

**Report on Reductions Achieved from Incentive-Based  
Emission Reduction Measures in the San Joaquin Valley**

**APPENDIX A.1: 2005 Carl Moyer Memorial Air Quality  
Standards Attainment Program Guidelines Part I**

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California Environmental Protection Agency

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*Air Resources Board*

# THE CARL MOYER PROGRAM GUIDELINES



Approved Revision 2005



Release Date: January 6, 2006



California Environmental Protection Agency



**Air Resources Board**

In memory of Dr. Carl Moyer  
(1937 - 1997)

This program is named in honor of the late Dr. Carl Moyer, whose extraordinary dedication, hard work, vision and leadership made this program possible. He created and masterminded this program, in a noble effort to unite business and government in the name of public interest to improve California's air quality.

This update was a collaborative effort and has benefited from the valuable contributions of the participating air districts. The ARB appreciates the considerable efforts of district staff both in the development of these guidelines as well as the day-to-day implementation of the Carl Moyer Program.

#### **Disclaimer**

Publication does not signify that the content reflects the views and policies of the California Air Resources Board, nor does the mention of trade names or commercial products constitute endorsement or recommendation for their use.

## EXECUTIVE SUMMARY

Air pollution is a serious problem for California. Over 90 percent of Californians live in areas that have unhealthful air at times. Air pollution has been tied to serious health impacts. Studies have linked particulate pollution to premature death in the elderly and other vulnerable populations. Research also shows that children exposed to unhealthful levels of ozone, or smog, suffer decreased lung function growth and increased asthma.

The California Air Resources Board (ARB), together with the 35 local air districts, is responsible for developing and implementing strategies to reduce air pollution and achieve health-based ambient air quality standards. Emission standards on new vehicles and engines help to reduce air pollution as older sources are retired and replaced by newer, cleaner vehicles and engines. However, new emission standards alone will not solve California's air pollution problem. Although older sources of pollution contribute a disproportionate share of emissions, there are technologies available to reduce these emissions. Devices are available that can reduce emissions from in-use vehicles and equipment by up to 85 percent, and new, low-emission engines equipment and vehicles are available that can reduce emissions by 25 to 85 percent. However, reducing emissions from these in-use sources can be difficult. The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) has proven to be an effective, cost-effective, and popular means of reducing emissions from existing pollution sources.

The Carl Moyer Program is a grant program, implemented by a partnership of ARB and local air districts, that funds the incremental cost of cleaner-than-required engines, equipment, and other sources of pollution. Carl Moyer Program grants provide early or extra emission reductions. It can also accelerate the development and commercialization of advanced emission control technology, accelerate the turnover rate of old equipment to newer and cleaner equipment, and help reduce costs to the regulated community. Projects to reduce emissions from on-road heavy-duty vehicles, idle reduction technologies, off-road diesel equipment, transportation refrigeration units, off-road spark-ignition equipment, marine vessels, locomotives, and agricultural engines have been eligible for grants. Legislative changes enacted in 2004 made projects to reduce emissions from other agricultural sources, light-duty vehicles, and on-road fleet modernization eligible for Carl Moyer Program funding as well. These legislative changes also created a new incentive program aimed at previously unregulated agricultural sources, which ARB staff is proposing to call the Agricultural Assistance Program.

In its first six years, the Carl Moyer Program has provided \$154 million in funding to clean up almost 7,000 engines statewide. The Carl Moyer Program has reduced about 18 tons per day of nitrogen oxides (NO<sub>x</sub>, a smog-forming pollutant), and 1 ton per day of diesel particulate matter. The emission reductions funded through Carl Moyer Program grants are very cost-effective, about \$3,000 per ton of NO<sub>x</sub>, comparing favorably to the cost-effectiveness of other air pollution regulations. The

recent legislative changes expand the focus of the Carl Moyer Program to additional pollutants – reactive organic gases (which combine with NO<sub>x</sub> in the atmosphere to form smog) and particulate matter (which includes toxic diesel particulate matter). This change will allow the Carl Moyer Program to more comprehensively address all of California's air pollution challenges, including the air toxic risk associated with emissions from diesel engines.

The legislative changes enacted in 2004 also provided increased and continued funding for the Carl Moyer Program and other incentive programs – up to \$141 million a year statewide through 2015. Emission reductions achieved through the Carl Moyer Program are an important component of the California State Implementation Plan (SIP) – the State's federally-required road map to reducing emissions to meet the health-based ambient air quality standards. All emission reductions funded with Carl Moyer Program funds must be real, surplus, quantifiable, and enforceable in order to be credited toward California's obligations in the SIP. These Guidelines describe project criteria to ensure that projects funded by the Carl Moyer Program achieve SIP-creditable emission reductions. The Guidelines also formalize the administrative requirements for both ARB and the local districts that administer the Carl Moyer Program. Funding criteria for the Agricultural Assistance Program are based on the Carl Moyer Program Guidelines, but the emission reductions under the Agricultural Assistance Program are not required to be surplus to regulatory requirements.

It is important to note that regulations will continue to be the primary means to reduce emissions to improve air quality. The incentives provided by the Carl Moyer Program, and other incentive programs, are intended to complement, not replace, these regulatory requirements. Although incentive programs can help reduce costs to the regulated community, there are simply not enough funds to purchase all the emission reductions needed to achieve healthful air.

The Carl Moyer Program has proven to be immensely popular in its first seven years, with the demand for grants routinely outstripping available funds. The inclusion of additional project categories combined with increased funding will allow the Carl Moyer Program to more fully realize the potential of incentive programs to improve air quality in California. In order to assure that the Carl Moyer Program remains responsive to the challenges facing air pollution control today, ARB staff is committed to improve all aspects of the Program from the technical data to the administrative requirements to customer service. Toward that end, ARB staff will update the technical information, as needed; encourage transparency in Program administration; and continue to explore ways to increase Program accessibility, especially to small businesses.

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# **THE CARL MOYER PROGRAM GUIDELINES**

## **PART I of IV**

### **PROGRAM OVERVIEW AND ADMINISTRATIVE REQUIREMENTS**

Approved Revision 2005  
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## Chapter One

### PROGRAM OVERVIEW

The Carl Moyer Program Air Quality Standards Attainment Program (“Carl Moyer Program”) enacted in Health and Safety Code (HSC) section 44275, et seq. is a grant program that funds the incremental cost of cleaner-than-required engines, equipment, and other sources of air pollution. Although air pollution regulations have significantly reduced emissions and improved air quality across the State, many areas of California continue to experience unhealthy air. The Carl Moyer Program complements California’s regulatory program by providing incentives to obtain early or extra emission reductions, especially from emission sources in environmental justice communities and areas disproportionately impacted by air pollution.

This document describes approved revisions to the Carl Moyer Program Guidelines to respond to legislation enacted in 2005, and to update the program to reflect current technical information and regulatory requirements for vehicles, equipment, engines and other pollution sources in California.

#### **I. Background**

Since 1998, the Carl Moyer Program has provided grants to encourage the owners of heavy-duty diesel engines to go beyond regulatory requirements by retrofitting, repowering, or replacing their engines with newer and cleaner ones. With the clean-up of about 7,000 old, high-emission engines, resulting in about 18 tons per day of oxides of nitrogen (NOx) emission reductions throughout the State, the Carl Moyer Program is a successful and popular air pollution program. The Carl Moyer Program offers critical emission reductions that are needed to achieve health-based air quality standards and prevent the loss of federal transportation funds throughout California. Although the Program has evolved, it retains its primary objective of obtaining cost-effective and surplus emission reductions to be credited toward California’s legally-enforceable obligations in the State Implementation Plan (SIP) – California’s roadmap for attaining the health-based national ambient air quality standards. In addition, Carl Moyer Program grants accelerate the turnover rate of old engines to newer and cleaner engines; accelerate the development and commercialization of advanced, reduced-emission technology; and help reduce costs to the regulated community.

On January 1, 2005, new legislation (AB 923, Firebaugh/Pavley) took effect, which expands the Carl Moyer Program to include additional pollutants, as well as additional sources of air pollution (HSC section 44275). The legislation requires the ARB to establish or update grant criteria (HSC section 44283) and guidelines for covered projects, as revised by the bill, by January 1, 2006.

The Carl Moyer Program has been successfully implemented through the cooperative efforts of the Air Resources Board (ARB or “Board”) and the local air pollution control and air quality management districts (“air districts” or “districts”). Each year, the ARB makes grant awards to air districts that apply for Carl Moyer Program funds to implement local programs. The air districts, following the Guidelines criteria approved by the Board, provide grants to public and private entities for the incremental cost of cleaner-than-required engines and/or equipment. In implementing the Carl Moyer Program, local districts enjoy considerable flexibility. For instance, districts may impose additional or more stringent eligibility requirements for projects in their districts. This flexibility allows air districts to tailor the use of Carl Moyer Program funds to meet local air quality objectives.

Although the Carl Moyer Program is an important component of California’s clean air plan, it is important to note that there are simply not sufficient public funds to purchase the emission reductions needed to provide healthful air. The Carl Moyer Program is not an easy path to compliance with regulatory requirements, but the Program can provide financial incentives to those who are able to secure early or extra emission reductions.

## **II. Legislative Changes**

Three key pieces of legislation enacted in 2004 and 2005 provided increased and continued funding, and expanded the Carl Moyer Program. These include Senate Bill 1107, Assembly Bill 923 (Firebaugh/Pavley), and Assembly Bill 1394 (Levine). In addition, on September 6, 2005, Governor Schwarzenegger signed Senate Bill 467 (Lowenthal) which requires the ARB to revise the Carl Moyer Program Guidelines to include projects in which an applicant turns in off-road equipment powered by an internal combustion engines and replaces that equipment with new zero-emission technologies. This legislation will take effect on January 1, 2006. ARB staff will evaluate how to incorporate the requirements of this legislation into the Carl Moyer Program in 2006.

### **A. Senate Bill 1107 (SB 1107)**

As part of the fiscal year 2004-2005 budget, SB 1107 adjusted the Smog Check fee while extending the newer-vehicle Smog Check exemption, securing about \$7 million for consumer assistance in the Smog Check program and about \$61 million in annual funding to be deposited in the Air Pollution Control Fund to fund the Carl Moyer Program “...to mitigate or remediate the harm caused by the type of motor vehicle on which the fee is imposed” (HSC section 44091.1).

### **B. Assembly Bill 923 (AB 923)**

AB 923 provided two additional sources of funding for the Carl Moyer Program, and expanded the program to include new emission sources and new pollutants.

This legislation adjusted the tire fee that is assessed on purchasers of new tires from \$1.00 per tire to \$1.75 per tire starting on January 1, 2005. The tire fee is reduced to \$1.50 per tire starting on January 1, 2007 (Public Resources Code section 42885). The adjustments to the tire fee will provide about \$25 million for clean air programs like the Carl Moyer Program in fiscal year 2005-2006, decreasing to \$16 million a year from 2007 through 2015.

AB 923 also provided air district governing boards with the authority to approve a \$2 increase in motor vehicle registration fees (“MV Fees”). The adjustment to the motor vehicle registration fee provides up to \$55 million directly to the local air districts for four specific incentive programs, including projects eligible for funding under the Carl Moyer Program, “...that the district determines remediate air pollution harms created by motor vehicles on which the surcharge is imposed.” The other three programs that may be funded with the \$2 MV Fee are the purchase of new school buses under the Lower Emission School Bus Guidelines [ARB, 2004], light-duty accelerated vehicle retirement or repair programs [ARB, 2001], and a program targeted at previously unregulated agricultural sources – the “Agricultural Assistance Program.” As directed by AB 923, the funding criteria for the Agricultural Assistance Program are based on the Carl Moyer Program Guidelines and appear in Part III of this document.

AB 923 expanded the Carl Moyer Program to include light-duty vehicle projects and agricultural sources of air pollution as defined in HSC section 39011.5(a). AB 923 also directed ARB to consider emission reductions of reactive organic gases (ROG) and particulate matter (PM10) emissions, as well as NOx, when evaluating eligible projects. The legislation specifically directs ARB to develop a weighted cost-effectiveness to evaluate projects that obtain NOx, ROG and PM10 emission reductions.

### **C. Assembly Bill 1394 (AB 1394)**

AB 1394 (Levine) directed the ARB to broaden the Carl Moyer Program to include heavy-duty fleet modernization projects that reduce NOx and/or PM10 emissions through the replacement of old trucks. New criteria are in these Guidelines so districts may select appropriate projects that would qualify for funding under the heavy-duty fleet modernization source category.

## **III. Summary of Guideline Revisions**

### **A. Addition of ROG and PM10**

With the enactment of AB 923, the Carl Moyer Program has expanded from a NOx-focused incentive program to include projects that also reduce ROG and PM10. This change allows the Carl Moyer Program to more comprehensively address all of California’s air pollution challenges, including the air toxic risk associated with emissions from diesel engines.

Reactive organic gases combine in the atmosphere with NOx to form smog. Because different regions of the State require a different combination of ROG and NOx emission reductions to meet ambient air quality standards, the inclusion of ROG in the Carl Moyer Program will allow local regions to tailor the Carl Moyer Program to more closely meet the requirements of their local SIP.

The addition of PM10 allows the Carl Moyer Program to respond to the major air quality challenge of diesel particulate matter. The ARB has identified particulate emissions from diesel-fueled engines as toxic air contaminants (TACs), and reducing diesel particulate emissions is a priority for the ARB. In October 2000, the ARB approved a comprehensive Diesel Risk Reduction Plan [ARB, 2000] to reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. The Plan is a roadmap that identifies the steps that ARB will be taking to develop specific regulations to reduce diesel PM10 emissions. The ability to fund projects that reduce PM10 emissions will help ARB and districts reduce the risk associated with exposure to toxic diesel PM10.

