

**2012 Annual Report to the Governor and Legislature on the  
Air Resources Board's Expenditure of Fees on Nonvehicular  
Sources, Consumer Products, and Architectural Coatings for  
Fiscal Year 2011-2012**

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Electronic copies of this report can be obtained at:

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# **2012 Annual Report to the Governor and Legislature on the Air Resources Board's Expenditure of Fees on Nonvehicular Sources, Consumer Products, and Architectural Coatings for Fiscal Year 2011-2012**

## **Introduction**

Health and Safety Code (HSC) sections 39612 and 39613 authorize the Air Resources Board (ARB) to assess permit fees on nonvehicular sources and fees on manufacturers of consumer products and architectural coatings in order to recover the costs of ARB programs related to these sources. HSC section 39612(g) also requires ARB to report to the Governor and the Legislature on the expenditure of the fees collected. The facilities subject to the nonvehicular fees are those authorized by the air pollution control and air quality management districts (air district) to emit 250 tons or more per year of an air pollutant that forms ozone or particulate matter. The fees for consumer products and architectural coatings apply to manufacturers with total sales in California that result in emissions of 250 tons per year or more of volatile organic compounds (ozone precursors).

For fiscal year (FY) 2011-2012, ARB staff sent out fee invoices totaling \$20 million, plus adjustments (3 percent Adjustment Amount and Carry-over Balance), which are explained below, to partially fund program expenditures. Pursuant to HSC sections 39612 and 39613, the fees fund programs that allow ARB to fulfill responsibilities as California's designated air pollution control agency for all purposes set forth in federal law, as specified in HSC section 39602, and to carry out activities necessary to implement the California Clean Air Act of 1988 and as amended. This report provides information on the program activities that were funded by the fees.

## **Fiscal Year 2011-2012 Fee Collections**

ARB staff prepares fee invoices (determinations) pursuant to California Code of Regulations sections 90800.8(c) and (d). To ensure collection of the needed funds authorized by the Legislature, the Board approved two adjustments to be made to each fiscal year's fee determinations pursuant to section 90800.8(c)(6). For the first adjustment, staff is to include up to a 3 percent Adjustment Amount, as defined in section 90800.8(c)(2), to the needed revenue to recover unforeseen reductions in collection of funds due to unexpected business closures and bankruptcies. From experience, staff has determined that 3 percent is the appropriate Adjustment Amount, which adds about \$600,000 to the fee determinations when the needed revenues are \$20 million. Staff may make a second adjustment to the current fiscal year's fee determinations if there is a Carry-over Balance, as defined in section 90800.8(c)(3), from the amount collected in the previous fiscal year in excess or below the needed revenues for that fiscal year.

Collections of funds may fluctuate from fiscal year to fiscal year. Collections may be impacted for a number of reasons including business closures and bankruptcies; loss of fee payers when emissions fall below applicable thresholds; addition of newly identified fee payers; and changes in fee payers' emissions. A Carry-over Balance may occur with either a low or high rate of collection. Any excess funds collected are carried over to reduce the total fee determinations for the next fiscal year. Any amount of funds undercollected will be added to increase the total fee determinations for the next fiscal year.

In FY 2011-2012, staff sent out fee determinations totaling about \$21.2 million. The amount over the \$20 million in needed revenues included a Carry-over Balance from FY 2010-2011, of about \$500,000 under collected, and a 3 percent Adjustment Amount, of about \$600,000.

Fee collections for FY 2011-2012 are shown in Table 1 below. As shown in Table 1, about \$21.2 million was collected. The amount over \$20 million collected in FY 2011-2012 is a Carry-over Balance that will be applied to reduce fees for FY 2012-2013.

**Table 1  
Fees Collected for Fiscal Year 2011-2012**

<b>Activities</b>	<b>Fees Collected</b>
Facilities	\$12,382,305.12
Consumer Products and Architectural Coatings	\$8,820,412.20
<b>Total Collected</b>	<b>\$21,202,717.32</b>

Following Table 1 are descriptions of the specific activities that were funded by the fees.

