



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS' REGULAR MEETING/RETREAT

January 18, 2006

A meeting and retreat of the Bay Area Air Quality Management District Board of Directors will be held at 9:45 a.m. in the Regatta Room at the Waterfront Plaza Hotel in Jack London Square, 10 Washington Street, Oakland, California.

Questions About an Agenda Item

The name, telephone number and e-mail of the appropriate staff person to contact for additional information or to resolve concerns is listed for each agenda item.

Meeting Procedures

The public meeting of the Air District Board of Directors begins at 9:45 a.m. The Board of Directors generally will consider items in the order listed on the agenda. However, any item may be considered in any order.

After action on any agenda item not requiring a public hearing, the Board may reconsider or amend the item at any time during the meeting.

BOARD OF DIRECTORS' MEETING / RETREAT A G E N D A

WEDNESDAY
JANUARY 18, 2006
9:00 A.M.
9:45 A.M.

Waterfront Plaza Hotel
Regatta Room - Oakland, CA
Continental Breakfast
Meeting

CALL TO ORDER

Opening Comments
Roll Call
Pledge of Allegiance
Commendations/Proclamations

Chair, Gayle B. Uilkema
Clerk of the Boards

PUBLIC COMMENT PERIOD

Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3
Members of the public are afforded the opportunity to speak on any agenda item. All agendas for regular meetings are posted at District headquarters, 939 Ellis Street, San Francisco, CA, at least 72 hours in advance of a regular meeting. At the beginning of the regular meeting agenda, an opportunity is also provided for the public to speak on any subject within the Board's subject matter jurisdiction. Speakers will be limited to three (3) minutes each.

CONSENT CALENDAR (ITEMS 1 - 4)

Staff/Phone (415) 749-

1. Minutes of January 4, 2006 Meeting
M. Romaidis/4965
mromaidis@baaqmd.gov
2. Communications
Information only
J. Broadbent/5052
jbroadbent@baaqmd.gov
3. Monthly Activity Report
Report of Division Activities for the month of December, 2005
J. Broadbent/5052
jbroadbent@baaqmd.gov
4. Quarterly Report of the Air Resources Board Member
J. Broadbent/5052
jbroadbent@baaqmd.gov

COMMITTEE REPORTS AND RECOMMENDATIONS

5. Report of the **Mobile Source Committee** Meeting of January 12, 2006

CHAIR: T. SMITH

J. Broadbent/5052
jbroadbent@baaqmd.gov

Action(s): The Committee recommends Board of Director approval of the following:

- A) *Reallocate \$100,000 in diesel back-up generator mitigation funds to fund(4) four hybrid electric trucks; and*
- B) *Authorize the Executive Officer/APCO execute a contract with FedEx Express for the hybrid-electric truck project.*

OTHER BUSINESS

6. Report of the Executive Officer/APCO
7. Report of the Chair
8. Board Members' Comments

Any member of the Board, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)

9. Adjournment to Board of Directors' Retreat

10:00 A.M. – BOARD OF DIRECTORS' RETREAT

10:00 Opening Comments Chair, Gayle B. Uilkema

10:05 Overview of Air District Programs Jack P. Broadbent

The Executive Officer/APCO will provide an overview of Air District programs.

10:10 Issue: Woodsmoke Campaign Peter Hess

The Board of Directors will receive an overview of efforts being undertaken to address pollution from woodsmoke.

10:15 Issue Brief: Media Coverage on Woodsmoke Campaign Jack M. Colbourn

10:20 Break

10:30 Issue: Non-Vehicle Projects Jean Roggenkamp

The Board of Directors will receive background information on non-vehicle based project criteria used in the Transportation Fund for Clean Air (TFCA) program.

10:45 Board of Directors Discussion of Non-Vehicle Project Chair, Uilkema

The Board will discuss non-vehicle based project criteria for the TFCA program.

11:05 Issue Brief: Status of Community Air Risk Evaluation (CARE) Program
Brian Bateman

11:15 Future Efforts/Challenges Facing the Air District Jack P. Broadbent

The Executive Officer/APCO will give an overview of future efforts and challenges facing the District.

Time and Place of Next Meeting – 9:45 a.m. Wednesday, February 1, 2006 - 939 Ellis Street, San Francisco, CA 94109

11:30 Adjourn

CONTACT CLERK OF THE BOARD - 939 ELLIS STREET SF, CA 94109

(415) 749-4965

FAX: (415) 928-8560

BAAQMD homepage:

www.baaqmd.gov

- To submit written comments on an agenda item in advance of the meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- To request special accommodations for those persons with disabilities. Notification to the Clerk's Office should be given at least 3 working days prior to the date of the meeting so that arrangements can be made accordingly.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chair Uilkema and Members of the Board of Directors
From: Jack P. Broadbent
Executive Officer/APCO
Date: January 11, 2006
Re: Board of Directors' Draft Meeting Minutes

RECOMMENDED ACTION:

Approve attached draft minutes of the Board of Directors meeting of January 4, 2006.

DISCUSSION

Attached for your review and approval are the draft minutes of the January 4, 2006 Board of Directors' meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET – SAN FRANCISCO, CA 94109

Draft Minutes: Board of Directors' Regular Meeting – January 4, 2006

Call To Order

Opening Comments: Chairperson Marland Townsend called the meeting to order at 9:45 a.m.