Retrofit technologies to reduce PM10 emissions from diesel engines are becoming more widely available. These retrofit technologies include diesel oxidation catalysts, passive and active diesel particulate filters, flow-through filters, and fuel additives. A number of these retrofits have been verified by the ARB and could be funded using Carl Moyer Program grants. Airborne toxic control measures (ATCMs) already require some diesel-fueled sources to install retrofit devices. Fleets that are subject to these ATCMs may still qualify for Carl Moyer Program funds if they install retrofits earlier than required so that the emission reductions achieved are surplus to regulatory requirements.

#### **B. New Cost-Effectiveness Formula to Include NOx, ROG and PM10 Emission Reductions**

As discussed earlier, AB 923 requires the ARB to establish a weighted cost-effectiveness cap for Carl Moyer Program projects that reduce emissions of NOx, ROG and PM10. Cost-effectiveness for the Carl Moyer Program was previously based only on NOx emission reductions.

Cost-effectiveness is a measure of the dollars provided to a project for each ton of covered emission reductions. To calculate Carl Moyer Program cost-effectiveness, the project grant amount is annualized based on the project's life and an appropriate discount rate. This annual cost is then divided by the project's estimated annual emission reductions. In order to consider NOx, ROG and PM10 emission reductions in one calculation, ARB staff weighted the emission reductions to develop a "weighted cost-effectiveness."

For NOx and ROG emission reductions, a weighting factor of one is used. Oxides of nitrogen and ROG are precursor emissions – that is they combine in the atmosphere with other emissions to form air pollutants such as ozone (smog) or secondary particulate matter. The relative importance of NOx, ROG and other precursor emissions

in the formation of smog and PM depends on many factors including location, temperature, geographic features, and the concentration of other pollutants. In order to accurately reflect the actual role of NOx and ROG, the weighting factors would have to be adjusted for each individual air basin. Historically, the ARB has treated NOx and ROG emissions equally. For example, the cost-effectiveness of ARB's regulations is generally provided in dollars per ton of NOx + ROG, with no weighting factors. The Carl Moyer Program follows the same approach and, thus, NOx and ROG emission reductions carry a weighting factor of one in the weighted cost-effectiveness formula.

ARB staff believes it is appropriate for emission reductions of combustion PM10 to carry additional weight in the calculation because, for an equivalent weight, these emissions are more harmful to human health. Non-combustion PM10 is not included in the weighted cost-effectiveness formula at this time because specific project criteria for non-engine projects have not yet been developed.

ARB staff considered a range of weighting factors for combustion PM10, ranging from 10 to 30. In Carl Moyer Program Advisory: # 05-001 (December 20, 2004), the staff weighted combustion PM10 emission reductions by 10 on an interim basis based on the cost to control combustion PM10 in the Solid Waste Collection Vehicle ATCM [ARB, 2003a]; that is, a weighting factor of 10 would offset the increased cost of reducing an equal amount of combustion PM10 emissions compared to the emissions of ozone precursors such as NOx. Based on an evaluation of a broader range of diesel ATCMs, staff found that the current cost to control PM10 is about 15 times the cost to control the ozone precursors NOx and ROG.

ARB staff also evaluated the relative health benefits of reducing NOx emissions and reducing PM10 emissions. ARB staff estimated the monetary benefits by considering health endpoints that could be expected from reducing a given amount of combustion PM10 emissions, including premature deaths, asthma related emergency room visits, work loss days, and minor restricted activity days. Staff estimated monetary values for these benefits based on various economic values established for these health endpoints by both the U.S. EPA and the ARB [U.S. EPA, 2000a; U.S. EPA, 2000b; U.S. EPA, 2003; U.S. EPA, 2004; ARB, 2003b]. Based on this evaluation, the health benefits of reducing one ton of PM10 outweighed the health benefits of reducing one ton of NOx by about 30 times.

Based on the staff's evaluation, as well as discussions with stakeholder groups, combustion PM10 is weighted by 20 times. Staff believes that this weighting factor balances the objective of the Carl Moyer Program to obtain SIP-creditable emission reductions while also reducing the risk associated with toxic diesel particulate matter.

Thus, the formula for weighted cost-effectiveness is:

$$\frac{\text{Annualized Cost (\$/year)}}{(\text{NOx reductions} + \text{ROG reductions} + 20 \times \text{combustion PM10 reductions}) \text{ (tons/year)}}$$

Some stakeholders also suggested incorporating exposure, particularly to sensitive receptors such as school children, into the cost-effectiveness calculation. After considering the nature of mobile source projects which travel throughout local air districts, and sometimes the entire state, and the potential difficulties associated with assessing the location, timing, and duration of emissions of each individual Carl Moyer Program project, it was decided not to incorporate exposure into the cost-effectiveness calculation at this time.

Although the weighted cost-effectiveness formula does not incorporate exposure, it should be noted that local districts have the discretion to use project selection criteria that account for exposure. In addition, local districts with a population of over one million must have a method in place to provide for the expenditure of 50 percent of Carl Moyer Program (HSC section 43023.5) funds for projects that operate or are based in environmental justice areas.

### **C. Administrative Requirements**

To ensure the best use of public funds and continued public confidence, the Carl Moyer Program must have clearly defined administrative responsibilities and oversight. The administrative criteria formalize existing practices and policies, and contain minimum requirements that ARB and local air districts must follow to continue implementing a successful statewide Carl Moyer Program based on the requirements of the Health and Safety Code. The requirements identify ARB's responsibilities pertaining to program oversight, audits, and recapture of districts' funds. They also identify the minimum requirements that districts must include in their local programs so ARB can document the districts' success and determine if funds need to be recaptured.

### **D. Agricultural Sources**

The Carl Moyer Program has funded the clean-up of over 2,000 agricultural engines. AB 923 expanded the source categories that are eligible for Carl Moyer Program funding to include agricultural sources of air pollution as defined in HSC section 39011.5(a). This definition includes stationary and area-wide sources of pollution including engines, livestock operations, and other agricultural activities.

The Guidelines respond to the legislative direction by including projects to reduce emissions from internal combustion engines that are agricultural sources. However, project criteria for non-engine agricultural projects have not been proposed at this time. The Board has directed the Executive Officer develop and approve project criteria for non-engine agricultural sources when technology is available to ensure that the emission reductions are real, surplus, quantifiable, and enforceable. If these projects include reductions of non-combustion PM10, the criteria will include a weighting factor for non-combustion PM10 for use in the cost-effectiveness formula.

## **E. Agricultural Assistance Program**

AB 923, in HSC section 44229, also creates an opportunity to provide incentives to fund new purchases, retrofit, repower, or add-on equipment for previously unregulated sources of air pollution. ARB staff is referring to this new program as the “Agricultural Assistance Program”. AB 923 allows a portion of the \$2 MV Fees to be used to fund this program. One major difference from the Carl Moyer Program is that Agricultural Assistance Program projects are not required to achieve surplus emission reductions. The HSC requires that Agricultural Assistance Program projects comply with the Carl Moyer Program Guidelines. Based on this statutory guidance, the Agricultural Assistance Program is modeled on the Carl Moyer Program Guidelines. Agricultural Assistance Program projects are limited to those for which the Board has approved Carl Moyer Program Guidelines. Guidelines for stationary and portable agricultural engines are included. Guidelines for non-engine projects, such as dairies, are not included at this time, but will be developed by ARB staff, in consultation with interested stakeholders, when technologies for such projects become available.

## **F. Light-Duty Vehicle Program**

AB 923 authorizes the districts and the ARB to fund projects to reduce emissions from light-duty vehicles under the Carl Moyer Program (HSC section 44275). Light-duty vehicle projects are initially limited to voluntary accelerated vehicle retirement (VAVR) programs that meet the ARB’s VAVR regulations. The option of using remote sensing devices (RSDs) to identify high emitting vehicles that can be targeted for voluntary early retirement and is taking a two-step approach to integrate RSD into the Carl Moyer Program and the VAVR regulation is also an option. As a first step, the ARB has authorized a RSD-based “High-Emitting Vehicle Identification, Repair, and Scrapping Program” to be run by the South Coast Air Quality Management District during 2005 and 2006. The ARB will use the data from this project to revise the VAVR regulation and these guidelines in 2006. After the ARB revises the regulation and the Carl Moyer Program Guidelines to fully incorporate RSD, any district that chooses to would be able to develop and implement RSD-based VAVR programs.

## **G. On-Road Fleet Modernization Program**

AB 1394 expanded the Carl Moyer Program to include on-road fleet modernization (HSC section 44297), which is the replacement of an old, high-polluting, heavy-duty vehicle, which was not likely to be replaced on its own, with a cleaner vehicle. Fleet modernization provides incentive funds to truck owners that typically do not have the financial resources to buy a newer, cleaner vehicle. Incentives offset part of the cost of the newer, lower polluting vehicle. ARB staff has incorporated a heavy-duty vehicle fleet modernization component into the Carl Moyer Program.

## **H. Zero-Emission Projects**

Zero-emission technology, such as electric equipment, is a key element of California's long-term plan for attaining health-based air quality standards. Zero-emission technology is able to provide major reductions of NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions, as well as reductions in emissions of TACs and greenhouse gases. In addition, electric equipment will remain emission-free throughout its life. Yet, despite these attributes, and the fact that electric technologies are ideally suited for a number of Carl Moyer Program projects, there have been relatively few zero-emission projects funded through Carl Moyer Program grants. Districts are now required to encourage zero-emission projects. Each district may choose how to encourage zero-emission projects. Options include, but are not limited to, a funding set-aside, priority processing, or additional outreach. ARB staff has also developed a Zero-Emission Project chapter in these Guidelines to highlight potential projects.

## **I. Streamlining Program Administration for Small Businesses**

ARB staff is committed to work with local air districts to evaluate ways to improve the efficiency of the Carl Moyer Program. Improved program efficiency would benefit all applicants seeking Carl Moyer Program grants, but may be especially beneficial for small businesses.

As part of this effort, ARB staff will work with the South Coast Air Quality Management District staff to develop a program next year to examine the feasibility of a rebate or voucher program to streamline and expedite fund disbursement. Based on the results of this program, ARB staff will evaluate whether a rebate or voucher program can be implemented statewide. If feasible, ARB staff will develop specific criteria for rebate or voucher programs to be incorporated in the next Carl Moyer Program Guideline revision. Prior to the next Guideline revision, ARB staff may also provide interim guidance to districts on how to implement a rebate or voucher program.

## **J. Other Revisions**

In addition to the revisions specifically discussed above, the Carl Moyer Program guideline revision also contains other criteria that are specific to each project category. These revisions reflect input from the public and air districts, as well as new statutory requirements.

The Guidelines adjust the cost-effectiveness cap from \$13,600 per ton of NO<sub>x</sub> to \$14,300 per ton of weighted NO<sub>x</sub>, ROG, and combustion PM<sub>10</sub> emissions to account for an approximately 5 percent inflation rate from 2003 to present. This number is based on the California average Consumer Price Index [U.S. BLS, 2005]. A discount rate of 4 percent is used to calculate the capital recovery factors in determining the annualized cost of Carl Moyer Program grants provided for a project. This number is based on the average annual yields for U.S. Treasury securities, averaged from

January 2005 through August 2005, with a 3-year, 5-year, 7-year, and 10-year maturation [U.S. FRB, 2005].

Additionally, the revisions also reflect the current regulatory environment, new technology, and potential projects. These project criteria, along with program administration criteria and updated emission rates are discussed in more detail in each chapter of the Guidelines.

#### **IV. References**

ARB, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. <http://www.arb.ca.gov/diesel/documents/rrpFinal.pdf>

ARB, 2001. Staff Report: Initial Statement of Reasons. Proposed Amendments to Air Resources Board Voluntary Accelerated Vehicle Retirement Regulations – Minimize Differences Between ARB and BAR VAVR Regulations and Allow Parts Recycling and Resale of Non-Emission Related and Non-Drive Train Parts. <http://www.arb.ca.gov/regact/vavr/isor.pdf>

ARB, 2003a. Staff Report: Initial Statement of Reasons. Proposed Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Residential and Commercial Solid Waste Collection Vehicles. <http://www.arb.ca.gov/regact/dieselswcv/isor.pdf>

ARB, 2003b. Final Research Report: The Economic Value of Respiratory and Cardiovascular Hospitalizations, May 31, 2003. <ftp://ftp.arb.ca.gov/carbis/research/apr/past/99-329.pdf>

ARB, 2004. Lower-Emission School Bus Program – Final Revised Guideline Addendum. <http://www.arb.ca.gov/msprog/schoolbus/2004final.pdf>

U.S. BLS, 2005. Consumer Price Index – All Urban Consumers, <http://data.bls.gov/cgi-bin/surveymost>, U.S. Department of Labor, Bureau of Labor Statistics, August 2005.

U.S. EPA, 2000a. Regulatory Impact Analysis: Heavy-Duty Engines and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, December 2000. EPA-420-R-00-026. Office of Air Radiation, Research Triangle Park, NC

U.S. EPA, 2000b. Cost of Illness Handbook. <http://www.epa.gov/oppt/coi/view.html>

U.S. EPA 2003. Draft Regulatory Impact Analysis: Control of Emissions from Nonroad Diesel Engines, April 2003, EPA-420-R-03-008, Office of Transportation and Air Quality.

U.S. EPA, 2004. Final Regulatory Impact Analysis: Control of Emissions from Nonroad Diesel Engines, May 2004, EPA-420-R-04-007, Office of Transportation and Air Quality.

U.S. FRB, 2005. Federal Reserve Statistical Release, H.15, Selected Interest Rates, <http://federalreserve.gov/Releases/H15/data.htm>, U.S. Federal Reserve Board, Release date: September 19, 2005.