### **Major Activities Funded by the Fees**

The fees collected by this program are used in part to implement requirements related to federal and state mandated air quality standards. Implementation activities include air quality monitoring, air quality data assessment, emission inventory development, research, test method development, modeling, air quality planning, regulatory development, implementation of certification programs, product sampling and laboratory analyses, and enforcement. Below is an overview of key programs that are funded through the fees.

#### **Rule Development and Implementation**

##### ***Consumer Products and Architectural Coatings***

During FY 2011-2012, ARB staff began work on two rulemakings, as described below. In support of a rulemaking for aerosol coating and aerosol adhesive products,

staff evaluated and summarized the 2010 Aerosol Coating and Adhesive Products Survey. Preliminary data summaries were released in September 2011 and further detail was provided in February 2012. Staff also participated in an aerosol technology seminar presented by industry stakeholders at our Sacramento offices. Work on this rulemaking is ongoing and is expected to be completed in the fall of 2013. The documents pertaining to this rulemaking effort are available at: <http://www.arb.ca.gov/consprod/consprod.htm>.

Staff also developed a proposal to amend the Consumer Products Regulation to modify provisions for automotive windshield washer fluid products. Although the Board Hearing approving the amendments occurred in FY 2012-2013, much of the work to support this rulemaking occurred during FY 2011-2012. Rulemaking documents are available at: <http://www.arb.ca.gov/regact/2012/cp2012/cp2012.htm>. The amendments became legally effective on July 1, 2013.

Additionally, many consumer products implementation activities are ongoing. For example, staff reviewed and evaluated requests and applications for product determinations, charcoal lighter material certifications, alternative control plans and annual reports, and innovative product exemptions. Staff responded to numerous inquiries from manufacturers, consultants, product certification/labeling programs and other regulatory agencies (including federal, local, other states and Canadian and Chinese air quality management/air pollution control agencies). As required by regulation, staff also conducted an assessment on the feasibility of a 2013 volatile organic compound (VOC) limit for multipurpose lubricants and penetrant products. The evaluation indicates that manufacturers are on track to comply.

Also, ARB staff assisted the air districts in developing rules to implement the 2007 architectural coatings Suggested Control Measure, which included rule language development, emission reduction calculations, and review of staff reports and regulatory language.

## **Air Monitoring and Laboratory Analysis**

### ***Consumer Products and Architectural Coatings***

ARB staff conducted laboratory analyses of products submitted for determination of compliance with applicable VOC and reactivity limits. When appropriate, test results were used to support follow up enforcement efforts. In response to several external inquiries/requests, laboratory staff conducted special studies involving: (1) evaluation of solvents with respect to low vapor pressure VOC criteria; (2) analysis of hydrocarbon solvents to determine the most appropriate analytical method to identify and determine their product-weighted maximum incremental reactivity values; (3) evaluation of the applicability of Method 310, which determines the VOC content in a product and the presence of any compounds prohibited by ARB regulations, for analysis of several new and proposed categories of consumer products; (4) analytical method development for new and proposed categories, including analytical procedures to measure the aromatic compound content in paint thinners and multi-purpose solvents and the VOC content of fabric softener dryer sheets; and (5)

analytical method development for lower standards of existing categories, including an analytical procedure to measure VOC content in products with high water content.

### ***Nonvehicular Sources***

Activities include measuring ambient air levels of gaseous and particulate criteria air pollutants from samples collected from the State's air monitoring network. These efforts are used in measuring progress towards attainment of the State and federal ambient air quality standards in various parts of the State.

## **Enforcement**

### ***Consumer Products and Architectural Coatings***

During FY 2011-2012, ARB staff collected 2,391 samples of household and institutional consumer products during inspections conducted statewide at a variety of retail stores, commercial businesses and internet sites. Sample selections focused on automotive specialty products, hair styling products, lubricants, paint thinners, solvents, and imported products. In addition, staff followed up on several complaints regarding noncompliant consumer products. After an initial evaluation to determine compliance with the administrative requirements of the consumer product regulations, the samples were submitted for laboratory analysis to determine compliance with applicable VOC and reactivity limits.