Roll Call: Present: Marland Townsend, Chair, Roberta Cooper, Dan Dunnigan, Erin Garner, Scott Haggerty, Jerry Hill, Patrick Kwok, Jake McGoldrick (10:00 a.m.), Nate Miley, Julia Miller, John Silva, Pam Torliatt, Gayle B. Uilkema, Brad Wagenknecht, Shelia Young.

Absent: Harold Brown, Chris Daly, Mark DeSaulnier, Liz Kniss, Mark Ross, Michael Schimansky, Tim Smith.

Pledge of Allegiance: Director Wagenknecht led the Board in the Pledge of Allegiance.

Commendation/Proclamation

A) *The Board of Directors recognized Chairperson Townsend for his leadership in 2005.*

Chairperson Townsend was recognized for his leadership and for significant achievements the District has made under his leadership. Director Uilkema presented Chairperson Townsend with a gift of a gavel and a plaque in appreciation for his excellent service on the Board of Directors.

Jack Broadbent, Executive Officer/APCO recognized and thanked Chairperson Townsend for his leadership on behalf of the District staff. Mr. Broadbent presented Chairperson Townsend with a gift as a token of the staff's appreciation.

B) *The Board of Directors acknowledged Incoming Chair Uilkema. Chair Uilkema discussed the Roles and Responsibilities of Board Members.*

Chair Uilkema discussed the 2006 Standing Committee appointments and distributed the Air District's Administrative Code Division I, Sections 2-6: Operating Policies and Procedures of the Board of Directors, Officers – Duties, Order of Business, Conduct of Business, Voting, and Committee Duties, to the Board members. Chair Uilkema requested Board members to review these and make recommendations for any changes to them, if necessary.

Public Comment Period: – There were none.

Director McGoldrick arrived at 10:00 a.m.

Consent Calendar (Items 1 – 4)

1. Minutes of December 21, 2005 Meeting
2. Communications. Correspondence addressed to the Board of Directors. For Information Only.
3. Considered Approval of Hiring Recommendation at Step E of Salary Range 146 for Information Systems Manager Position

The Board of Directors considered approval of hiring recommendation at Step E of the salary range 146, which is \$112,350 per year for the Information Systems Manager position.

4. Considered Approval of Recommendation for Salary Increase for the Classification of Human Resources Officer

The Board of Directors considered approval of salary increase for the Classification of Human Resources Officer.

Board Action: Director Miller moved approval of the Consent Calendar; seconded by Director Wagenknecht; carried unanimously with the following Board members voting:

AYES: Cooper, Dunnigan, Garner, Haggerty, Hill, Kwok, McGoldrick, Miley, Miller, Silva, Torliatt, Townsend, Wagenknecht, Young, Uilkema.

NOES: None.

ABSENT: Brown, Daly, DeSaulnier, Kniss, Ross, Shimansky, Smith.

Adopted Resolution No. 2006-01: A Resolution to Increase the Salary of the Human Resources Officer job classification

Public Hearing

5. Public Hearing to Consider Adoption of Proposed Bay Area 2005 Ozone Strategy and Certification of Final Environmental Impact Report

The Board of Directors considered adoption of a proposed Bay Area 2005 Ozone Strategy and certification of a Final Environmental Impact Report.

Henry Hilken, Director of Planning and Research, presented the Proposed Bay Area 2005 Ozone Strategy and Final Environmental Report and discussed the following:

- Background information on the Bay Area 2005 Ozone Strategy
- Extensive Public Involvement
- Contents of the Bay Area Ozone Strategy
- Stationary Source Measures
- Mobile Source Measures
- Transportation Control Measures
- Further Study Measures for Stationary, Mobile and Transportation Sources
- Environmental Review
- Recent Public Review

Mr. Hilken stated that the staff recommends that the Board of Directors certify the Final Environmental Impact Report and adopt the Bay Area 2005 Ozone Strategy.

Chair Uilkema opened the Public Hearing at 10:35 a.m.

Speakers: The following individuals spoke on this agenda item:

Bruce Tuter
Air Resources Board
Sacramento, CA 95812

William Quinn
California Council for Environmental &
Economic Balance
San Francisco, CA 94105

David Schonbrunn
TRANSDEF
Mill Valley, CA 94941

Irvin Dawid
Sierra Club California
Palo Alto, CA 94301

Chair Uilkema closed the Public Hearing at 10:45 a.m.

Mr. Broadbent and Jean Roggenkamp, Deputy Air Pollution Control Officer, responded to Board members' questions. Mr. Broadbent stated that staff recommends that the Board of Directors adopt the 2005 Ozone Strategy, as proposed by staff.

Board Action: Director Townsend made the following motion: That the Board of Directors:

- (A) Adopt the 2005 Ozone Strategy; and
- (B) Certify the Final Environmental Impact Report.

The motion was seconded by Director Miller.

The motion then carried unanimously with the following Board members voting:

AYES: Cooper, Dunnigan, Garner, Haggerty, Hill, Kwok, McGoldrick, Miley, Miller, Silva, Torliatt, Townsend, Wagenknecht, Young, Uilkema.