## Chapter Two

### ADMINISTRATION OF THE CARL MOYER PROGRAM

The Carl Moyer Program has been successfully implemented through the cooperative efforts of the Air Resources Board (ARB) and the local air pollution control and air quality management districts (districts). Health and Safety Code (HSC) section 44286 authorizes ARB to make grant awards to local air districts that apply for funds to implement a local Carl Moyer Program. The ARB has ultimate oversight responsibility for the statewide Carl Moyer Program. The districts implement their local programs in accordance with the guideline criteria approved by ARB. These Guidelines are binding and enforceable. The ARB provides the districts with flexibility in implementing the program, including the authority to implement stricter criteria based on their local air pollution challenges and air quality goals.

The ARB's goal is to administer the Carl Moyer Program stringently enough to ensure emissions benefits are realized, while maintaining enough flexibility to allow for ease in district and applicant participation and maintaining enough transparency for public scrutiny. The ARB has followed the requirements of HSC sections 44287 through 44297 in determining and reporting the success of local districts' programs. For each funding cycle, the districts are currently required to report to ARB three times during the two-year period, in order for ARB staff to track local progress in spending the Carl Moyer Program funds. With continued funding increasing up to \$140 million per year from all funding sources through 2015, it is critical to track funds from the point the district applies for funds from ARB, through the point the local district pays for a project, and during project implementation. This chapter formalizes the minimum requirements that ARB and local air districts must follow to continue implementing a successful statewide Carl Moyer Program. The chapter is designed to outline ARB's responsibility pertaining to program oversight, audits, and recapture of districts' funds. It also provides the minimum requirements that districts must include in their local programs so ARB can document and publicly report the districts' success and failures, and determine if there is a need to recapture Carl Moyer Program funds.

#### I. Administrative Terminology

**Carl Moyer Program Funds.** Carl Moyer Program funds include both the state funds awarded by the ARB (as provided by statute) and district matching funds.

**Contract.** A contract, grant, or other legally binding agreement used by a district to obligate and expend funds for a project funded through the Carl Moyer Program.

## **II. Funding Sources and Types of Carl Moyer Projects**

### **A. New Carl Moyer Program Funding Sources**

Two key pieces of legislation enacted in 2004 have expanded the Carl Moyer Program and brought an increased, continued source of annual funding through 2015. These are Senate Bill 1107 and Assembly Bill 923 (Firebaugh/Pavley).

#### **1. Senate Bill 1107 (SB 1107)**

As part of the fiscal year 2004-2005 budget, this legislation adjusted the Smog Check fee while extending the newer-vehicle Smog Check exemption, securing about \$7 million for consumer assistance in the Smog Check program and about \$61 million in annual funding to be deposited in the Air Pollution Control Fund to fund the Carl Moyer Program "... to the extent that the state board or a participating district determines that the moneys are expended to mitigate or remediate the harm caused by the type of motor vehicle on which the fee is imposed" (HSC, section 44091.1).

The adjustment to the Smog Check fee is imposed on vehicles that are subject to biennial smog checks. Vehicles subject to the Smog Check Program include gasoline-powered passenger cars, light-duty trucks, medium-duty trucks, and heavy-duty trucks. These vehicles emit about 620 tons per day (tpd) of NO<sub>x</sub>, 400 tpd of ROG, and 13 tpd of PM<sub>10</sub> emissions. It is the harms caused by these automotive pollutants that the fees will be used to mitigate. Under the Smog Check Program, vehicles are required to be tested every two years to measure the levels of NO<sub>x</sub>, hydrocarbon (HC), and carbon monoxide (CO) emissions. Vehicles exceeding the allowed emission thresholds are required to be repaired prior to being able to renew their registrations with the Department of Motor Vehicles. Vehicles powered with diesel engines are not subject to the Smog Check Program.

Gasoline engines generally do not produce as many NO<sub>x</sub> and PM<sub>10</sub> emissions as diesel engines. On a per mile driven basis, the ARB's emission inventory shows that heavy-duty diesel trucks emit about 22 times the NO<sub>x</sub>, 21 times the PM<sub>10</sub>, and 1.5 times the ROG emissions compared to gasoline-powered vehicles subject to the Smog Check Program (see Table 2-1). In addition to heavy-duty diesel trucks, other heavy-duty diesel engines and pollution sources also contribute significantly to NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions.

Particulate matter emissions from both gasoline-powered vehicles and heavy-duty diesel vehicles are formed in the combustion process and are dominated by fine PM. Strong links have been demonstrated between elevated fine particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks [ARB, 2002]. In addition, regardless of their origin, whether from light-duty gasoline-powered vehicles or other sources, NO<sub>x</sub> and ROG emissions react in the atmosphere to form ozone. Ozone is a powerful oxidant that can damage the respiratory tract, causing inflammation and irritation, and induces symptoms such as

coughing, chest tightness, shortness of breath, and worsening of asthma symptoms [ARB, 2005]. Recent evidence has, for the first time, linked the onset of asthma to exposure to elevated ozone levels in exercising children [McConnell, 2002]. Light-duty vehicles are one of a multitude of sources that emit both NOx and ROG; a strategy that effectively reduces these emissions, no matter from what source, would reduce the harm caused by motor vehicles and have positive health benefits for the people of California, and particularly for sensitive groups, including young children.

**Table 2-1**  
**NOx, ROG, and PM10 Emissions from Vehicles Subject to the Smog Check Program and Heavy-Duty Diesel Trucks for 2005**  
**(grams per mile)**

<b>Pollutants</b>	<b>“Smog-Check” Vehicles</b>	<b>Heavy-Duty Diesel Trucks</b>
NOx	0.7	15.2
ROG	0.4	0.7
PM10	0.015	0.32

Source: EMFAC2002\_v2.2, April 23, 2003

Gasoline-powered vehicles, particularly light-duty vehicles, in California are already subject to the most stringent emission standards in the nation. It is challenging to obtain additional emission reductions from individual new vehicles over these already extremely low emission levels. In-use emissions from existing gasoline-powered vehicles are significant, especially from older vehicles, due to deterioration and as a result of mal-maintenance. However, in-use emissions already are being addressed through the Smog Check Program as well as the vehicle repair and scrap program being operated by the Bureau of Automotive Repairs (BAR) (HSC, sections 44100-44122, in part).

As discussed earlier, AB 923 expanded the Carl Moyer Program to allow funding for projects to reduce emissions from light-duty vehicles (HSC, section 44275). Thus, project criteria have been developed for funding light-duty vehicle projects through the voluntary accelerated vehicle retirement program. ARB staff will also participate in a program that is being planned for 2006 in the South Coast Air Basin to evaluate a remote sensing program to detect gross-polluting vehicles. Staff believes that the programs described above, both for the BAR program and the ARB Carl Moyer Program, for light-duty vehicles represent adequate and reasonable efforts to reduce emissions from this class of vehicles. As staff gains more information on the accelerated vehicle retirement and the remote sensing programs, staff plans to revisit this category and will revise the funding criteria for these projects to more fully incorporate them in the Carl Moyer Program.

Based on the discussion presented above, maximum and cost-effective emission benefits to mitigate the harms caused by light-duty vehicles would be obtained if funds from the adjustment to the Smog Check fee, as provided for by SB 1107, are used to

reduce emissions from other sources of the same pollutants as automobiles produce. This approach would most expediently and effectively reduce NOx, ROG, and PM10 emissions and would serve the best interests of the people of California. Local air districts have the authority to select projects that would most effectively reduce NOx, ROG, and PM10 emissions in their local area.

## **2. Assembly Bill 923 (AB 923)**

This legislation introduced significant revisions to the Carl Moyer Program, including two new funding sources for the Carl Moyer Program – the adjustment to the tire fee and an allowance for an increase to the motor vehicle registration fee.

**Increase in Tire Fee.** Assembly Bill 923 adjusted the tire fee that is assessed on purchasers of new tires from the current \$1.00 per tire to \$1.75 per tire starting January 1, 2005. The tire fee is reduced to \$1.50 per tire starting on and after January 1, 2007 (Public Resources Code, section 42885). The adjustments to the tire fee translate to about \$25 million available for the Carl Moyer Program in 2005-2006, and \$16 million from 2007 on.

The legislation requires a portion of the revenues generated by the tire fee to be deposited in the Air Pollution Control Fund for use by the ARB and the air districts. AB 923 also requires the ARB to expend or allocate the portion of the tire fee adjustment that is directed to the Air Pollution Control Fund to fund programs and projects that mitigate or remediate air pollution caused by tires in the state, to the extent that the state board or the applicable district determines that the program or project remediates air pollution harms created by tires upon which the fee described in Section 42885 is imposed” (Public Resources Code, section 42889).

Air pollutants generated through tire wear are particulate matter whose composition is directly related to the constituents and processes used to manufacture the new tire. Tires are manufactured using a mixture of natural rubber; styrene-butadiene synthetic rubber; carbon black; molecular sulfur and sulfur compounds; silicone elastomers; phenolic resin; aromatic, naphthenic, and paraffinic oils; petroleum waxes; zinc oxide, titanium dioxide and other metals; fatty acids and inert materials. Carbon blacks typically contain varying quantities of adsorbed by-products from the production processes, particularly aromatic compounds. Typical classes of chemicals adsorbed onto the carbon black surface are carcinogenic polycyclic aromatic hydrocarbons (PAHs), nitro-derivatives of PAHs and sulfur-containing PAHs. The presence of these compounds can significantly increase the hazards of carbon black exposure. Some of these compounds have been identified by the ARB as TACs.

The legislative intent of the portion of the tire fee as expressed in AB 923 is to reduce PM and TAC emissions to improve air quality for Californians. Elevated PM emissions have been linked to premature deaths and other health ailments, such as asthma attacks. Fine PM, regardless of source, can bypass the body’s defense mechanism and can embed deep in the lungs. Ongoing studies have indicated that particulate matter

pollution may significantly reduce lung function growth in children [Peters et al. 2001, Avol et. al. 2001, Gauderman et al. 2002] and that exposure to diesel PM could also cause lung cancer [ARB, 2002].

Technologies used to reduce PM emissions from tires generally involve strategies to reduce tire wear. This could be accomplished either through the use of high-mileage tires or by maintaining proper tire pressures. Although high-mileage tires have been available for a number of years, they have been marketed principally for their high-mileage attribute rather than for their potential to reduce PM emissions. Similarly, although tire manufacturers have informed consumers on the benefits of maintaining proper tire pressures in terms of prolonging tire life and improving fuel economy, they have not engaged in presenting the impacts of improper tire inflation on PM emissions.

Existing criteria for funding Carl Moyer Program projects are based on the net emission benefits of using a low-emission engine or advanced technology compared to a conventional engine or technology. In the case of tires, it is very difficult to accurately quantify the emission benefits of using high-mileage tires versus conventional tires. Although basic information on tire wear is known, factors affecting tire wear PM emissions specific to the types of tires currently available, such as high mileage tires, conventional tires, high performance tires, as well as other specialty tires, have not been developed. Tire wear is also dependent on material and manufacturing process, as well as operational conditions, such as vehicle speed, load, tire pressures, and road conditions.

Because of these factors, the potential emission benefits of high-mileage tires compared to conventional tires, or due to maintaining proper tire inflation, are very difficult to quantify accurately and to enforce. Since the primary objective of the Carl Moyer Program is to obtain surplus emission reductions, and because of the uncertainty in the actual emission benefits of these strategies, criteria for projects that reduce tire wear cannot be developed for this Guidelines revision. ARB staff will continue to evaluate the potential for these projects to receive Carl Moyer Program funding as technologies to reduce tire wear emissions continue to be developed so that we can accurately quantify the emission benefits.

Since projects to reduce tire wear cannot be evaluated using traditional Carl Moyer Program criteria, the funds associated with the tire fee will be used on projects that remediate the harms caused by PM and TAC emissions generally, since these emissions are caused by tires.

**Potential \$2 Motor Vehicle Registration Fee Increase (\$2 MV Fee).** AB 923 amended the HSC to authorize districts in non-attainment areas to increase the motor vehicle registration fee surcharge, currently authorized up to \$4 to fund specified air district activities to implement the California Clean Air Act, by up to \$2, provided air district governing boards formally approve the increase. Health and Safety Code section 44229 (b) directs the districts to use the \$2 MV Fee increase to implement any

or all of the following four programs "...that the district determines remediate air pollution harms created by motor vehicles on which the surcharge is imposed":

- Projects eligible for grants under the Carl Moyer Program.
- The new purchase, retrofit, repower, or add-on equipment for previously unregulated agricultural sources of air pollution, for a minimum of three years from the date of adoption of an applicable rule or standard, or until the compliance date of that rule or standard, whichever is later. The ARB is calling this program the "Agricultural Assistance Program."
- The new purchase of school buses pursuant to the Lower-Emission School Bus Program.
- An accelerated vehicle retirement or repair program.

If each eligible district chose to use the entire \$2 increase to fund the Carl Moyer Program, the adjustment to the motor vehicle registration fee could provide up to \$55 million directly to the local air districts for the Carl Moyer Program. Motor vehicles subject to the registration fee surcharge include all on-road vehicles, e.g. light-duty, medium-duty, and heavy-duty vehicles. On-road vehicles are major contributors of NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions. As shown in Table 2-2, these vehicles emit about 1,518 tons per day of NO<sub>x</sub>, 772 tons per day of ROG, and 50 tons per day of PM<sub>10</sub> in 2005. As discussed in previous sections, strong links have been demonstrated between elevated fine particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks [ARB, 2002]. In addition, NO<sub>x</sub> and ROG emissions react in the atmosphere to form ozone, a powerful oxidant that can damage the respiratory tract, causing inflammation and irritation, and induces symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthma symptoms [ARB, 2005]. On-road vehicles are one of a multitude of sources that emit the NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions that cause these harms. In addition to heavy-duty diesel trucks, other heavy-duty diesel engines and pollution sources also contribute significantly to NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions. As shown in Table 2-2, these other mobile sources emit about 908 tons per day of NO<sub>x</sub>, 436 tons per day of ROG, and 69 tons per day of PM<sub>10</sub> in 2005. A strategy that effectively reduces these emissions, no matter from what sources, would reduce the harms caused by motor vehicles and have positive health benefits for the people of California, particularly for sensitive groups, including young children.