The laboratory results for approximately 836 samples indicated that the products may have exceeded the VOC limits. Investigations were conducted to determine if a violation had occurred, identify the parties involved, and determine the magnitude of the violations. Other violations for failure to display the date of manufacture, submit requested reports, or obtain certification were pursued. As a result of these investigations, ARB issued 66 notices of violation during the FY. After conducting office conferences, ARB staff worked to resolve the enforcement cases through administrative or civil actions. During the FY, staff settled 47 cases. The \$1,350,500 in penalties collected helped to mitigate more than 71 tons of excess emissions resulting from these violations.

Some significant cases involved repeated sales of noncompliant automotive windshield washer fluid products, substantial sales of noncompliant hair styling products and a general purpose degreasing product that contained a toxic air contaminant. In each case, Enforcement Division staff worked alongside ARB attorneys. Two of the cases required a civil complaint to be filed by District Attorneys representing ARB in California Superior Courts.

### ***Nonvehicular Sources***

ARB's enforcement programs and activities include assisting local districts with inspections of stationary sources, investigating complaints, issuing notices of violations, evaluating district variances for compliance with statutory requirements, obtaining and analyzing evidence to determine the date of onset, cause, and extent

of violation of air pollution regulations, and reviewing air district rules for enforceability. Some key programs and activities are described below.

- **Stationary Source Investigations, Inspections, and Surveillance:** Conducting joint investigations of cross media environmental cases, and providing enforcement assistance to local air districts and other local and regional environmental agencies.
- **Complaint Investigations and Hotline:** Responding to air pollution complaints, conducting investigations, and referring them to other agencies when appropriate.
- **Variance Program:** Reviewing all air district hearing board orders for compliance with HSC requirements.
- **Air Facility System:** Collecting and conducting quality assurance on data received from 26 of the 35 air districts for federally required compliance, permitting, and violation status of major sources.
- **Continuous Emissions Monitoring Program:** Gathering and analyzing data from emission monitoring devices required by air districts at stationary sources.
- **Rule Review:** Reviewing air district rules for enforceability, compliance with State laws, clarity, and accuracy.
- **Fuels Enforcement:** Conducting random inspections of fuel facilities, including refineries, distribution terminals, import vessels, and retail outlets, by obtaining samples of motor vehicle fuel to evaluate compliance with the motor vehicle fuel regulations.
- **Enforcement Training:** Conducting and administering comprehensive educational courses in stationary source enforcement throughout the State on air pollution history; procedures required to properly evaluate emissions; analysis of industrial processes; theory and application of emission controls; and waste stream reduction.
- **Compliance Assistance:** Developing a variety of practical, rule-specific publications that describe source processes and emission control equipment, clarify rule requirements, identify compliance issues, and promote self-regulation.

## Research

Activities undertaken to address air pollution include investigating the reactivity of VOCs and the atmospheric processes that contribute to ozone and particulate matter formation, conducting vulnerable populations and children's exposure and health studies, and research to support future updating of ambient air quality standards.