NOES: None.

ABSENT: Brown, Daly, DeSaulnier, Kniss, Ross, Shimansky, Smith.

Adopted Resolution No. 2006-02: A Resolution of the Board of Directors of the Bay Area Air Quality Management District Certifying the Environmental Impact Report for the Proposed Bay Area 2005 Ozone Strategy

&

A Resolution of the Board of Directors of the Bay Area Air Quality Management District to Adopt the Bay Area 2005 Ozone Strategy.

6. **Closed Session** – The Board convened to Closed Session at 10:50 a.m.

Existing Litigation:

Pursuant to Government Code Section 54956.9(a), a need existed to meet in closed session with legal counsel to discuss existing litigation:

Bay Area Air Quality Management District Employees' Association v. Bay Area Air Quality Management District, PERB, Unfair Labor Practice Complaint, Case No. SF-CE-288-M.

- Open Session** – The Board reconvened to Open Session at 10:57 a.m.

Brian Bunger, Legal Counsel, stated that the Board of Directors met in Closed Session regarding one existing litigation matter against the District. The Board of Directors heard a report from Counsel and voted to approve the settlement agreement, subject to approval by the Employees' Association.

Other Business

7. Report of the Executive Officer/APCO – Mr. Broadbent reported on the following:
- The next Board of Directors' meeting is a Retreat scheduled at the Waterfront Plaza Hotel, Jack London Square, Oakland. At the Retreat Board members will be reviewing key programs and initiatives for the Air District.
 - The Air District is sponsoring an upcoming KCBS event called HEALTH etc., focused on health and wellness, on Saturday, January 28, 2006 at the Moscone Center, San Francisco. As a sponsor, the District will deliver the Welcome message prior to the keynote address by Dr. Phil McGraw.
 - On behalf of the staff, wished the Board of Directors a Happy New Year.
8. Chair's Report: Chair Uilkema again reported on the following:
1. The 2006 Standing Committee appointments
 2. Sections 2-6, Division I of the Air District's Administrative Code at each Board member's place that outlines Operating Policies and Procedures of the Board of Directors, Officers – Duties, Order of Business, Conduct of Business, Voting, and Committee Duties.
 3. In addition to installing a larger podium light, Chair Uilkema requested that it also be auditory.

9. Board Members' Comments – Directors Haggerty, Miller and Torliatt expressed their personal appreciation to Chairperson Townsend and thanked him for his leadership and service during his term as Chairperson of the Air District's Board of Directors.
10. Time and Place of Next Meeting –9:45 a.m., Wednesday, January 18, 2006 – Waterfront Plaza Hotel, Regatta Room, Jack London Square, Ten Washington Street, Oakland, CA 94607.
11. Adjournment – The meeting adjourned at 11:09 a.m.

Neel Advani
Deputy Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chair Uilkema and Members of the Board of Directors
From: Jack P. Broadbent
Executive Officer/APCO
Date: January 11, 2006
Re: Board Communications Received from January 4, 2006 through January 17, 2006

RECOMMENDED ACTION:

Receive and file.

DISCUSSION

A list of Communications received by the Air District from January 4, 2006 through January 17, 2006, if any, will be at each Board member's place at the January 18, 2006 Board meeting/retreat.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

AGENDA: 3

Memorandum

To: Chair Uilkema and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: January 18, 2006

Re: Report of Division Activities for the Month of December 2005

**FINANCE, ADMINISTRATION AND
INFORMATION SERVICES DIVISION – J. McKAY, DIRECTOR**

Payroll System Replacement

After reviewing the responses to the RFP, and after further interviews, the Budget and Finance Committee approved the selection of Ceridian to replace the District’s current ADP payroll system. Work began January 3 with go-live targeted for new fiscal year July 1. The Project Management issues associated with this work may have repercussions on other Projects (including the Production System) that require senior management oversight.

Annual Audit

Caporicci and Larson completed the initial 2004-2005 staff interviews and submitted an Exit Conference document. They will return on January 17.

FY 2006-2007 Budget

The state is currently in the second year of the two year property tax 10% “take-away.” It seems clear that property tax revenue will be fully restored for the coming fiscal year. Subvention revenue should remain flat. The Governor’s proposed budget will preview in January.

Facilities Projects in process:

	<u>Started</u>	<u>% Complete</u>	<u>Completion</u>
Phase III Fire Alarm System	Aug. 2005	100	Nov. 30, 2005
Phase IV HVAC Upgrade	Aug. 2005	50	Aug. 30, 2006
ADA upgrades for 4th floor	Aug. 2005	95	Jan. 26, 2006
ADA upgrades for 7 th floor	Jan. 5, 2006	40	Feb. 15 2006
Replace fire doors	Oct. 2005	95	Feb. 15, 2006
4th floor lighting	Oct. 2005	50	Oct. 30, 2005
7 th floor lighting	TBD		
All electrical closets up to code:	Oct. 2005	100	Dec. 01, 2005
Garage pedestrian early warning:	Aug. 2005	100	Sept. 15, 2005
Emergency generator lights	Oct. 2005	100	Dec. 30, 2005