**Table 2-2  
NOx, ROG, and PM10 Emissions from  
On-Road Mobile and Off-Road Mobile Sources for 2005  
(tons per day)**

<b>Pollutants</b>	<b>On-Road Mobile</b>	<b>Off-Road Mobile</b>
NOx	1518	908
ROG	772	436
PM10	50	69

Source: The California Almanac of Emissions and Air Quality, 2005 Edition

### **B. Outreach Funds**

The ARB sets aside up to two percent of the total Carl Moyer Program annual funding for local air district outreach to implement their local program. These funds are distributed to each district based on the annual allocation of project funds that a district receives. Administrative funds shall be used for direct costs associated with the tasks outlined in this chapter and must be documented by the district. Examples of such costs and the documentation required are:

- Staff time to complete the tasks outlined in this chapter. The staff time shall be documented with time sheets.
- If consultants are used to assist districts in administering their local programs, consultant fees may also qualify. They shall be documented with a contract and invoices.
- Printing, mailing and travel costs directly associated with the implementation of the Carl Moyer Program may also qualify. These costs shall be documented with receipts and/or invoices.

### **C. Matching Funds**

The district matching fund requirement is important because it provides a literal “buy-in” from the districts responsible for the selection, monitoring, and enforcement of the projects. This requirement helps ensure that the most worthwhile projects are selected and that more funds are available for clean air projects.

## 1. Match Fund Formula

Currently districts participating in the Carl Moyer Program are required to provide \$1 in match funding for every \$2 of state Carl Moyer Program funding awarded by ARB, with a cap on statewide match funds at a total of \$12 million. The formula provided below is used to determine each district's required matching funds.

$$\frac{\text{District's annual allocation} * \$12,000,000}{\text{Current annual funding level - (ARB \& district admin./outreach funds + 10\% holdback)}}$$

The ARB recognizes the fiscal realities, especially for rural districts, which make it a challenge to meet matching fund requirements of the Carl Moyer Program. Currently, a district receiving the minimum grant award of \$200,000 may request a waiver of the match fund requirement provided the district can demonstrate appropriate staff commitment for program implementation and administration. The ARB staff works closely with local district staff to determine the proper level of commitment necessary based on previous history of projects funded and performance.

## 2. Sources of Matching Funds and Allowable Expenditures

Districts have a variety of local funds under their fiduciary control that can be used to meet their match fund requirement. Districts are allowed to meet their matching fund requirement on an overall program basis, rather than a project-by-project basis. This allows the districts the flexibility to fund worthwhile clean air projects from a variety of targeted funding sources.

**AB 2766 - \$4 Surcharge on Motor Vehicle Registration Fees (\$4 MV Fee).** Many districts receive funds from a \$4 surcharge on motor vehicle registration fees. Funds generated by the \$4 MV Fee must be used for projects that reduce emissions from motor vehicles and infrastructure when it serves Carl Moyer Program motor vehicle projects [ARB, 1998]. Table 2-3 below gives a partial list of motor vehicles that are eligible to be funded by the \$4 MV Fee. The non-motor vehicles listed below are not eligible project categories for motor vehicle registration fee funds.

**Table 2-3  
Motor Vehicles vs. Non-Motor Vehicles**

Motor Vehicles	Non-Motor Vehicles
Automobiles	Locomotives
Trucks	Aircraft
Buses	Lawn mowers (non-riding)
Vans	Leaf blowers
Road graders	Refrigeration units
Earth movers	Chain saws
Tractors	Auxiliary generators
Golf carts	Welding machines
Motorcycles	Pleasure craft
Self-propelled harvesters	Cranes
Forklifts	Marine vessels
Sweepers	Stationary agricultural engines
Motorized Bicycles	Bicycles

**AB 923 – \$2 MV Fee.** As previously discussed, statewide the \$2 MV Fee could generate up to \$55 million annually if local governing boards approve the adjustment. As indicated in HSC sections 41081(d), 44225 and 44229(b), districts approving the adjustment must use those funds in one of the four areas previously discussed.

If districts use the \$2 MV Fee to pay for projects that meet the Carl Moyer Program criteria (including infrastructure in support of a Carl Moyer Program-funded motor vehicle project) or light-duty accelerated vehicle retirement and repair programs that meet the Carl Moyer Program Guidelines, those funds count toward a district’s match fund requirement. Emission reductions generated from projects in both categories are considered to be surplus. Note that projects paid for under the Agricultural Assistance Program do not need to meet the criteria that all funded emission reductions must be “surplus” to those reductions required by law, although other Carl Moyer Program criteria, however, must be met. In addition, projects paid for under the Lower Emission School Bus Program also do not have to be surplus nor do they have to meet the cost-effectiveness criteria under the Carl Moyer Program. Hence, only funds from the \$2 MV Fee that are used on projects that meet the Carl Moyer Program Criteria may count toward the district’s match funding requirement.

Since the Health and Safety Code requires districts to use the \$2 MV Fee on projects in four specified areas, it is necessary for ARB to monitor and document that public funds are being spent as intended by law. Hence, all projects funded by the \$2 MV Fee will be subject to the same reporting, auditing, and oversight requirements as other Carl Moyer Program projects. After deciding whether to adopt the additional \$2 MV Fee and which category(ies) of projects to use the funds for, districts must report projects funded by the extra \$2 MV Fee in the Carl Moyer Program database (including non-Carl Moyer Program projects funded with the \$2 MV Fee).

**Other District Funds.** Other funds under the districts' budget authority may be used as match. The eligible expenditures for match with other district funds include:

- Carl Moyer Program Projects. Match funds may be used to pay for any project which meets the Carl Moyer Program requirements of providing cost-effective emission reductions that are real, surplus, enforceable, and quantifiable and that meet the other project criteria in these Guidelines.
- Incremental Fuel Cost. Match funds may be used to pay for the incremental cost of liquid or gaseous fuel and electricity, other than standard gasoline or diesel, which is integral to a Carl Moyer Program qualifying project.
- Infrastructure Projects. Match funds may be used for electric and alternative fuel infrastructure projects that serve Carl Moyer Program qualifying projects.
- In-Kind Contributions. Up to 15 percent of a district's match requirement may be fulfilled through in-kind contributions. In-kind contributions are local funds under the district's fiduciary control that are used to pay for administering the local Carl Moyer Program, including but not limited to, staff resources assigned to the Carl Moyer Program, and printing, mailing, transportation and travel cost used by that staff to implement the Carl Moyer Program. Examples of acceptable indirect costs are administrative staff services to the Carl Moyer Program, office space, and telephone service. These in-kind contributions must be made in the same time frame as the agreement term for the funds, must be proportional to the time and amount dedicated to Carl Moyer Program activities, and shall not be carried over to other years. The in-kind contributions must be documented and records available for review during ARB or other State monitoring visits and audits. Acceptable documentation includes time sheets, contracts, and invoices.

Districts are entitled to use any funds under their budget authority to cover the in-kind costs to administer the Carl Moyer Program. When using these other district funds for in-kind match, districts must follow any guidelines and other legal requirements for expending those other funds. While the two percent outreach funds that districts receive with each allocation comes under the districts' budget authority, those outreach funds shall not be counted as part of a district's in-kind match contribution

**Matching Funds from Outside Sources.** HSC section 44287(e) allows port authorities to provide match funding for port projects. Port authorities may participate through projects involving their own equipment, or by soliciting port tenants to apply for project funding. To encourage port authority participation, port authorities are authorized to put up match funding for port projects, to satisfy districts' match funding obligations. Thus, funding provided by a port authority for a qualifying project, or for associated infrastructure, would count toward the district's matching fund requirement. No more than 30 percent of a district's match obligation shall come from a port authority.

Private companies are not allowed to provide match funding to satisfy the districts' match funding obligation. The requirement that districts provide the matching funds facilitates an equitable distribution of funds, by preventing companies with “deep pockets” from tying up the majority of the funds. This requirement also helps ensure that districts independently evaluate the projects they approve for funding.

#### **D. Cost-Effectiveness**

Carl Moyer Program funding shall only be used to pay for the incremental cost of a project, minus any other public financial assistance, up to the program cost-effectiveness limit. Public financial assistance includes, but is not limited to, Environmental Quality Incentives Program (EQIP) and Federal Transportation Authority (FTA) funds. Only Carl Moyer Program funding, funding under the district’s fiduciary budget authority or funding provided by a port authority (to meet the match fund requirement), is included in the cost-effectiveness calculation. Private funding is not included in the cost-effectiveness calculation. Thus, a project that costs more than the cost-effectiveness limit may be funded, but only if outside funding is used to “buy down” the incremental cost. Funding for infrastructure is not included in the cost-effectiveness calculation. For more details on how to determine the cost-effectiveness of a particular project, see Part II of the Guidelines, Chapters 1-12. A general discussion of the cost-effectiveness calculation methodology is presented in Part IV of the Guidelines, Appendix C.

#### **E. Obligation**

Since the inception of the Carl Moyer Program, ARB has required districts to obligate state funds one year from June 30 of the year the district receives its initial Grant Award and Authorization Form. This requirement ensures ARB that state funds will be spent in a timely manner as required by law.

When obligating funds, districts shall do so by contracting with owners to complete selected projects. Funds are considered to be obligated when the district takes one of the following actions:

- The district’s governing board approves a project for funding through a resolution, minute order, letter or other written instrument.
- The Air Pollution Control Officer (APCO) or designated district staff, if given the authority by the governing board, approves a contract.
- The contract between the district and the owner is fully executed.

Carl Moyer Program funds shall be obligated by a district one year from June 30 of the year a district received its Grant Award and Authorization Form.

In the event previous years' funds were awarded or obligated to projects that withdraw or are terminated, those funds shall be awarded and/or obligated to other projects along with the current year's funds, following the current year's requirements. However, for tracking purposes, they must be reported with the correct previous year's reports.

#### **F. Expenditures**

HSC section 44287(k) requires that Carl Moyer Program funds be expended by a district two years from June 30 of the year a district received its initial Grant Award and Authorization Form. Districts expend funds by paying owners for completing milestones of projects under contract. Prior to paying for a delivered engine/vehicle or making final payment for completed project, the district must receive an invoice from the owner and complete a satisfactory post-inspection.

Some districts withhold a percentage of the grant amount until all annual reporting requirements are met. These withhold payments ensure the owners submit their annual reports and do so in a timely fashion. Districts that have withhold payments as part of the contract with the owner shall count the withhold payments as expended, for the purposes of this section, once the district pays the invoice(s) for all but the withhold amount.

In the event previous years' funds (that were obligated and invoiced) are returned to a district, those returned funds are to be re-obligated to projects along with the current year's funds, and following the current year's requirements. However, for tracking purposes, they must be reported with the correct previous year's reports.

#### **G. "At-Risk" Districts**

In accordance with HSC section 44291(d), ARB shall monitor the districts' implementation of the Carl Moyer Program. The ARB will use the minimum requirements outlined in this chapter as the benchmark for satisfactory implementation of the Carl Moyer Program. The ARB will also evaluate districts' implementation of their local Carl Moyer Program through monitoring and auditing as required. A district will be determined to be "at-risk" if the district fails to demonstrate that it is implementing the local program consistent with this chapter, which includes but is not limited to any of the following:

- Funds not being obligated and/or expended within the required time frames.
- Funds being spent in any way that is not consistent with the requirements of the Carl Moyer Program. For example, not maintaining adequate fiscal and programmatic records.
- Funds being spent in a way that is not consistent with the district's own policies and procedures manual.

- Implementing the local Carl Moyer Program in a way that cannot guarantee the funds are being used for projects that provide real, quantifiable, and surplus emissions reductions within the cost-effectiveness limits.

The ARB shall provide technical assistance to districts that are determined to be “at-risk.” The repercussions for “at-risk” districts that fail to correct deficiencies are outlined, in Section XI - ARB’s Oversight.

## **H. Training and Technical Assistance**

The ARB provides training and technical assistance to districts through several means. On a day-to-day basis ARB maintains regular communication with the local districts through ARB’s district liaison and the district’s Carl Moyer Program contact person. The ARB also provides training and technical assistance when monitoring districts’ performance, including review of projects and reports, and making on-site monitoring visits.

After each Guideline revision, ARB provides training and technical assistance on the changes to the Guidelines. This training is mandatory for all participating districts. The ARB, in conjunction with the districts, also provides training and technical assistance at the quarterly Incentive Program Implementation Team (IPI Team) meetings. All districts must attend at least two IPI Team meetings per year. At-risk districts must attend all IPI Team meetings.

## **III. ARB’s Carl Moyer Program Award Process**

The ARB determines the tentative awards for each year in accordance with the formula identified in HSC section 44299.2(a). The formula provides a minimum allocation of \$200,000 to all districts. Districts that accept only the minimum allocation may request a waiver from the match requirement. With the exception of the South Coast Air Quality Management District (SCAQMD), awards that exceed the minimum allocation of \$200,000 are calculated based on district population, severity of the air quality problems and the historical funding awards under the Carl Moyer Program. The SCAQMD award is based solely on population. Each year, tentative funding awards are provided in the Carl Moyer Program solicitation package.

Districts may request more than the tentative award. In fact, districts are encouraged to request the maximum funding for which they can commit the required match funds. Even though some districts will opt to accept the minimum award and have the match requirement waived, ARB expects that the total funding requested will exceed the funding available. Each year, all funds will be awarded and ARB will determine the final funding award among the districts. If any district requests less than their tentative award, the remaining funds will be allocated among the districts that requested more than their tentative award following the required formula.