- **Secondary Organic Aerosol (SOA) Formation: Chamber Study and Model Development:** The University of California, Riverside completed a project on SOA formation from VOCs entitled, "SOA Formation: Chamber Study and Model Development." This study updated and improved the Statewide Air Pollution Research Center's (SAPRC) chemical mechanism to model the formation of particulate matter to support California's State Implementation Plan (SIP). This was accomplished by conducting numerous experiments in the University of California, Riverside environmental chamber. This project started in June 2009 and was completed in May 2012. The final report is posted at: <http://www.arb.ca.gov/research/apr/past/08-326.pdf>.
- **Improving Chemical Mechanisms for Ozone and Secondary Organic Carbon:** The University of California, Davis proposal entitled "Improving Chemical Mechanisms for Ozone and Secondary Organic Carbon" continued during FY 2011-2012 (initiated in early 2012) and is now underway. The primary objective is to build on the above study by further updating and comprehensively evaluating the detailed SAPRC mechanisms that predict both gas phase and particle phase criteria pollutant concentrations. The project consists of three tasks: 1) Update the SAPRC SOA mechanism, 2) Update the modeling scenarios used in reactivity assessments, and 3) Evaluate organic nitrate and nitrogen pentoxide (N<sub>2</sub>O<sub>5</sub>) chemical mechanisms and assess their impact on SOA formation. The project is expected to be completed in 2016.
- **Environmental Exposures in Early Childhood Education Environments:** The University of California, Berkeley study entitled "Environmental Exposures in Early Childhood Education Environments" continued during FY 2011-2012 and was completed in August 2012. This study examined indoor and outdoor levels of VOCs, particles, pesticides, phthalates, flame retardants, metals, and perfluorinated compounds at 40 day care centers and preschools in northern California. Formaldehyde and other chemicals were found at levels above health-based guidelines. A fact sheet and press release regarding the study, and the final report, are available at: [http://www.arb.ca.gov/research/single-project.php?row\\_id=64830](http://www.arb.ca.gov/research/single-project.php?row_id=64830).
- **National Oceanic and Atmospheric Administration (NOAA)-California ARB Field Study:** Four research contracts which collected ambient VOC data during the NOAA-California ARB field study, CalNex 2010, continued in FY 2011 – 2012 to conduct data validation and analysis activities. These contracts are: "Source Apportionment as a Function of Altitude of Atmospheric Aerosols in California," "Airborne and Ground Based Whole Air Sampling During CalNex," "Characterization of the Atmospheric Chemistry in the Southern San Joaquin Valley," and "Hourly In-situ Quantitation of Organic Aerosol Marker Compounds." The investigators of the atmospheric chemistry and aerosol marker contracts are analyzing the data to better determine the roles of various pollutants and chemical reactions contributing to violations of the ozone and particulate matter<sub>2.5</sub> (PM<sub>2.5</sub>) ambient air quality standards. These contracts started prior to 2010 and are near completion.



- **Modeling Formation and Evolution of Secondary Organic Aerosols during CalNex 2010:** The University of Colorado, Boulder started a study entitled “Modeling the Formation and Evolution of Secondary Organic Aerosols during CalNex 2010” in April 2012. Results from this study will be used to help identify sources of SOA and improve ARB’s air quality modeling for SIPs. This project is scheduled to end in March 2015.
- **Extended Analysis of Aerosol Chemistry Data obtained during the Carbonaceous Aerosols and Radiative Effects Study (CARES) to Characterize Sources and Processes of Organic Fine Particulate Matter in Sacramento Valley of California:** The University of California, Davis started a study entitled “Extended Analysis of the CARES Aerosol Chemistry Data to Characterize the Sources and Processes of Organic Fine Particulate Matter in the Sacramento Valley of California” in April 2011. This data analysis effort is scheduled to end in March 2014.
- **Determination of Spatial Distribution of Ozone Precursor and Greenhouse Gas Concentrations and Emissions in LA-Basin:** The University of California, Los Angeles started a study entitled “Determination of the Spatial Distribution of Ozone Precursor and Greenhouse Gas Concentrations and Emissions in the LA-Basin” in April 2010. Spectroscopic measurements are being made from an observatory on Mt. Wilson, and computer codes and algorithms are being further developed to interpret the data. This project is scheduled to end in March 2014.
- **Airborne Multi-Axis Differential Optical Absorption Spectroscopy (AMAX-DOAS) Trace Gas Column Observations from Research Aircraft over California:** The University of Colorado, Boulder started a study entitled “AMAX-DOAS Trace Gas Column Observations from Research Aircraft over California” in February 2010. Remote sensing (an AMAX-DOAS instrument) from on board a NOAA Twin Otter research aircraft during CalNex2010 measured horizontal and vertical distributions of trace gases (formaldehyde, glyoxal and nitrogen dioxide) over the South Coast and San Joaquin Valley air basins. This study is analyzing the trace gas measurements and comparing them with atmospheric models to test emissions, transport and photochemical transformation of hydrocarbons with the overall objective of improving air quality models. This project is scheduled to end in January 2014.