COMPLIANCE & ENFORCEMENT DIVISION – K. WEE, DIRECTOR**Enforcement Program**

The District Hearing Board issued an Amended Stipulated Conditional Order of Abatement against the Tesoro Martinez Refinery's Number #5 Coker Boiler. The order requires short-term measures to help ensure better operation of the #5 Coker Boiler as well as a long-term solution to address coker flue gas emissions. The Order formalizes Tesoro's proposal to control coker flue gas emissions and correct violations by installing a delayed coker to replace the existing equipment. At over 3,000 Tons per year for all the air pollutants combined, the preliminary emission reductions associated with this proposal are among some of the largest ever achieved in an enforcement action by the District. The District conducted laboratory analysis and air dispersion modeling to determine the potential health impacts that may have resulted from the November 8 slurry oil fallout from the Shell Refinery in Martinez. Results of laboratory analysis of materials released indicated concentrations of toxic compounds, including benzene, were below the level of detection of the District laboratory instrumentation. Air dispersion modeling, using the most conservative (health protective) estimates, yielded results that predicted that concentrations were 100 to 1,000 times below the acute reference exposure level (REL) for benzene. The District anticipates no adverse health effects from this incident. Staff forwarded this information to Contra Costa County Health Services for dissemination to the public.

Compliance Assurance Program

Staff met with Chevron Refinery representatives on December 20th, to review refinery flare survey data submitted to determine completeness with the Flare Minimization Plan Technical Data requirements of Reg. 12, Rule 12 and to discuss Reg. 12, Rule 11 issues. The Enforcement staff conducted a meeting of the Idling Truck workgroup at the Port of Oakland Offices in West Oakland on December 6th. The meeting was attended by marine terminal operators, independent truckers, concerned citizen groups and regulatory agencies. The meeting covered Inspection statistics for the past quarter, terminal appointment system utilization rates, and internal congestion inside the marine terminal gates. Staff attended the Contra Costa Environmental Crimes Task Force meeting in Martinez on December the 7th. Staff participated in the Hazardous Materials Interagency Task Force Meeting in Hercules on December 8th where representatives from the Chemical Safety Board presented preliminary information on the Texas City Refinery explosion. Staff attended a meeting with the Contra Costa Environmental Justice Resource Team at the Richmond Community Center on December 14th. The Team was concerned about increased dust and diesel emissions from a new solid waste transfer station being built at the West Contra Costa Sanitary Landfill. The Team was also concerned that an existing concrete recycling facility is also expanding operations to twenty-four hours.

Compliance Assistance Program

Three Green Business (GB) certifications were completed for the Santa Clara County GB Coordinator. Staff met with the Public Information and Outreach staff to coordinate a proposal by the Napa County Fire Marshal to create a training video on open burning. Probable timelines were discussed, tasks were assigned, and possible staff focus group members were identified to be contacted for video content input.

Training

A contracted training class, “Introduction to Refinery Operations”, was held for Division staff with additional attendance by staff from Engineering and Planning Divisions and District Counsel’s Office on December 14th & 15th.

Operations

Field sampling for the pilot Particulate Matter monitoring study took place on Saturday, December 3rd in Mill Valley and December 10th in Concord. No Spare the Air Tonight Advisories have yet been called for this winter season. Staff is reviewing the Asbestos Dust Mitigation Plan for the Spear Street Project in San Francisco. Staff attended a CTAC (Community Warning System Technical Advisory Committee) meeting in Martinez on the topic of emergency response to the hearing & sight impaired community and how to best meet their needs. Over-the-Phone Interpretation for District callers in November provided Spanish translation during the month.

(See Attachment for Activities by County)

ENGINEERING DIVISION – B. BATEMAN, DIRECTOR
--

Toxics Program

The Toxic Evaluation Section completed a total of 36 risk screens during December. The majority of these risk screens were for diesel engine emergency generators and gas stations. Work continued in establishing protocols for completion of a Health Risk Assessment for Pacific Steel Casting, Inc. in Berkeley under the requirements of the Air Toxics Hot Spots Program. Staff is continuing work in conjunction with Occidental College on the Environmental Garment Care Demonstration Project. A demonstration site with multiple carbon dioxide machines and wet cleaning systems will soon open in Union City.

Title V Program

Work continued developing revisions to the refinery Title V permits and associated Statement of Basis’ resulting from comments received from the public and EPA. Staff is awaiting revised guidance from EPA related to applicability of New Source Performance Requirements to refinery flares prior to finalizing these revisions. The public comment period began for the Title V renewal permit for the Gilroy Energy Center.

Permit Evaluation Program

The District received a total of 197 new permit applications in December. Staff met with a number of applicants to discuss permitting issues associated with proposed projects, including the Chevron’s Renewal project at their Richmond refinery.

Engineering Special Projects Program

Staff continued work on the development of pilot permit processes for the new production database system along with the District’s contractor, CH2MHill. Engineering Division staff assisted Technical Services Division staff with organic and particulate emission testing at a cocoa bean roasting facility.