Health and Safety Code section 44286 grants ARB the authority to set aside 10 percent of Carl Moyer Program funds for projects to pay for projects that are multi-district in nature. As such, ARB will include an annual 10 percent hold-back from project funds to pay for projects that operate a portion of the time or miles outside their primary district of operation (within California). This includes projects that have significant air quality impacts in neighboring districts as a result of air pollution transport. The ARB's 10 percent hold-back funds will also focus on areas of statewide importance. In Year 7 (fiscal year 2004-2005), ARB prioritized goods movement projects. Examples of multi-district projects funded in Year 7 include construction equipment, marine vessels, line haul trucks and a locomotive.

#### **IV. ARB's Carl Moyer Program Solicitation**

##### **A. Solicitation**

The ARB solicits district applications to conduct a local Carl Moyer Program, by sending solicitation packets to the Air Pollution Control Officer (APCO) at each district. The solicitation packet is also made available electronically on the Carl Moyer Program website. The application packet includes all of the following:

- A cover letter with instructions for completing and submitting the application.
- An application with match requirement information and documentation requirements.
- A match waiver request form.
- A list of the tentative awards.

##### **B. Districts' Carl Moyer Program Applications**

Districts interested in participating in the Carl Moyer Program must submit a completed application packet with all documentation by the posted deadline, which is 60 days from the date of the solicitation. The completed application packet must include the documents described below.

###### **1. Completed Application**

The ARB application must be completed and originally signed. All information requested must be provided or the application will be considered incomplete.

###### **2. Documentation for Match Commitment**

Any district may elect to request the minimum allocation of \$200,000 per year and request a match waiver. Districts that request a match commitment waiver shall document the request by submitting the match commitment waiver request form which commits the district to provide sufficient resources to implement the local

Carl Moyer Program. The match waiver must be originally signed by the APCO. Districts requesting the monetary match waiver are not eligible to receive reallocated Carl Moyer Program funds.

Districts receiving an award that exceeds the \$200,000 minimum allocation must provide documentation of monetary match of district funds that has or will be spent on eligible projects. Projects that have been completed shall be documented by entering or uploading the project data into the Carl Moyer Program database. Future projects shall be proposed by listing the type of monetary match on the application and identifying the source of funds that the district will be using. The ARB staff will verify that the listed amount and source of funds are available for the district to use under the Carl Moyer Program. Districts may also meet up to 15 percent of their match requirement with in-kind contributions.

### **3. Local District Board Resolution**

The application must include a resolution of the district governing board that authorizes the district to participate in the Carl Moyer Program and accept funds from ARB. Districts may want to include language and funding amounts in the resolution that provide the districts with the opportunity to accept additional funds, should additional funds become available. For districts with a match requirement, the board resolution shall authorize the APCO to apply sufficient funding to meet the match requirement. Since Carl Moyer Program funding is now authorized until 2015, districts may include a board resolution, which authorizes the district to implement the Carl Moyer Program for multiple years. Each year the district would document the resolution as still being in effect by simply including a copy of the resolution with the signed application.

### **4. Local Carl Moyer Program Implementation Plan**

The district shall include a Carl Moyer Program implementation plan for obligating the grant award, including, but not limited to, how the district will complete the tasks of outreach, solicitation, application processing, obligation and invoicing of funds, reporting and monitoring. The plan must include a timeline for completing milestones for the identified tasks. Districts that have already submitted their implementation plan in previous years may submit just their timetable for implementation of the milestones and, if appropriate, changes the district is making to the local implementation of the Carl Moyer Program.

### **5. Documentation of Obligation and Expenditure of Previous Grant Awards**

Districts that have previously been awarded Carl Moyer Program funds must have submitted, or submit with the application, documentation of the status (obligation/expenditure) of all previous years' Carl Moyer Program funds for which no final report has been submitted. The details of this status report are described under section IV.F.1., below. ARB reviews the documentation to evaluate each district's

status of obligating and expending previous years' funds before approving additional allocations. This evaluation ensures funds are expended within the time frames required by the HSC section 44287(k).

### **C. Review and Approval of Carl Moyer Program Applications**

The ARB receives the applications and determines if each application is complete. If the application is incomplete, ARB shall provide the district with a written explanation of what is missing from the application within ten working days of receipt of the application. Once the district application is complete, ARB shall verify all commitments of monetary match and, complete a review of all previous years' Carl Moyer Program funding.

While districts may apply for funding each year, beginning with Year 9 (fiscal year 2006-2007) for the Year 10 funding application, ARB specifies minimum requirements regarding the amount of funds that each district must obligate from previous awards in order to receive a grant award in the new funding cycle. The requirements are as follows:

- Any district receiving the minimum award of \$200,000 that has not obligated at least 50 percent of their funds from the previous year shall not be eligible to receive funds for the current fiscal year.
- Any district receiving more than the minimum award of \$200,000 that has not obligated 70 percent of their funds from the previous year shall only be eligible to apply for a reduced award amount and shall not be eligible to accept additional funds, should they become available.

Any district that has not met the obligation requirements by the application deadline may still reserve funds for the current year. However, the district will be given a grant award that contains conditions requiring that the district must obligate and provide documentation of that obligation for an increased percentage (70 percent for districts that requested the minimum allocation and 90 percent for districts that requested more than the minimum allocation) of their allocation by April 30 of the current year. Any district that fails to meet this obligation requirement shall have their current year's allocation cancelled or reduced. ARB will consider the amount of funds that can be reasonably obligated in consultation with the district.

ARB shall redistribute any cancelled funds following the formula identified in HSC section 44299.2(a). However, only those districts that have applied for additional funds during the application period, and have met the match fund requirements and the obligation requirements will be considered in the formula.

- Districts may elect to return unobligated funds from previous years to obtain their full current year award.

- “At-risk” districts are only eligible to apply for funds once corrective action has been taken and the “at-risk” determination has been removed.

Complete applications, which fulfill all criteria, shall be approved no later than 60 days after receipt. On a case-by-case basis, ARB may elect to approve an application that is missing a particular item and make the submittal of that item a stipulation of the Grant Agreement. For example, sometimes district staff is unable to obtain a board resolution before the application deadline. In such a case, ARB may allow a board resolution to be submitted with the signed Grant Agreement or prior to the district’s initial disbursement.

#### **D. Final Grant Awards**

Once all of the districts’ applications have been approved, ARB will determine the final awards. Final awards are incorporated into the Grant Award and Authorization with the districts. The Grant Award and Authorization Form shall specify the amount of each districts’ award that are from the smog check fee, the tire fee and for outreach. The ARB prepares and submits two original copies of the Grant Award and Authorization Forms to qualifying districts. The districts review and have the authorized person (usually the APCO) originally sign both copies of the agreement. The districts retain one fully executed copy of the agreement for their files and return one original copy of the fully executed agreement to the ARB. April 30 of each year is the deadline for acceptance of a grant award. From June 30 following the full execution of the agreement, the districts have 12 months (one year) to obligate and 24 months (two years) to expend the grant award.

#### **E. Disbursement Requests to Districts**

##### **1. Initial Disbursements**

In order to receive a disbursement, each district must submit a Grant Disbursement Request to ARB. The Grant Disbursement Request form must be signed by a district board-authorized party. If there are stipulations on the Grant Award and Authorization form, all stipulations must be met prior to submitting the initial disbursement request. For the initial disbursement, districts may request up to ten percent of their allocation or \$100,000, whichever is greater. If a district submits a request that documents the need for more than ten percent or \$100,000, to the satisfaction of ARB, a larger disbursement may be made. In addition, districts may request half of their administrative funds. Districts will receive one check for both administration and project funds. However, districts must account for the administration and project funds separately.

Prior to receiving the initial disbursement, districts must submit documentation of the obligation and expenditure of previous years’ Carl Moyer Program and required matching funds as follows:

- Obligation and expenditure of 100 percent of all Carl Moyer Program funds and required district match from allocations awarded 2 or more years previous.
- Obligation of at least 90 percent of the previous year's Carl Moyer Program and required match funds.

Districts that maintain withhold payments to ensure owners submit annual reports, shall count those withhold payments as expended when calculating the percentage of funds expended for the purposes of this section.

## **2. Additional Disbursements**

For additional disbursements of Carl Moyer Program funds, districts must submit a Grant Disbursement Request and provide documentation of obligation of previous and current years' funds as follows:

- Obligation of 100 percent of all previous years' funds, documented by entering or uploading the projects' information into the database and the submission of a copy of pertinent pages (initial page, signature page and page describing the project) of the executed contracts for the same projects.
- Obligation of 50 percent of the initial disbursement, documented by entering or uploading the projects' information into the database and submitting a copy of approval by board resolution, minute order, or board letter; APCO approved contracts; or, fully executed contracts. On a case-by-case basis, ARB may accept other documentation of the commitment to obligate current year's funds.

Districts may request the other half of their administrative funds when 50 percent of their Carl Moyer Program funds have been obligated. Districts will again receive one check for both administration and project funds and must account for the administration and project funds separately.

## **3. Earned Interest**

Any Carl Moyer Program funds provided by the State that are deposited in interest bearing accounts must be reported to ARB. The interest income must be used to fund projects that meet the current Carl Moyer Program Guidelines. Projects funded by interest earned shall be entered or uploaded into the database and included in the final report of the year from which the interest accrued.

## **F. District Reporting Requirements**

Districts are required to report on the status of each year of Carl Moyer Program funding three times. The required reports - the status, annual and final reports - are described below. Districts that fail to submit a satisfactory annual report on a timely basis shall be

deemed “at-risk.” Districts that fail to submit satisfactory initial and final reports may also be deemed “at-risk.”

## **1. Status Report**

Each district shall submit their status report to ARB in mid-November at the time Carl Moyer Program district applications are due. If a district is not applying for the next year’s Carl Moyer Program, the district shall submit the status report, by itself, by November 15. The report shall use the ARB prescribed format to indicate the district’s progress in meeting its projected milestones from its current year’s Carl Moyer Program funds. This report shall be made publicly available. Funds that have been obligated to projects shall be documented by updating the project data in the Carl Moyer Program database. While not being termed “at-risk,” any district that has not met the minimum obligation requirement of their funds (50 percent of funds obligated for districts receiving the minimum allocation or less and 70 percent of funds obligated for districts receiving more than the minimum allocation), at this time, shall be monitored more closely by ARB and may be provided extra training and technical assistance. In addition, any district not meeting the minimum obligation requirement shall either not be eligible for funding or only be eligible for the minimum award as specified in Section IV.C. of this chapter.

If a district has not already done so, the district shall submit their written policies and procedures manual for the implementation of the Carl Moyer Program as part of the status report. If all funds have been obligated, the database updated, and the policies and procedures manual submitted to ARB by the November 15 deadline, the status report will (with ARB approval) satisfy the requirement for the annual report.

## **2. Annual Report**

Districts shall submit an annual report by or before June 30 of the year following their allocation. This report shall be made publicly available. At a minimum, districts shall submit a brief narrative report on their implementation of the Carl Moyer Program and update all of their project information in the database to assure data is current and accurate. The brief narrative shall specifically include information on:

- Total applications received.
- Efforts to meet environmental justice mandates, if required.
- Efforts to outreach to potential zero-emission and small business projects.
- Monitoring and auditing efforts and results.
- Enforcement actions and recaptured funds, if any.
- Outstanding features and accomplishments.

- Challenges in implementation.
- For Year 8 only, information on the average and median time to obligate funds (from receipt of application to execution of contract).

The update of the project information shall include the following:

- Carl Moyer Program projects, including those funded by state funds (specified by smog check or tire fee), interest accrued on state funds, and local matching funds.
- Other projects funded by AB 923 (Light Duty Vehicle, Lower Emission School Bus, and Agricultural Assistance Programs).
- Any significant deviations relative to the original project shall be provided as an update. The status of emissions reductions by projects in the implementation phase is assumed to be as originally submitted, unless updated by the district.
- Copies of executed contracts for all Carl Moyer Program projects and AB 923 funded projects. Districts may make and submit one complete copy of their standard contract format and then submit only the pertinent pages (initial page, signature page and page describing the project) of the agreements to ARB. Districts are required to submit only one copy of each agreement or the pertinent pages of each agreement.

If a district has previously submitted a satisfactory annual report, all funds have been expended and the database updated, the district may complete a combined annual and final report brief narrative, which will (with ARB approval) satisfy the requirement for the final report.

### **3. Final Report**

Districts shall submit a final report no later than June 30 of the second year following their award or after all Carl Moyer Program funds and local match commitment have been expended. This report shall be made publicly available. At a minimum, districts shall submit a brief narrative report on their implementation of the Carl Moyer Program and update all of their required project information already entered into the database and any new project information. The brief narrative shall specifically include information on:

- Results of environmental justice efforts, if required.
- Results of outreach efforts to zero-emission and small business projects.
- Monitoring and auditing efforts and results.

- Enforcement actions and recaptured funds, if any.
- Outstanding features and accomplishments.
- Challenges in implementation.
- For Year 8 only, information on the average and median time to expend funds (from contract execution to invoice payment)

The update will ensure that the data in the database is current and accurate. The update shall include all of the following:

- Modifications to Carl Moyer Program projects, including both state funds, interest accrued on state funds, and local matching funds.
- Modifications to AB 923 funds obligated for projects not meeting Carl Moyer Program requirements.
- Any significant deviations relative to the original project shall be provided as an update. The status of emissions reductions by projects in the implementation phase is assumed to be as originally submitted, unless updated by the district.
- Copies of executed contracts, as listed in item two above, that obligate Carl Moyer Program and local match funds to projects, which were not previously submitted.
- Copies of invoices that document the amount Carl Moyer Program funds and local district match expended for each project.