### **Air Quality Planning**

Activities necessary for air quality attainment planning include developing, maintaining and updating emission inventories; evaluating air quality trends and indicators; and conducting sophisticated air quality modeling. These activities are necessary for development and implementation of air quality plans for ozone and particulate matter. During the FY, staff worked directly with air district staff on their plans for attaining the federal 24 hour PM<sub>2.5</sub> standard. Several planning related

activities are identified as priorities under HSC section 39612(c) and are described below.

## **Status of Program Activities**

The following sections discuss the status of activities related to five specific areas outlined in HSC section 39612.

### **Updating the Emissions Inventories**

ARB compiles, maintains, and is constantly working to improve a very detailed and complex inventory of air pollution sources. Emission inventories form the basis for air quality planning and regulatory development processes. It is also an important ARB research category. ARB routinely publishes the inventory for all California air basins. In FY 2011-2012, some of the major activities ARB completed related to emissions inventories include the following:

- **Preparation of PM<sub>2.5</sub> Emission Inventories:** ARB and the local air districts continued working on the development of plans for attainment of the federal 24 hour PM<sub>2.5</sub> air quality standard. During FY 2011-2012, ARB staff led the preparation of the emissions inventory that has now been used in the air quality modeling to demonstrate attainment of the standard in future years. One of the most important components of this effort was updating growth assumptions to reflect the recent economic downturn and its effect on the expected emission trends in the near and long term. Other ongoing efforts to improve the emissions inventory include continuous refinements of ARB's methodologies for estimating area source emissions; improvements to size and speciation profiles for particulate matter; and regular review and updating of rule-specific control profiles as rules are adopted and/or amended.
- **Developing Air Quality Plans:** As part of the San Joaquin Valley Air Pollution Control District's (SJVAPCD or SJV District) 24 hour PM<sub>2.5</sub> SIP development, ARB staff attended a workshop to answer questions related to the emission inventory. ARB staff also conducted a technical seminar at the SJV District to explain the emission inventory, air quality modeling, and the pollutants that are significant precursors for PM<sub>2.5</sub>. In support of the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP), ARB staff conducted weekly calls to coordinate air quality modeling and emission inventory efforts. All of this work during FY 2011-2012 culminated with approval of SJVAPCD's SIP and SCAQMD's AQMP in early 2013.
- **Training for Air District Staff:** ARB provides training and guidance for air district emission inventory staff. In FY 2011-2012, training consisted of one-on-one sessions between ARB's emission inventory staff and air district staff for implementation of the California Emission Inventory Data and Reporting System (CEIDARS). Use of CEIDARS allows air districts to directly transfer emissions from sources in their district to ARB. ARB's emission forecasting team provided

on-going instruction and guidance to air district staff to support their local SIP elements. In addition, ARB hosted periodic Emission Inventory Technical Advisory Committee meetings and workshops to keep air districts informed on its emission inventory program.

- **Web Accessibility:** ARB maintains web-based tools that give air districts direct access to their emission inventory data. These tools are augmented and enhanced on a continual basis. Extensive emission inventory reference and documentation is available on-line ([www.arb.ca.gov/ei/ei.htm](http://www.arb.ca.gov/ei/ei.htm)) for those who are creating and/or using emission inventories. These web tools allow air districts and the general public to obtain and review emission inventory data in a number of ways.

### **Identifying, Assessing, and Mitigating the Transport of Air Pollutants**

ARB assesses the contribution of ozone and ozone precursors from upwind regions on ozone concentrations in downwind regions. To address this ozone transport, ARB (1) identifies air district transport couples, (2) assesses the relative contribution of upwind emissions on downwind ozone concentrations, and (3) establishes mitigation requirements commensurate with the level of contribution.