Community Air Risk Evaluation (CARE) Program

District staff received training in the use of Global Positioning System equipment from the District's contractor, Farallon Geographics, Inc. Work continued in investigating sources of toxic particulate matter and review of the preliminary toxic air contaminant emissions inventory prepared by the District's contractor, Sonoma Technologies, Inc.

INFORMATION SYSTEMS DIVISION – J. McKAY, DIRECTOR

Toolsets for Permits/Enforcement/Legal

Work continues to create the implementation scenario for the Production System Pilot. The Engineering Division is wrapping up the business process analysis for the Authority to Construct process. This work forms the basis for the RFP that will result in two Pilot implementations at the District.

LEGAL DIVISION – B. BUNGER, DISTRICT COUNSEL

The District Counsel's Office received 60 Violations reflected in Notices of Violation ("NOVs") for processing.

Mutual Settlement Program staff initiated settlement discussions regarding civil penalties for 44 Violations reflected in NOVs. Settlement negotiations by Mutual Settlement Program staff resulted in collection of \$11,100 in civil penalties for 25 Violations reflected in NOVs.

Counsel in the District Counsel's Office initiated settlement discussions regarding civil penalties for 61 Violations reflected in NOVs. Settlement negotiations by counsel in the District Counsel's Office resulted in collection of \$89,750 in civil penalties for 17 Violations.

(See Attachment for Penalties by County)

PLANNING DIVISION – H. HILKEN, DIRECTOR

Rule Development Program

Staff presented proposed amendments to Regulation 8, Rule 44: Marine Tank Vessel Operations, Regulation 8, Rule 46: Marine Tank Vessel to Marine Tank Vessel Loading, and Manual of Procedures Source Test Method 34: Bulk and Marine Loading Terminals Vapor Recovery Units at the Board of Directors meeting on December 7, 2005. The regulatory proposals were adopted by the Board. Staff presented proposed amendments to Regulation 8, Rule 28: Episodic Releases from Pressure Relief Devices at Petroleum Refineries and Chemical Plants to the Board of Directors on December 21, 2005. The regulatory proposals were adopted by the Board. Staff presented a report on refinery atmospheric blowdown systems to the Board of Directors on December 21, 2005. The Board approved staff's recommendation that no further rule making for this source is warranted at this time. Staff also prepared and distributed a request for comments on proposed amendments to Regulation 12, Rule 12: Flares at Petroleum Refineries.

Grant Programs

Staff sent award letters to recipients of the fiscal year 2005/2006 Transportation Fund for Clean Air (TFCA) Regional Fund grants. Staff received 149 grant applications totaling \$24.1 million for the current funding cycle (Year 7) of the Carl Moyer Program. A total of 461 eligible light-duty vehicles were purchased and scrapped by the three Vehicle Buy Back Program contractors.

Air Quality Planning Program

Staff reported on activities to date with respect to climate protection and outlined proposed future activities to the Board of Directors Ad Hoc Committee on Climate Protection. Staff prepared the proposed final Bay Area 2005 Ozone Strategy, Responses to Comments and final EIR and posted the documents for public review. Staff sent 7 letters regarding the air quality impacts of development projects and plans in the Bay Area: Contra Costa County's Public Works Building Expansion Project; Dublin Unified School District's Dublin High School Master Plan; City of Emeryville, South Bayfront Site B Development; Fairfield Station Area Specific Plan; Marin County Cemetery Master Plan and Development Plan; City of Oakland, The Gateway Project; Santa Clara County, Scott Boulevard Project.

Research and Modeling

Staff hosted a Modeling Advisory Committee meeting to discuss the District's recent ozone modeling activities. Staff participated in the Central California Ozone Study (CCOS) and the California Regional Particulate Air Quality Study (CRPAQS) Technical Committee meetings to follow the progress of these two projects. The CCOS plans to generate an updated and improved modeling emissions inventory toward mid January of 2006, and the CRPAQS plans to complete the on-going particulate matter data analysis projects toward the end of March 2006.

PUBLIC INFORMATION & OUTREACH

Media- During December, articles were published in a variety of Bay Area newspapers on air quality topics including: staff interviews with the San Mateo Times, the Marin Independent, and KQED about the wood burning and air pollution, the West Contra Costa times regarding the Advisory Council vacancies, and the San Francisco Chronicle about wet and CO2 cleaners. The San Jose Mercury News published an in-depth article about the resurgence of wood burning resulting from higher natural gas prices. Staff was quoted in the Morgan Hill Times/ Gilroy Dispatch regarding air monitoring at the Metcalf Energy Center. Staff coordinated interviews with KPFA on the pressure release device rule, and the ozone strategy with KLIV and the San Francisco Chronicle. The Bay Area Monitor published an article entitled "Waiting to Inhale: Reducing Fine Particulate Matter."

A 60 foot banner promoting Health awareness about woodsmoke pollution was installed over the Treasure Island tunnel. Four press releases were issued including: the adoption of the marine vessel rule, the agreement with Pacific Steel Castings, and the Advisory Board vacancy. Staff participated in tabling at Radio Disney's Jingle Jam on December 17.