#### **G. Policies and Procedures Manual**

Each District shall maintain a current policies and procedures manual, which is in conformance with or more stringent than these guidelines. The policies and procedures manual must, at a minimum, include the overall plan and day-to-day process for the districts' implementation of the following tasks as outlined in this chapter:

- District solicitation (including outreach efforts to environmental justice communities, to small businesses, and for zero-emission projects) and project acceptance.
- Project selection.
- Obligation of funds to projects.
- Contract development and boilerplate language.
- Monitoring of projects.

- Expending the funds.
- Auditing of projects, and when necessary recapturing funds.
- Reporting to ARB.
- Requesting disbursements from ARB.

The policies and procedures manual shall be submitted to ARB for approval with the Year 8 status report by November 15, 2006, or with the next year’s Carl Moyer Program application in November 2006, and with any substantive revision thereafter.

#### **H. Timeline for Each Year of Funds**

<b>Mid-September</b>	ARB solicits applications from the districts based on tentative awards
<b>Mid-November</b>	ARB receives applications from the districts including districts’ status report from the previous year
<b>Early January</b>	ARB notifies districts of final awards
<b>April 30</b>	District deadline to accept or decline funds
<b>June 30 following year</b>	Districts’ annual report to ARB – funds must be obligated
<b>June 30 of second year</b>	Districts’ final report to ARB – projects invoiced and paid for, funds expended

#### **V. District Solicitation and Project Acceptance**

Each district must maintain and follow written policies and procedures for soliciting and accepting projects. ARB encourages districts to provide clear and detailed information to the owner regarding the reporting requirements and consequences for failure to demonstrate achievement of emissions reductions.

##### **A. Outreach**

Outreach prior to and during the time frame of the solicitation is critical for the success of a local program. The districts shall focus their outreach in a way that encourages applications from all sectors, including environmental justice communities, small businesses, and zero-emission projects. Below are brief descriptions of the types of practices that should be included as part of a district’s outreach activities.

## **1. List of Interested Parties**

Districts should maintain a list of interested parties throughout the year and mail a notification to the parties on the list when funds are available. This list should also include prior applicants, public agencies (e.g. public works departments, sanitation departments, school districts), engine dealers/distributors, and where appropriate, port authorities, and farm bureaus.

## **2. Local Newspaper Announcement**

Districts are encouraged to put an announcement in local newspapers, in locally based trade newsletters including the local farm bureau and in the trade journals of organizations representing zero-emission technologies such as the Clean Cities Coalition and WestStart-CALSTART.

## **3. Web Site Notification**

If the district has a website, the Carl Moyer Program solicitation should be advertised on the district's website. Similarly, if the district has a newsletter, the Carl Moyer Program solicitation should be advertised in the district's newsletter.

## **4. Prior Participants**

Districts should solicit additional projects from prior participants with successfully implemented projects, especially during monitoring visits.

## **5. Small Business**

Districts are encouraged to expand the participation of small business by advertising to targeted industries, offering workshops to the engine dealer network, and offering to assist small business owners with the completion of the application. For example, many urban districts have found the construction industry to be a viable source of projects, when the districts provide outreach, training and technical assistance to the many small businesses that own qualifying equipment.

## **6. Agricultural Community**

Districts with agricultural communities are encouraged to contact the local agricultural department and request that a flyer is posted that will be visible to farmers when they come in to get their pesticide use permits.

## **7. Advertising**

Districts may consider requiring their grantees to place a logo or decal on the new engine(s) advertising that the engine was funded by the district and ARB with Carl Moyer Program funds.

### **B. Environmental Justice**

It is important that projects funded under the Carl Moyer Program benefit all Californians especially those in communities disproportionately impacted by air pollution. As such, ARB encourages all districts to incorporate an environmental justice component in their local Carl Moyer Programs. Districts with a population greater than 1 million inhabitants are required to provide funding to projects that benefit environmental justice areas (HSC section 43023.5). This will continue to be a requirement and an important component of the Carl Moyer Program for these districts. These districts are encouraged to continue updating current written policies and procedures, where necessary, to define the environmental justice areas within district boundaries. They must market the Carl Moyer Program to owners that operate or are based in environmental justice areas. These districts must select from their applicant pool in a way that ensures that 50 percent or more of their Carl Moyer Program funds (including the smog check fee, and adjustment to the tire fee) are expended on projects that are located and/or operate in environmental justice areas. The ARB also recommends these districts expend 50 percent or more of their \$2 MV Fee funds on projects that are located and/or operate in environmental justice areas.

### **C. Project Solicitation**

Below are brief descriptions of the options districts typically use for accepting applications. Districts may solicit two years of funds with one solicitation in order to stay current with the obligation requirements. When combining two years of funds in one solicitation, however, the previous year's funds must be obligated first.

#### **1. Over the Counter**

The over the counter method is also referred to as a first-come first-served application process, where the district announces the first day project applications will be accepted. Applications are accepted until all of the funds are obligated. This method provides districts with smaller populations a greater opportunity to garner Carl Moyer Program eligible projects. This method may also maximize flexibility for applicants by allowing them to apply at any time, up until the funds run out.

#### **2. Notice of Funds Available (NOFA)**

The NOFA method is also referred to as Request for Proposals (RFP), or Call for Projects. Districts following this method announce an application deadline for all proposals to be submitted. This method allows proposals to be accepted from the date

of the solicitation to a specified date and time. This method provides districts with a high demand for Carl Moyer Program funds with the opportunity to select the most cost-effective projects that meet local criteria through a competitive rating and ranking process.

#### **D. Project Applications**

For consistency throughout the Carl Moyer Program, to assist applicants statewide and to limit confusion, ARB encourages all districts to use the same application form for the Carl Moyer Program. The application is available on the Carl Moyer Program web site at <http://www.arb.ca.gov/msprog/moyer/moyer.htm>. Districts that use their own application form shall ensure it includes all the information the ARB application includes, as listed in each source category chapter. A few districts run their local Carl Moyer Program concurrently with other local heavy-duty incentive programs, which use one combined and unique application form. In these cases districts will have unique application forms.

No matter which forms are used, districts' applications must include a disclosure statement that the owner (or the owner's designee) must initial/sign. The disclosure statement certifies that the owner has not submitted and shall not submit an application for Carl Moyer Program funds to any other district and/or the ARB for the same project. Owners are allowed to re-apply for project funding only if a previous application for the same project has been rejected and is no longer being considered for funding. In addition, owners are required to disclose the value of any current financial incentive that directly reduces the project price, including tax credits or deductions, grants, or other public financial assistance, for the same engine. The incremental cost of the project shall be reduced by the amount of the current financial incentive. Any owner or owner's designee who is found to have submitted multiple applications for the same engine and/or not disclosed any current financial incentive shall, at a minimum, be disqualified from funding for that engine from all sources and may also be banned from submitting future applications to any and all Carl Moyer Program solicitations. In addition, as a violation of law, including but not limited to the Business and Professional Code, ARB and the districts may levee fines and/or seek criminal charges.

Third party applications are not allowed. The owner of the engine must sign and agree to the application. However, a third party (e.g. engine dealer or distributor) may complete an application or part of an application on an owner's behalf. Applications must include a signature section for third parties. The third party signature section must include signature and date lines, and blanks for the third party to list how much they are being paid, if anything, to complete the application and what source of funds are being used to pay them. To make the Carl Moyer Program accessible to all potential applicants, including applicants who cannot afford to hire third party assistance, districts are encouraged to provide technical assistance to applicants in completing the application.

## **1. Completeness of Application**

In accordance with HSC section 44288(a), districts must review all applications for completeness upon receipt and notify the applicants in writing if their application is not complete within five working days of receipt of the application. The notification must clearly state what is required to make the application complete. A copy of the notification must be maintained with the application. This written notification must be accomplished using one of the options below:

- A letter, sent through the U.S. mail.
- An email message.
- A boiler plate form with check-offs.

No matter what method is selected, the notification must be copied, with the original handed or sent to the owner and the copy must be placed in the applicant file along with a copy of the incomplete application. Districts are encouraged to assist applicants, especially small business applicants, in completing their applications. Districts may determine that an application is not in good faith, credible or in compliance with the Carl Moyer Program and its objectives.

## **2. Eligibility of Projects**

All complete applications that are in good faith, credible, and in compliance with the Carl Moyer Program and its objectives, must be reviewed by the district for eligibility. This process must include all of the following:

- Entering or uploading the data from the application into the database or the database calculator to ensure it meets the emission reductions and cost-effectiveness criteria of the Carl Moyer Program.
- Checking to ensure the project meets all of the minimum requirements outlined in the chapter for the appropriate category.
- Maintaining a record of the eligibility verification in the applicant file.

### **E. Application Tracking**

Districts must have a system for tracking applications. Districts may use the database to track applications. At a minimum, the tracking system shall include the name and address of the owner, the category, and type of baseline engine. The district shall also maintain a copy of each application and a file for each selected project. A district may use a solely electronic file system only after the district satisfactorily demonstrates to ARB that all documentation is maintained and can be easily accessed on demand.

## **VI. Project Selection**

The districts have the authority and responsibility for selecting Carl Moyer Program eligible projects in their areas. Once a district has checked the eligibility of projects, the district must follow its policies and procedures manual in selecting projects to fund. The record of each project's rating and ranking, receipt date, or other project selection criteria must be maintained with the application. Districts may choose to disqualify an application if the applicant defaulted or otherwise violated the terms of a previous Carl Moyer Program contract or other incentive program contract. Districts must ensure that selected projects are surplus to compliance deadlines of adopted regulations.

The requirements in the following paragraph apply to those districts that do not currently operate and maintain their own database.

At this time, the project information shall be entered into the database to ensure the project meets the emission reduction requirements and cost-effectiveness criteria of the Carl Moyer Program. No project shall be funded unless the database indicates the emission reduction requirements and cost-effectiveness criteria of the Carl Moyer Program have been met. If the database indicates the project does not meet either the emission reduction requirements or the cost-effectiveness criteria of the Carl Moyer Program, and the district representative thinks the project should actually qualify, the district representative may contact his or her ARB liaison to determine if the project is, in fact, eligible.

Districts that currently operate and maintain their own database will upload their project information when the district requests disbursement of funds from the ARB.

Once a project is selected, a flag shall be set in the database indicating that the project has been selected for funding. The project shall be assigned a Carl Moyer Program project number by the ARB database. Districts may continue to use their own numbering system within their district. All exchanges between ARB and the districts shall utilize the standardized project grant numbering system, and may also use the district's number system upon request.

Districts shall make every effort to process an application and grant an award rapidly. The district shall provide ARB with information on the average and median time frames to award grants as part of the districts' Year 8 annual report. A file shall be created for all projects selected for funding. Grant award notification shall be in writing, and a copy of the grant award notification letter must be maintained in the applicant file.

## **VII. Obligation of Funds to Projects**

Districts shall obligate their allocation of Carl Moyer Program funds consistent with other sections of this chapter. In addition, districts that have a match requirement must obligate their match funds in a way that meets all of the Carl Moyer Program criteria. Districts must document their in-kind support with fiscal records of resource allocations

to the Carl Moyer Program. Districts may meet up to 15 percent of their match funding requirement with in-kind contributions.

For ease of financial tracking of funds, and to the maximum extent practical, projects should be paid entirely through either ARB funds or district match funds. If ARB funds and district match funds must be mixed, it shall be for only one project and, if the project is for more than one engine, for only one engine. If funds from two years or phases of the programs are used for a project, the funds must be either ARB funds or district match funds but not both.

### **VIII. Minimum Contract Requirements**

When paying for projects using Carl Moyer Program funds, districts must enter into a contract with the applicant. The contract must be signed and the project milestones (e.g. engine delivery, engine installation, final inspection, and acceptance) shown in the contract must be met before Carl Moyer Program funds are given to an applicant. The equipment must be operating before the final payment is issued. In order to provide consistency in contract requirements throughout the Carl Moyer Program, staff has conducted an extensive review of contracts used by many local districts participating in the Carl Moyer Program. Staff also conducted several working group meetings to determine the minimum content for contracts used by districts under the Carl Moyer Program. Based on this research and input from districts, all districts participating in the Carl Moyer Program are required to incorporate the following minimum requirements in contracts entered into with applicants who have been selected to receive funds under the Carl Moyer Program. Samples of contract terms from existing districts' contracts are provided to districts upon request. Actual language in each district's contracts shall be established by the district in consultation with the district's legal staff.

#### **A. Party Names and Date**

All contracts shall state the name of the district and the owner as parties to the contract. All contracts shall also state that, in addition to enforcement by the district, the ARB, as an intended third party beneficiary, reserves the right to audit and enforce the terms of the contract at any time during the contract term.

#### **B. Contract Term**

All contracts shall provide the term of the contract. The term of the contract must extend to the end of the project life and shall include both the project completion and project implementation time frames. The contract term shall include two main time frames – project completion and project implementation/life periods – to ensure that the district and ARB can fully enforce the contract terms during the life of the Carl Moyer Program-funded project.

Contract Term = Project Completion + Project Implementation/Life

## **1. Project Completion**

The project completion time frame is the first part of the contract term. Project completion is the time frame starting with the date of execution of the contract to when the project is complete i.e., becomes operational. This includes the time period when an engine or vehicle is ordered, delivered and installed. Districts may require periodic reporting during this time frame. The contract shall include a specified time frame in which project completion shall occur, so that the funds are expended within the two-year required timeframe. The contract shall also require that no work may begin on the project until the contract is fully executed.

## **2. Project Implementation/Life**

The project implementation/life time frame is the second part of the contract term. The project implementation time frame equals the project life. Project life is the number of years that a Carl Moyer Program project obtains or is claimed to obtain surplus emission reductions while operating in California. Surplus emission reductions are reductions that are early or extra. That is, the reductions occur prior to a rule compliance date or the reductions exceed the requirements of a rule or regulation.