ARB uses air quality models to account for transport in the development of air quality plans. Beginning in the late 1990's with the Southern California Ozone Study and followed in the early 2000's by the Central California Ozone Study programs, the State was split into two modeling domains, one for Southern California and one for Northern and Central California. Transport relationships between air districts within these large domains are implicitly captured within photochemical models. This is the mechanism ARB uses in its oversight role to ensure transport impacts on downwind areas are addressed for purposes of both State and federal air quality standards. Modeling attainment demonstrations take into account the shared responsibility for reducing emissions in regions where air pollution transport can at times be significant. ARB reviews air quality data every three years and proposes changes to the transport mitigation regulation when warranted by the data.

ARB's transport mitigation regulation established mitigation requirements for upwind areas found to have either overwhelming or significant impacts on downwind areas. The mitigation requirements include application of best available retrofit control technology and requirements that upwind air districts adopt all feasible measures for the ozone-forming pollutants, independent of the upwind air district's attainment status. In addition, they include a requirement that "no net increase" thresholds for new source review permitting programs in upwind areas be as stringent as those in downwind districts.

ARB reviews progress made towards attainment of standards by evaluating air quality data for State and federal designations annually. Included in this evaluation is an examination of progress made in downwind transport-impacted areas as well as upwind areas. ARB conducted a comprehensive review of air quality data in 2011

that was part of recommendations on planning boundaries for areas not attaining the 2008 federal ozone standard. These recommendations were submitted to the United States Environmental Protection Agency (U.S. EPA) in October 2011 and updated ARB's initial recommendations submitted in 2009. One of the components of this analysis was to incorporate the latest scientific understanding of transport upwind contributions so that they were appropriately reflected in recommended boundaries of attainment and nonattainment areas.

Finally, local air districts must frequently update local control strategies to comply with the air quality planning requirements. ARB staff works closely with local air district staff as they develop the required local source control strategies. A key element of ARB's assistance is to ensure that local air districts comply with the requirements for mitigation of transported air pollution.

### **Identifying Indicators to Assess Air Quality Progress**

HSC section 39607(f) requires that ARB, in consultation with air districts, evaluate air quality indicators that can be used to measure progress towards attainment of State air quality standards.

To that end, ARB has developed four air quality indicators for air districts to use in assessing progress toward State and federal standards, which are: (1) expected peak day concentration, (2) population-weighted exposure, (3) area-weighted exposure, and (4) air quality contour maps designed to assess spatial ozone air quality progress within an air basin or nonattainment area. Air districts have used these indicators in assessing progress in their State ozone plan updates. Every three years, ARB provides technical assistance and data to air districts so they can use the indicators to assess progress toward attainment of the State's 1-hour peak, and 8-hour average ozone standards.

The air quality contour maps have been used to evaluate how air quality has changed spatially in an area over time. Various reports and documents rely on them to help the public better understand progress made towards attainment of State and federal air quality standards.

ARB provides the public with easy access to air quality data and indicators through numerous web pages. Air quality data as well as emission projections into the future for various source categories can be viewed at <http://www.arb.ca.gov/adam/>. A real-time air quality database is also available, which is an important tool that allows the public and air districts to continually track and measure progress. Real-time air quality data are available at: <http://www.arb.ca.gov/aqmis2/aqmis2.php>.

### **Methodology for Assessing Population Exposure**

As required, ARB established a uniform method for air districts to assess population exposure to air pollution at levels above ambient air quality standards. ARB provides information and assistance for assessing exposure for use in ozone attainment plans on an ongoing basis.