Spare the Air – No Spare the Air Tonight advisories were issued during December. MTC voted in favor of allocating five million dollars to fund the 2006 summertime Spare the Air – Free Ride

program. An additional one million dollars will come directly to the District to support advertising and media for this program. In cooperation with BART and Kiehl's products, staff is coordinating a Spare the Air Tonight thank you day scheduled for February, Kiehl's products will be distributed to BART patrons. An end of season package was sent to 1200 Spare the Air employers thanking them for their past participation and encouraging them to sign up for new materials in the current season.

Woodsmoke – the Solano County Board of Supervisors passed a woodsmoke ordinance at the December 13 meeting. Currently 40 cities and eight counties have adopted the ordinance.

TECHNICAL DIVISION – G. KENDALL, DIRECTOR

Air Quality

During the first part of December, a high pressure system over California produced light offshore winds, resulting in six days of Unhealthful for Sensitive Groups (USG) air quality within the District. On those days, poor air quality was widespread, with high PM_{2.5} levels recorded at Vallejo, Concord, San Jose, Oakland, Redwood City and Livermore. Air quality stayed in the Good category from December 18th through remainder of the month due to the passage of frequent storms across the Bay Area.

Air Monitoring

Thirty-two of the thirty-three air monitoring stations were operating during the month of December 2005. The Crockett station, located at East Bay MUD's water district facility, is shut down for seismic upgrades. On December 1st, ozone monitors at eight satellite stations were shut for the low ozone season, as allowed under a waiver granted by the EPA.

Meteorology and Forecasting

September 2005 air quality data were quality assured and entered into the EPA Air Quality System (AQS) database. Staff continued to make daily air quality and burn forecasts. The Board of Directors authorized the Executive Officer to enter into a contract with the Air Resources Board to accept a \$279,000 Grant from EPA for Technical Services Division to develop an air quality and meteorological data management system.

Quality Assurance

The Quality Assurance (QA) group conducted regular, mandated performance audits of 35 monitors at 10 Air District air monitoring stations. QA Staff observed performance audits conducted by California Air Resources Board (CARB) staff at eight Air District air monitoring stations. CARB audit results showed that all Air District monitors were operating within allowable limits. QA staff also conducted performance audits of the SO₂ and H₂S monitors at the four Ground Level Monitoring stations at the Shell Refinery in Martinez.

Laboratory

In addition to ongoing, routine analyses, the laboratory was audited by the National Institute of Standards and Technology (NIST) to determine compliance with the NIST/National Voluntary Laboratory Accreditation Program (NVLAP) requirements for accreditation in bulk asbestos analysis. No deficiencies were found by the NVLAP assessor. The benzene, toluene, ethyl benzene and xylene content of two catalytically-cracked, clarified oil slurries and two untreated, light catalytically-cracked gas oil samples from Shell Oil Products U.S. Martinez Refinery were determined. These products were accidentally released by Shell during an incident in November 10, 2005. Five PM_{2.5} filters from Lawrence Berkeley National Laboratory were analyzed for organic carbon/elemental carbon as part of a study to determine the effects of high anion and cation concentrations on the analytical separation of organic carbon and elemental carbon.

Source Test

Ongoing Source Test activities included Continuous Emissions Monitoring (CEM) Field Accuracy Tests, source tests, gasoline cargo tank testing, and evaluations of tests conducted by outside contractors. The ConocoPhillips Refinery's open path monitor monthly report for the month of November was reviewed. The Source Test Section provided ongoing participation in the District's Further Studies Measures for refineries.

**These facilities have received one or more Notices of Violations
Report period: December 1, 2005 – December 31, 2005**

Alameda County

Status Date	Site #	Site Name	City	Regulation Title
12/06/2005	R0982	Melissa Harmon	Alameda	Asbestos Demolition, Renovation & Mfg.
12/05/2005	A0187	Pacific Steel Casting Co-Plant #1	Berkeley	Particulate Matter & Visible Emissions
12/06/2005	L6230	P. W. Stephens, Inc.	Fremont	Asbestos Demolition, Renovation & Mfg.
12/20/2005	C9907	Palisades Gas & Wash	Newark	Gasoline Dispensing Facilities
12/06/2005	C8505	Alvarado Valero	Union City	Failure to Meet Permit Conditions

Contra Costa County

Status Date	Site #	Site Name	City	Regulation Title
12/12/2005	B1177	One Hour Cleaners	Concord	Perc & Synthetic Solvent Dry Cleaning Operations

Marin County

Status Date	Site #	Site Name	City	Regulation Title
NONE				

Napa County

Status Date	Site #	Site Name	City	Regulation Title
NONE				

San Francisco County

Received Date	Site #	Site Name	City	Regulation Title
12/19/2005	B0519	Golden Express Auto Body & Painting	San Francisco	Motor Vehicle & Mobile Equip Coating Operations
12/21/2005	C9896	Hertz Rental Car Facility	San Francisco	Gasoline Dispensing Facilities
12/19/2005	A8661	Lucky Cleaners	San Francisco	Perc & Synthetic Solvent Dry Cleaning Operations
12/06/2005	R1688	Trico Construction	San Francisco	Asbestos Demolition, Renovation & Mfg.
12/19/2005	B2604	Unique Laundry & Cleaners	San Francisco	Perc & Synthetic Solvent Dry Cleaning Operations