The contract shall specify that the project implementation equals the period of time during which the owner is required to operate and maintain their Carl Moyer Program-funded engine/vehicle according to the terms of the contract. The contract shall specify that by executing the contract, the owner understands and agrees to operate the engine/vehicle according to the terms of the contract and to cooperate with the district and ARB in implementation, monitoring, enforcement, and other efforts to assure the emissions benefits are real, quantifiable, surplus, and enforceable. The minimum project implementation time frame shall be three years, unless otherwise approved in advance by the ARB. The maximum project implementation/life is defined in the following chapters under each specific source category. A local air district must inform ARB if the district imposes additional restrictions on the project life for any source category. The project implementation time frame includes the district monitoring and ARB auditing phases which may run concurrently or sequentially:

- During all or a part of the project implementation term, the district is responsible for monitoring the project to assure the project is operational and emissions reductions are realized. The contract shall require the owner to report at least annually to the district on the operation of the vehicles or equipment during this district monitoring phase. The contract shall inform the owner that noncompliance with the reporting requirements shall require on-site monitoring. The district monitoring phase shall match the project life when the project life is less than five years. When the project life is more than five years, the district monitoring phase shall be for a minimum of five years.

- While the district remains responsible for the enforcement of the contract, the district shall also include language in the contract that clearly states the owner understands and agrees that the ARB has the authority and reserves the right to monitor and enforce the terms of the contract at any time during the project life to ensure emission reductions are obtained for a minimum of 75 percent operation within California or as specified in the contract for marine projects, including the period between 5 years and the end of the project life for those projects with project lives that are more than 5 years. The contract shall also inform the owner that ARB will seek whatever legal, equitable, and other remedies are available under State law for the owner's failure to comply with the Carl Moyer Program requirements and failure to fully perform under the contract.

The contract term may also outline other timing requirements. For example, districts may include a requirement that the owner sign and return the contract by a certain date or the Board's obligation of funds to the project is nullified.

### **C. Payment**

In order to ensure that the district and ARB are paying only for the incremental cost of eligible items, paying only once for each engine, and the equipment being paid for is operating, all contracts must include the following payment terms.

#### **1. Maximum Contract Amount**

The maximum contract amount (which is the incremental cost, partial incremental cost, or funding cap), must meet the required minimum cost-effectiveness limit. The maximum contract amount may never exceed the incremental cost. If a district desires to have their maximum contract amounts in round numbers, the district is only allowed to round down.

#### **2. Itemized Invoices**

Payment terms must require itemized invoices from the engine supplier for repowers or paid invoices from the vehicle owner for new vehicles and satisfactory post-inspection by the district prior to payment of the owner's invoice. Partial payments may be made only if the payment process and requirements have been reviewed and approved by the district. Payments shall be made directly to the project applicant only if the invoice has been paid and the payment is a reimbursement. Payments may be made to the engine dealer or distributor only if such payment arrangements are specified in the contract.

#### **3. Disclosure of Funds**

The owner (or owner's designee) must initial/sign a disclosure statement. The disclosure statement certifies that once the owner (or the owner's designee) signs this contract for this project, the owner (or designee) shall not submit another application or sign another contract for the same specific engine(s) with any other source of funds,

including but not limited to, other districts or to ARB for a multi-district solicitation. Any owner or owner's designee who is found to have submitted multiple applications or signed multiple contracts for the same engine(s) shall, at a minimum, be disqualified from funding for that engine(s) from all sources and may also be banned from submitting future applications to any and all Carl Moyer Program solicitations. In addition, as a violation of law, including but not limited to the Business and Professional Code, ARB and the districts may levee fines and/or seek criminal charges.

#### **4. Non-Compliance Terms**

Districts shall include terms to cancel contracts or withhold payment for non-compliance with or not meeting the obligations of the contract, and may include a term that cancels the contract if it is not executed by the owner in a timely manner.

##### **D. Carl Moyer Program Criteria**

All contracts shall include basic Carl Moyer Program Guidelines. Contracts must contain either a general statement of compliance with all Carl Moyer Program Guidelines and/or outline those requirements, as follows:

- The project shall not be required by any local, state and/or federal rule, regulation or MOU currently in effect.
- The low emissions technology must be certified or verified (as outlined in the following source category chapters) and meet the current NOx, PM and/or ROG requirements. If the low emissions technology is not certified or verified it may be approved based on an ARB case-by-case evaluation. When approved by an ARB case-by-case evaluation, the method for emissions verification must be included as part of the contract.
- Rights to the emission reductions must not be claimed by any participant as emission reduction credits or in an averaging, banking, and trading program.
- The new engine/equipment/vehicle must not have been purchased prior to the effective date of the contract or the date of the governing board's approval, if applicable, whichever occurs first. The purpose of this requirement is to avoid funding of engines purchased prior to implementation of the contract, which would violate the Carl Moyer Program statutory provisions.
- The existing (old) engine must be destroyed and rendered useless. Destruction methods for the vehicle in the fleet modernization category and for the vehicle and engine in the light duty category are further described in those chapters. Engines must have a complete and fully visible and legible engine serial number in order to be eligible for an engine repower. The destruction of the engine must be documented by the district seeing the destroyed engine or the receipt from the qualified vehicle salvage yard (see Part II, Chapter 2: Fleet Modernization, Salvage

Requirements for definition). Engines without a visible and legible serial number may be repowered if district staff stamp the engine block with the Carl Moyer Program project number and district staff is present to personally verify engine removal from the project vehicle or equipment and the subsequent engine destruction. ARB will consider alternatives to stamping the engine block on a district-by-district basis.

- The new engine/vehicle/equipment must remain in service for the project life; operate in California as per the source category requirements specified in the following chapters; and, operate a specified amount. The district may specify minimum operating requirements within air district or air basin boundaries.

#### **E. Maintenance of the Engine/Vehicle**

All contracts shall require the owner to maintain the engine/vehicle according to the manufacturer's specifications for the life of the project. This includes a requirement for no tampering. The owner is also responsible for maintaining a working hour meter, or other approved usage measuring device, for projects that document hours of operation as a means of calculating emissions reductions and cost-effectiveness. If the hour meter/usage device fails, the owner remains responsible for validating any hours not recorded by the hour meter/usage device. The owner must either repair or replace the non-operating meter/device or provide other documentation of equipment operating hours acceptable to the district.

#### **F. Project Specifications and Performance Expectations**

All contracts shall include detailed information on the baseline engine. This detailed information shall include at a minimum, the make, model, model year, horsepower and serial number of the baseline engine. All contracts shall also include the same detailed information on the new engine. This requirement may be met by including the project application as an attachment to the contract. An engine, which meets or exceeds the certification of the proposed engine, may be substituted with prior approval of the district. All contracts shall specify the amount the engine is to operate based on hours, miles or fuel usage within California (or the district) each year. Due to fluctuations in weather and other unforeseen circumstances, districts may average multiple years' usage to determine annual usage.

#### **G. Repercussions for Nonperformance**

The contract must outline the repercussions to the owner for nonperformance and for not meeting any of the obligations of the contract. The contract must also inform the owner that ARB and the district have the authority to fine the owner or seek other remedies available under the law for noncompliance with Carl Moyer Program requirements and nonperformance with the contract. Districts may consider unforeseen circumstances beyond the owners' control in determining repercussions for nonperformance.

## **H. On-Site Inspections**

All contracts shall include language that allows the district, ARB or their designee(s) to inspect the engine(s) and/or records relating to the engine during the term of the contract.

## **I. Auditing**

All contracts shall include language that allows for fiscal auditing by the district, ARB or a third party designee during the life of the project.

## **J. Records and Records Retention**

All contracts shall include language requiring the owner to maintain records and retain the records for at least three years after the term of the contract.

## **K. Reporting**

All contracts must include a provision for owners to submit, at a minimum, annual reports commencing one year after project completion and annually thereafter for the district monitoring and auditing phase of the contract. The district shall include the dates the annual report is due. The owner shall also submit a copy of evidence of the appropriate insurance. If the district monitoring phase of the contract term exceeds five years, the owner's reporting responsibility may be reduced to once every other year after the initial five years of reporting. If the project is a zero-emission technology, reporting may be reduced to biennially for the first six years, and no annual reports are required thereafter.

## **L. Insurance**

All contracts shall require owners to carry and (as required by annual reports or requested during monitoring and auditing) provide proof of insurance covering the new engines throughout the term of the agreement. A district may require more or additional insurance.

## **M. Notices**

All contracts shall include contact information for both parties to the contract, and how to send and receive notices.

## **N. Signature Blocks**

All contracts must include signature blocks with an area for the dates that the contract is signed.

## **O. Optional Contract Terms**

All districts have the option to include other terms and conditions in their agreements. Below, are contract terms that are used by some districts. Even though they are not required, all districts have the option of including the following additional contract terms:

### **1. Severability**

If any part of agreement is found invalid by a court of law, the severability contract term maintains the enforceability of the remainder of the contract.

### **2. Tax Implications and Information**

Each district should consult with its tax attorney regarding potential tax implications for the owners and what, if any, actions the district will take as a result of the attorney's assessment.

### **3. Non-Allocation of Funds**

If funds are not available from ARB, this contract term provides the district the ability to cancel the contract

### **4. Decals**

Districts may want to add a contract term to require a decal to be affixed on the new engine. This is one method for outreach.

### **5. Electronic Monitoring Unit**

Some categories (marine, locomotive and fleet modernization) require the installation of an Electronic Monitoring Unit (EMU). Contracts for those categories must include a contract term for EMUs. Districts may require the installation of an EMU with each new engine for other categories as well. The EMU is a Carl Moyer Program eligible expense and may be added to the incentive amount as long as the project still meets the cost-effectiveness cap. Districts may allow projects with EMUs to complete all reporting through the electronic data system.

### **6. Incorporate the Application**

In order to assure the baseline engine in the application is the one being replaced, districts may want to incorporate the application by reference.

## **IX. Districts' Monitoring Requirements**

### **A. Pre-Inspection**

Once an application is deemed eligible and before contract execution, a pre-inspection shall be completed by the district. The one exception is for public agencies (e.g. public works departments, transit organizations, and school districts). Districts may choose to allow public agencies to provide documentation of the engine and its use.

The pre-inspection shall, at a minimum, include collecting the serial number of the baseline engine and verifying the information in the application about the baseline engine (make, model, model year, horsepower). The pre-inspection shall also verify the engine is operational (with a start up) and that the engine is working as described in the application (document function and use). A photo shall be taken for the file. The photo must include the applicant's name, the date and the serial number of the engine.

A pre-monitoring form shall be used to document the pre-inspection. The required elements for a pre-inspection form include all of the following:

- Owner's name, address and telephone number.
- Location of the engine.
- Verification of the baseline engine information (make, model, model year, horsepower, and serial number) as described in the application.
- Space for the inspector to record whether the engine is in running condition, make comments, and attach pictures.

A hard copy of the completed pre-inspection form shall be maintained in the project file. Districts may utilize paraprofessional staff, with training, to complete pre-inspections. Districts may also complete the Carl Moyer Program pre-inspections in combination with permit inspections.

### **B. Post-Inspection**

Post-inspections shall be completed on all projects funded under the Carl Moyer Program. The post-inspection shall occur after the district receives an invoice from the owner for an engine, but prior to the district paying for that engine (or making final payment for the engine). For public fleets, such as transit organizations, where more than 20 of the vehicles in the fleet are included in the project, the district may choose to inspect a random sample of the vehicles included in the project. The sample size must be statistically significant.

The district's post-inspection must verify that the engine listed in the contract was installed. The inspector shall record the information from the plate (serial number,

make, model, model year, and horsepower) on the inspection form and verify it with the information listed in the contract. The engine must be operational in the equipment or vehicle as stated in the contract. The inspector must visually witness all engines start up and mobile projects run. The vehicle or engine information must be documented with pictures.

Where applicable, the post-inspection shall also verify that the baseline engine or vehicle is destroyed and rendered useless. Depending on the method of destruction selected, the inspector must see the destroyed engine, witness the engine destruction, and take photos of the destroyed engine. The photos shall include the name of the owner and date of the inspection. For engines with a complete, fully visible and legible engine serial number, the district must see the destroyed engine or the receipt from the qualified vehicle salvage yard. For engines without a complete, visible, and legible serial numbers, the district staff must stamp the engine block with the Carl Moyer Program project number and be present to personally verify engine removal from the project vehicle or equipment and the subsequent engine destruction. ARB will consider alternatives to stamping the engine block on a district-by-district basis. The district must follow all additional requirements for the methods of destruction for fleet modernization and light-duty categories as further described in those chapters.

A post-inspection form shall be used to document the post-inspection. The required elements for a post inspection form include all of the following:

- Owner's name, address and telephone.
- Location of the engine.
- Baseline engine information (make, model, model year, horsepower, and serial number) as written in the application and/or contract.
- Space for the inspector to record whether the engine was scrapped or destroyed.
- New engine information (make, model, model year, horsepower, and serial number).
- Space for the inspector to record whether the engine is in running condition and make comments.

Photos shall be maintained with the hard copy file or electronically and made available upon ARB request. The completed form shall be maintained in the project file. Final payment shall only be made to an owner once a satisfactory post-inspection has been completed.

### **C. Annual Reports**

Districts shall require all owners to submit annual reports commencing one year after project completion and annually thereafter for the term of the contract. The annual

report shall be in a format prescribed by the district and shall contain all of the following information:

- Owner's name, address, and telephone number.
- Location of the engine.
- Engine information (make, model, model year, horsepower, and serial number).
- Condition of the engine, including current working condition and any major maintenance of the engine that significantly affected the annual usage of the engine.
- Any conditions (e.g. weather, permits) that significantly affected the annual usage of the engine.
- Readings of the usage meter (hour meter, odometer, EMU, etc.).
- A copy of evidence of the appropriate insurance.