## **Ranking Control Measures for Stationary Sources**

Since enactment of the California Clean Air Act in 1988, ARB has implemented a number of programs that have generated stationary source control measures for direct administration by ARB or for adoption and implementation by local air districts. All of these programs have assessed and incorporated metrics of cost-effectiveness in selecting appropriate levels of emission control. Such programs and studies include:

- **Identification of Performance Standards for Existing Stationary Sources: A Resource Document.** This document was developed in direct response to requirements of the California Clean Air Act. The document identifies source categories and the most stringent performance standards adopted by air districts. Information is continually updated upon review by ARB of newly adopted air district prohibitory rules. The document is available at:  
<http://www.arb.ca.gov/ssps/ssps.htm>.
- **ARB and Air District Measures to Reduce Particulate Matter Emissions:** Information on the most restrictive particulate matter emission reduction regulations adopted by ARB and air districts for a spectrum of stationary, area, and mobile source categories is available at:  
<http://www.arb.ca.gov/pm/pmmeasures/pmmeasures.htm>.
- **Statewide Best Available Control Technology (BACT) Clearinghouse:** ARB and the California Air Pollution Control Officers Association maintain a database of BACT decisions for use in the permitting of new stationary sources. These control equipment and emission limit specifications serve as the basis for identifying new stationary source regulations to be considered by air districts when air quality plans are upgraded to meet new more stringent State air quality standards. In FY 2011–2012, ARB responded to a request by the U.S. EPA to begin collecting additional data on cost-effectiveness of control strategies deemed BACT for new projects. These additional data have been incorporated into the clearinghouse. This database is available at:  
<http://www.arb.ca.gov/bact/bact.htm>.
- **Reasonably Available Control Technology (RACT)/Best Available Retrofit Control Technology (BARCT) Databases:** A provision of the California Clean Air Act requires air districts to adopt RACT and BARCT rules to reduce emissions from existing stationary sources when air districts are in nonattainment for State air quality standards. These requirements are periodically updated through the collaborative efforts of ARB and air districts via the rule review process using cost-effectiveness and emission reduction analyses of current emission control technologies. Information is available at:  
<http://www.arb.ca.gov/ractbarc/ractbarc.htm>.

## Additional Activities

- **California Green Chemistry Initiative:** As part of ARB's participation in the Leadership Council for the California Green Chemistry Initiative, staff continued to provide input on proposals released by the Department of Toxic Substances Control (DTSC) for its work on Safer Consumer Products Alternatives regulations. Staff participated in workshops conducted by DTSC and the Green Ribbon Science Panel in FY 2011-2012. A regulation was proposed in July 2012, and revised text was released in early 2013. Information on the DTSC's Green Chemistry activities is available at: <http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/index.cfm>.
- **Exposure Scenarios and Modeling Analyses:** Staff developed exposure scenarios and modeling analyses to determine if adverse exposures could result if dimethyl carbonate (DMC) were to be excluded from the definition of VOC in the Consumer Products Regulation. The scenarios included use of DMC in architectural coatings, automotive maintenance and repair products (i.e. brake cleaners), and paint thinners. The architectural coatings exposure assessments were conducted to assist air districts with their VOC exemption evaluation. Staff's review started in 2010 and was completed in early 2012. Based on this review, an exemption request for DMC was denied in April 2012.
- **"Environmental Science & Policy" Journal Article:** Staff authored a journal article entitled "Comprehensive environmental impact assessment of exempt volatile organic compounds in California" published in "Environmental Science & Policy" in October 2011 (volume 14, issue 6, pages 585-593).
- **Criteria and Toxic Pollutant Emissions Summary Report:** Staff wrote a report summarizing criteria and toxic pollutant emissions from facilities that are permitted to burn waste tires as a supplemental fuel. This information is compiled and published annually through coordination with the local air districts in accordance with section 42889.4 of the California Public Resources Code.
- **"Atmospheric Environment" Journal Article:** Staff authored a journal article entitled "Ozone Forming Potential of Organic Compounds from Different Emission Sources in the South Coast Air Basin of California," published in Atmospheric Environment in August 2012 (volume 55, pages 448-455).
- **Fee Emissions Evaluation and Revisions:** Staff evaluated consumer products and architectural coatings manufacturers' requests for revisions to their VOC emissions estimates which are used to assess fees that fund the activities described in this report.
- **SIP Modeling and Planning:** Staff developed a suite of improved species profiles for more than 100 consumer product categories to update the consumer products emissions inventory for SIP modeling and planning purposes.