San Mateo County

Received Date	Site #	Site Name	City	Regulation Title
12/19/2005	A7807	Dryclean City	Belmont	Perc & Synthetic Solvent Dry Cleaning Operations
12/06/2005	A4021	SFPP, LP	Brisbane	Failure to Meet Permit Conditions
12/20/2005	C2838	Nella Oil Company/dba Olympian Oil	Daly City	Gasoline Dispensing Facilities
12/20/2005	C6342	Tosco Marketing Facility #4354	Menlo Park	Gasoline Dispensing Facilities
12/20/2005	C9882	Beach House at Gazos Creek	Pescadero	Gasoline Dispensing Facilities
12/20/2005	C9865	Dollar Rent-A-Car	San Francisco	Gasoline Dispensing Facilities
12/19/2005	B2096	Express Drapery Cleaners	San Mateo	Perc & Synthetic Solvent Dry Cleaning Operations

Santa Clara County

Received Date	Site #	Site Name	City	Regulation Title
12/20/2005	D0848	Safeway Fuel Center #1891	Morgan Hill	Gasoline Dispensing Facilities
12/20/2005	C8708	Rotten Robbie #24	San Jose	Gasoline Dispensing Facilities
12/07/2005	R1888	James Wong	Sunnyvale	Asbestos Demolition, Renovation & Mfg.

Solano County

Received Date	Site #	Site Name	City	Regulation Title
12/14/2005	B5574	Valero Logistics Operations, L P	Benicia	Storage of Organic Liquids
12/07/2005	R1587	Don Dupont	Kenwood	Open Burning
12/14/2005	F2279	Cal Inc	Vacaville	Asbestos Demolition, Renovation & Mfg.

Sonoma County

Received Date	Site #	Site Name	City	Regulation Title
12/06/2005	Q4092	George Barnwell Vineyards	Santa Rosa	Open Burning
12/06/2005	F5597	Sebastiani Vineyard	Sonoma	Open Burning

December 2005 Closed NOVs with Penalties by County

Alameda

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Gettler Ryan	C7395	Dublin	\$500	1
Hexion Specialty Chemicals, Inc	A0151	Fremont	\$1,250	1
Isola USA Corp	A3024	Fremont	\$1,750	3
Oakland Color Services	K3143	Oakland	\$1,000	1

Total Violations Closed: 6

Contra Costa

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
ConocoPhillips - San Francisco Refinery	A0016	Rodeo	\$35,000	3
Terra Nova Industries	P2017	Walnut Creek	\$28,000	4

Total Violations Closed: 7

San Francisco

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Decollision Autobody Center	A8525	San Francisco	\$250	1
Sundown Cleaners	A4672	San Francisco	\$150	1

Total Violations Closed: 2

San Mateo

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Auto Plus	R0530	Daly City	\$850	2
Blue Bird Cleaners	A4956	San Mateo	\$750	2
Hewlett-Packard Company	A0246	Palo Alto	\$1,000	1
J. D. Steinberger	Q5739	San Bruno	\$750	4
Menlo Park Beacon	C9889	Menlo Park	\$250	1
Tommy's Cleaners	A9459	Millbrae	\$250	1

Total Violations Closed: 11

Santa Clara

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
ARCO Facility #02153 - Wasu D Pillay	C5610	Santa Clara	\$350	1
ARCO Facility #06147- KASSA'S GAS & MART	C7649	Campbell	\$250	1
Network Appliance	B4815	Sunnyvale	\$2,000	1
Pete's Stop	C8900	San Jose	\$250	1
SFPP, LP	A4020	San Jose	\$10,000	1
South Bay Construction	P5854	Campbell	\$10,000	3
Vivid Inc	B1467	Santa Clara	\$1,000	2

Total Violations Closed: 10

Solano

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
J P's Auto Body	A4508	Fairfield	\$250	1
Manuel's Auto Body	A5510	Vallejo	\$250	1

Total Violations Closed: 2

Sonoma

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Codding Construction	Q4009	Rohnert Park	\$4,000	2
Harold Goetz	P7926	Kenwood	\$500	1
Ralph Svava	Q4088	Sebastopol	\$250	1

Total Violations Closed: 4

ACRONYMS AND TERMINOLOGY

ABAG	Association of Bay Area Governments
AC	Authority to Construct issued to build a facility (permit)
AMBIENT	The surrounding local air
AQI	Air Quality Index
ARB	[California] Air Resources Board
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BANKING	Applications to deposit or withdraw emission reduction credits
BAR	[California] Bureau of Automotive Repair
BARCT	Best Available Retrofit Control Technology
BIODIESEL	A fuel or additive for diesel engines that is made from soybean oil or recycled vegetable oils and tallow. B100=100% biodiesel; B20=20% biodiesel blended with 80% conventional diesel
BTU	British Thermal Units (measure of heat output)
CAA	[Federal] Clean Air Act
CAL EPA	California Air Resources Board
CCAA	California Clean Air Act [of 1988]
CCCTA	Contra Costa County Transportation Authority
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CMA	Congestion Management Agency
CMAQ	Congestion Management Air Quality [Improvement Program]
CMP	Congestion Management Program
CNG	Compressed Natural Gas
CO	Carbon monoxide
EBTR	Employer-based trip reduction
EJ	Environmental Justice
EIR	Environmental Impact Report
EPA	[United States] Environmental Protection Agency
EV	Electric Vehicle
HC	Hydrocarbons
HOV	High-occupancy vehicle lanes (carpool lanes)
hp	Horsepower
I&M	[Motor Vehicle] Inspection & Maintenance ("Smog Check" program)
ILEV	Inherently Low Emission Vehicle
JPB	[Peninsula Corridor] Joint Powers Board
LAVTA	Livermore-Amador Valley Transit Authority ("Wheels")
LEV	Low Emission Vehicle
LNG	Liquefied Natural Gas
MPG	Miles per gallon
MTC	Metropolitan Transportation Commission