The districts shall review the annual report for completeness, accuracy, and usage. A hard copy of the annual report and a written record of the district's analysis of the annual report shall be maintained in the project file. If the project performed 30 percent above or below the usage specified in the contract, the district shall flag the project. Any project that has been flagged for performance shall be evaluated over a multiyear basis. If the project's usage does not average out to within 30 percent of the usage specified in the contract over at least a 3 year period, the district shall take appropriate action to ensure the contracted emissions reductions are realized. Appropriate actions include, but are not limited to, recapturing funds from the project in proportion to the loss in emissions reductions.

There are a few situations whereby the district may reduce annual reporting requirements. If the district's monitoring phase of the contract term exceeds five years, the owner's reporting responsibility may be reduced to once every other year after an initial five years of satisfactory reporting. If the project involves a zero-emission technology, reporting may be reduced to biennially for the first six years and no annual reports are required thereafter. If the project has an EMU, the annual report may be collected through the electronic data system.

If an annual report is incomplete, inaccurate or not received from an owner on schedule the district shall make a reasonable attempt to obtain the complete and accurate report from the owner. If the district is unable to obtain the report, all of the engines in that project shall be audited by the district. Owners with outstanding reports shall not be granted any additional Carl Moyer Program funds until all reports are satisfactorily submitted. Districts may bar an owner from applying for any additional Carl Moyer Program funds, if that owner has a history of not submitting satisfactory annual reports.

## **D. Audits**

Districts shall audit at least ten percent (or a statistically significant number) of the projects that have more than a three-year project life and are within two years of contract expiration. In addition, district audits shall include all of the projects whose owners fail to report annually. The audit shall be completed by district staff and shall include verification that the engines paid for are still operational in the same equipment and meet the mileage, fuel usage, or hours of operation indicated on the executed contract. This shall be completed by checking the serial number of the engine; witnessing the engine operate; and checking the odometer, hour meter/usage device, fuel receipts, or EMU.

Districts shall also randomly audit at least five percent (or a statistically significant number) of the projects at the end of the contract term. Districts shall also include those projects whose owners failed to report annually and those projects that were found to be below the level of use during the audit two years prior to the end of the contract. The audit shall be completed by district staff and shall, at a minimum, include verifying that the engines paid for are still operational in the same equipment and meet the mileage, fuel usage, or hours of operation indicated on the executed contract. This shall be completed by checking the serial number of the engine; witnessing the engine operate; and checking the odometer, hour meter/usage device, fuel receipts, or EMU.

If the project is more than 30 percent below or above an annual average of the level of use outlined in the contract, the district shall take appropriate action to ensure the emissions benefits are realized and captured during the term of the contract. In addition, the district shall audit all of the other engines owned by the same participant and included in the same Carl Moyer Program funded project.

## **X. Expenditure Requirements**

The final payment for a project shall only be made after a post-inspection is satisfactorily completed (see post-inspection section above) and all invoices have been received and approved. The district shall review the itemized receipts and only pay for eligible expenses. Eligible expenses are limited to those mechanical items that are necessary to complete the installation of the new engine or retrofit. At the discretion of the district the labor and sales tax directly associated with that installation may be included. The district shall maintain copies of all invoices and documentation of payment in the project file. For all on-road projects, if a compliance check was not previously completed, the district shall verify with its ARB district liaison that there are no outstanding violations prior to payment.

Districts may make progress payments to owners provided the progress payments are based on a predetermined schedule that is set forth in the contract between the district and the owner. Those progress payments shall only be made after the owner provides the district with sufficient evidence of completing predetermined milestones (e.g.

delivery of an engine). The district must maintain a clear record of progress payments in the file and in the administration/fiscal unit of the district. Progress payments include final payments that are withheld until all reporting requirements are met, also known as withhold payments. For purposes of ascertaining the percentage of funds expended to qualify for disbursement requests, districts that demonstrate the maintenance of withhold payments as a part of contracts with owners, may count the value of the withheld payment as expended once all other invoices for the project are paid.

## **XI. ARB's Oversight**

The ARB's oversight responsibilities for the Carl Moyer Program are multifaceted. The ARB must ensure that the emission reductions claimed by the Carl Moyer Program are real, surplus, enforceable, and quantifiable. The ARB is responsible for ensuring the funds are expended on projects that meet and follow the Health and Safety Code and Carl Moyer Program Guidelines. The ARB is also responsible for reviewing districts' progress obligating and expending statewide funds, ultimately determining, when necessary, the need to reallocate funds within a funding cycle. The ARB may contract with an independent third party to ensure the structure of the Carl Moyer Program ensures the integrity of the program. The ARB staff shall report to the Board annually on the progress of the Carl Moyer Program. In carrying out these responsibilities, ARB maintains a close working relationship with the districts.

### **A. Monitoring and Auditing of District Programs**

Monitoring is an ongoing process that is designed to provide training and technical assistance, as well as oversight, to the districts. Throughout the implementation of the Carl Moyer Program, ARB completes desk reviews of district programs, on-site monitoring, and audits. Desk reviews include reviewing project data to ensure emissions reductions and cost-effectiveness meet Carl Moyer Program Guidelines, and are real, surplus, enforceable, and quantifiable. At a minimum, the project data review shall occur when a district obligates funds on June 30 one year after the award of funds, and on June 30 two years after the award of funds. During the project data review, any Carl Moyer Program funds expended on a project or portion of a project that ARB finds, through its monitoring and auditing of districts, to not be eligible shall be documented as a finding in the district's audit. The ARB will work closely with the district to determine the appropriate action necessary to rectify the incorrect project selection. If the correction is not made by the district, the district will be deemed "at risk."

The ARB also reviews all districts' Carl Moyer Program policy and procedures manuals to ensure they are consistent with Carl Moyer Program rules, guidelines, and advisories. This review shall be completed at the time of the initial report, and when determined necessary by ARB.

The ARB shall complete on-site monitoring on at least 5 percent of district projects, that were funded in the last completed funding cycle, for at least 4 districts per year. Due to statistical significance in random sampling, ARB may monitor up to 100 percent of the

projects of a district if the district funds 20 or less projects per year. During the on-site monitoring, ARB shall review and verify that project data, emission reductions and cost-effectiveness meet Carl Moyer Program Guidelines and advisories, and all emission reductions are real, quantifiable, and surplus. The ARB's on-site monitoring includes randomly selecting a sample of at least 5 percent of the projects funded in one funding cycle, completing an on-site file review, and project field review for each sampled project. The on-site monitoring also includes reviewing the implementation of the district's local program for consistency with Carl Moyer Program Guidelines, advisories, and the district's policies and procedures manual. This includes reviewing administrative (i.e. fiscal) controls.

Auditing is a periodic formal process designed to assess each district's implementation of the Carl Moyer Program and that its implementation is consistent with all applicable rules, regulations, and guidelines, including the district's own policies and procedures manual. Audits may be fiscal, programmatic, or both. A district may be audited with or without a previous monitoring or auditing. For example, the State Bureau of Audits may audit a district whether or not ARB has previously monitored or audited the same district. An audit may include all components of both desk and on-site reviews. The ARB may include an audit of the Carl Moyer Program with any other scheduled ARB audit of a district. The ARB may also designate a third party auditor to perform the audit.

At the conclusion of monitoring and/or auditing, ARB shall provide the district with a written report. This written review shall include, if applicable, any deficiencies in the district's program that require correction. The district will have 30 calendar days, from the date of the written report, to correct the deficiencies and respond in writing to the report. The ARB staff will provide the district with the opportunity for training and technical assistance to develop and implement a corrective action plan. If ARB determines the district has not taken adequate corrective action within the allotted 30 days, the district will be deemed "at-risk"; the district shall not be eligible to apply for future funding; and ARB shall hold at least one public meeting to consider public comments prior to recapturing all Carl Moyer Program funds that have not been obligated by the district. When recapturing project funds, ARB may also recapture administrative funds associated with the project funds. The ARB shall reallocate those funds to districts that are eligible to receive additional funds based on applications for the same fiscal year.

## **B. ARB Administrative Action**

The administrative actions described in this section are the procedures ARB shall follow to recapture funds. The HSC section 44287(k), requires any funds not expended by a district by June 30 of the second calendar year following the date of the reservation, to revert back to the ARB as of that June 30. Those funds shall be recaptured and reallocated to another district or districts based on applications for the same fiscal year. The HSC section 44287(k) also requires that any district whose allocation has been

recaptured remain eligible to reserve funds for local administration of the Carl Moyer Program.

### **1. “At-Risk” Districts**

Any and all districts that have not provided an annual report documenting the obligation of all of their funding by June 30 of the year following their award are defined as an “at-risk” district. Any district that has been identified as “at-risk” by ARB will receive a letter from ARB by July 30 of the year following the district’s award (or as soon thereafter as practically possible) stating the reason the district has been identified as “at-risk.” The ARB notification letter will also require the district to develop and submit an acceptable remedial plan within 30 calendar days from the date the district receives notification (sent certified mail) from ARB.

### **2. Submittal of a Remedial Plan**

The remedial plan shall include all of the following:

- An outline of milestones the district will follow to fully obligate the remainder of their allocation by December 30.
- An outline of milestones to completely expend the funds by the second June 30 following their award.
- An annual report documenting the amount of match and Carl Moyer Program funds the district has obligated to date.

Upon receipt of the remedial plan, ARB will review and approve or disapprove the plan as acceptable. If a district does not submit an acceptable plan within 30 calendar days, the ARB shall begin administrative action to recapture the funds from that district. When recapturing project funds, ARB may also recapture administrative funds associated with the project funds. The ARB will reallocate those funds to districts that are eligible to receive additional funds based on applications for the same fiscal year.

### **3. ARB Assistance to Meet Acceptable Remedial Plan**

Once an acceptable remedial action plan is submitted by an “at-risk” district, ARB will provide the district with technical assistance to and monitor the district’s progress in meeting the milestones in the remedial plan. This will require the “at-risk” district to update and submit reports on progress in meeting their milestones as required by ARB. If the “at-risk” district falls 30 or more days behind its remedial plan, ARB will take administrative action to recapture the remaining unobligated Carl Moyer Program funds from that district. Those funds will be reallocated to districts that are eligible to receive additional funds based on applications for the same fiscal year.

#### **4. Obligation and Expenditure of Match Funds**

If a district has obligated funds from an allocation, and any of the allocation has been recaptured by the ARB, the district remains responsible for obligating and expending all of the required match for the obligated amount of the allocation. No further disbursements from any allocation will be made to a district that has an outstanding match requirement from any previous allocation.

##### **C. ARB Allocation of Recaptured District Funds**

When ARB recaptures funds in any fiscal year, ARB will only consider the districts that have applied for and have sufficient match to accept additional funding for the same year and type of (district or multi-district) allocation. The ARB will not consider any districts that are “at-risk” at the time of this allocation. The ARB is not able to reallocate funds to any district receiving the minimum award of \$200,000 unless that district is able to provide match funds for the minimum award of \$200,000 plus any additional funds applied for.

Once ARB has a list of districts with sufficient match and that are not “at-risk,” ARB will use the following steps to allocate the recaptured funds to the district(s) that are eligible to receive an additional award.

- The ARB will first try to allocate funds to districts that are located in the same air basin as the district from which the funds have been recaptured.
- If there are no districts in the air basin that have sufficient match and are in good standing, then ARB will allocate the funds to districts that have projects that travel through the same air basin as the district from which the funds were recaptured.
- If there are no districts that have projects that travel through the same air basin, ARB will allocate the recaptured funds to the districts that have already obligated all of their allocation of that same FY funds; and, are the first, or among the first, to propose a Carl Moyer Program eligible and viable project, which will be completed (funds obligated and expended) within two years of the original allocation of the reallocated funds.

The new allocated funds must be spent in the same category (district or multi-district) from which they came. These funds may or may not include the administration funds originally associated with them.

##### **D. Report to the Board**

The Carl Moyer Program staff shall report to the Board annually on the progress in implementing the Carl Moyer Program. This report will provide the general public with

another opportunity to be advised of the results of the program. This report shall include the following topic areas:

- Total applications received for current year's funds.
- Efforts and results of outreach to potential environmental justice, zero-emission projects, and small business project owners.
- The status of the obligation and expenditure of the current year's funds statewide and by district.
- The status of the obligation and expenditure of previous years' funds statewide and by district.
- District and ARB monitoring and auditing efforts and results, including any audits completed by independent third parties.
- The status of emissions reductions by projects in the implementation phase of their contracts, including reasons for and solutions to shortfalls for projects that do not perform as projected.
- Outstanding features and accomplishments of the districts and ARB.
- Challenges for the districts and ARB in implementing the Carl Moyer Program.

The ARB encourages the districts to report to their governing boards in a similar fashion.

## **XII. References**

ARB, 1998. Air Resources Board. ARB 1998 Criteria and Guidelines for the Use of Motor Vehicle Registration Fees.

<http://www.arb.ca.gov/planning/tsaq/mvrfp/criteria/criteria.htm>

ARB, 2002. Air Resources Board and Office of Environmental Health Hazard Assessment. Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates.

<ftp://ftp.arb.ca.gov/carbis/regact/aaqspm/isor.pdf>

ARB, 2005. Air Resources Board. Staff Report: Review of California Ambient Air Quality Standards for Ozone. <ftp://ftp.arb.ca.gov/carbis/regact/ozone05/isorv3.pdf>

Avol, E.L., et al. 2001. Respiratory effects of relocating to areas of differing air pollution levels. *Am J Respir Crit Care Med*, 164: 2067-2072.

Gauderman, W.J., et al. 2002. Association between air pollution and lung function growth in Southern California children: Results from a second cohort. *Am J Resp Crit Care Med*, 166(1): 74-84.

McConnell, R., et al. 2002. Asthma in exercising children exposed to ozone: A cohort study. *Lancet*, 359: 386–391.

Peters, A., D.W. Dockery, J.E. Muller, and M.A. Mittleman. 2001. Increased particulate air pollution and the triggering of myocardial infarction. *Circulation*; 103: 2810-2815.