- **VOC Exemption Evaluation:** A petition to provide a VOC exemption for trans 1,3,3,3-tetrafluoroprop-1-ene, also known as HFO-1234ze or Hydrofluoroolefin-1234ze, was received during the fiscal year. Staff consulted with the Office of Environmental Health Hazard Assessment to determine potential health impacts from use of the chemical. Staff's evaluation is ongoing.

## History of the Fee Program

The Legislature enacted HSC section 39612 as part of the California Clean Air Act of 1988. The act requires attainment of State ambient air quality standards by the earliest practicable date. As part of that mandate, the act also requires ARB and the air districts to take various actions to reduce air pollution from motor vehicles, industrial facilities, and other sources of emissions.

As originally enacted, HSC section 39612 authorized the ARB to assess fees on nonvehicular sources (i.e., facilities) that were allowed by air district permits to emit 500 tons or more per year of any air pollutant that forms ozone or particulate matter. In 1989, the Board approved the California Clean Air Act Nonvehicular Source Fee Regulation (Fee Regulation). The original regulation included the fee rate and amounts to be remitted to ARB by the air districts for the first year of the program, fiscal year 1989-1990. In subsequent years, the Board approved amendments to the Fee Regulation identifying the amount of fees to be collected by each air district for the following fiscal year. To streamline the process, in 1998 the Board approved amendments that established a process whereby the ARB Executive Officer assesses the fees administratively.

In 2003, the Legislature enacted Assembly Bill (AB) ABX1 10, which amended HSC section 39612 and added HSC section 39613. ABX1 10 made a number of changes to HSC section 39612, including: (1) increasing the cap on stationary source fees from \$3 million to \$13 million for FY 2003-2004, and allowing the fees to be adjusted annually thereafter for inflation; (2) expanding the universe of facilities subject to the fees by specifying that the fees are to be collected from facilities authorized by air district permits to emit 250 tons (instead of the previous 500 tons) or more per year of any air pollutant that forms ozone or particulate matter; and (3) authorizing ARB to collect the fees directly from all sources subject to the fees. In addition, new HSC section 39613 required ARB to assess fees on manufacturers of consumer products and architectural coatings sold in California. The fees are assessed on manufacturers whose total California sales of consumer products or architectural coatings result in VOC emissions of 250 tons or more per year. ARB must use the fees collected pursuant to section 39613 solely to mitigate or reduce air pollution in the State created by consumer products and architectural coatings. In July 2003, the Board approved amendments to the Fee Regulation to collect the fees authorized by ABX1 10. The full text version of the regulation can be found on ARB's website at: <http://www.arb.ca.gov/regact/feereg03/feereg03.htm>.

For FY 2003-2004, the Legislature authorized ARB to collect \$17.4 million in fees from facilities and consumer product and architectural coating manufacturers. In 2004, the

Legislature authorized ARB to assess an additional \$2.6 million in fees for a total of \$20 million for FY 2004-2005. In November 2004, the Board approved amendments to the Fee Regulation, renamed Nonvehicular Source, Consumer Products, and Architectural Coatings Fee Regulation, to establish a procedure to collect the additional \$2.6 million for FY 2004-2005 from facilities. The amendments also provided for collection from facilities of any legislatively-approved fees in fiscal years beyond FY 2004-2005 that are in excess of \$17.4 million. In each subsequent year, this limitation can be increased by an amount not to exceed the annual percentage change in the California Consumer Price Index as compiled and reported by the Department of Industrial Relations. The full text of the revised regulation can be found on the ARB's website at: <http://www.arb.ca.gov/regact/feereg04/feereg04.htm>.

HSC section 39612(g) requires the Board to report to the Governor and the Legislature on the expenditure of permit fees collected pursuant to this section and HSC section 39613. The report is to include a status of the programs prioritized for funding. ARB staff annually prepares a report, including this report, to fulfill this mandate. Previous reports are available at: <http://www.arb.ca.gov/mandrpts/mandrpts.htm>.