NAAQS	National Ambient Air Quality Standards (federal standards)
NO _x	Nitrogen oxides, or oxides of nitrogen
NPOC	Non-Precursor Organic Compounds
NSR	New Source Review
O ₃	Ozone
PM _{2.5}	Particulate matter less than 2.5 microns
PM ₁₀	Particulate matter (dust) less than 10 microns
PM _{>10}	Particulate matter (dust) over 10 microns
POC	Precursor Organic Compounds
pphm	Parts per hundred million
ppm	Parts per million
PUC	Public Utilities Commission
RFG	Reformulated gasoline
ROG	Reactive organic gases (photochemically reactive organic compounds)
RIDES	RIDES for Bay Area Commuters
RTP	Regional Transportation Plan
RVP	Reid vapor pressure (measure of gasoline volatility)
SCAQMD	South Coast [Los Angeles area] Air Quality Management District
SIP	State Implementation Plan (prepared for <i>national</i> air quality standards)
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
TCM	Transportation Control Measure
TFCA	Transportation Fund for Clean Air [BAAQMD]
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TOS	Traffic Operations System
tpd	tons per day
Ug/m ³	micrograms per cubic meter
ULEV	Ultra low emission vehicle
ULSD	Ultra low sulfur diesel
USC	United States Code
UV	Ultraviolet
VMT	Vehicle miles traveled (usually per <i>day</i> , in a defined area)
VTA	Santa Clara Valley Transportation Authority
ZEV	Zero Emission Vehicle

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Uilkema and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: January 11, 2006

Re: Report of the Mobile Source Committee Meeting of January 12, 2006

RECOMMENDED ACTION:

The Mobile Source Committee recommends Board of Director approval of the following:

- 1) Reallocate \$100,000 in Diesel Back-Up Generator (BUG) Mitigation funds for four diesel hybrid-electric trucks; and
- 2) Authorize the Executive Officer/APCO to enter into a contract with FedEx Express for the hybrid-electric truck project.

BACKGROUND

The Mobile Source Committee met on Thursday, January 12, 2006. Dean Simeroth of the California Air Resource Board (CARB) staff was unexpectedly unable to attend to provide an overview of the MOU between the ARB and the Union Pacific Railroad (UP) and Burlington Northern Santa Fe Railway (BNSF) and will thus be invited to make his presentation at a later date.

Staff provided a report on the audit of projects funded by the Transportation Fund for Clean Air (TFCA) Regional Fund.

The Committee considered recommending Board of Director approval of reallocating \$100,000 in diesel back-up generator mitigation funds to fund four hybrid electric trucks.

The District staff provided a summary of recent trends in diesel and natural gas costs, and Mr. Sam Altshuler of PG&E provided information on projected diesel and natural gas fuel costs from the present through 2010.

Attached are the staff reports presented to the Committee for your review.

Chairperson Smith will give an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Mary Romaidis
Reviewed by Mary Ann Goodley

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: January 5, 2006

Re: Transportation Fund for Clean Air (TFCA) Regional Fund Audit Report

RECOMMENDED ACTION:

Receive and file the results of TFCA Audit Report #8, an audit of completed TFCA Regional Fund projects, including the auditor's findings and recommendations for actions to address financial and administrative issues.

BACKGROUND

State law requires that, at least once every two years, any agency receiving TFCA funding be subject to an audit of each project funded. The Air District retained the services of Macias, Gini & Company, an independent auditor, to conduct financial and compliance audits of 44 completed TFCA Regional Fund projects completed through the period ended June 30, 2004. The audit process was conducted during the months of June, July, August and September of 2005 and covered all fiscal and compliance activities that took place during the implementation of the projects. The auditor's Summary Report is attached and a list of audited projects is provided in Attachment C of the Audit Summary Report. Because of the varying rates of project completion, the projects covered in this audit were awarded grants between fiscal years 1996 and 2002. The audit was performed in accordance with the requirements outlined in California Health and Safety Code Section 44242 and in individual funding agreements.

Most of the issues identified in the audit findings were minor and are being addressed through discussions between Air District staff and the Regional Fund project sponsors to help avoid these problems in the future.

DISCUSSION

Macias, Gini and Company found no major financial problems with the accounting and expenditure of TFCA funds in their review of 42 of the 44 audited projects, as indicated in the attached audit Summary Report. All of the project sponsors of the 42 projects were able to account for the TFCA funds they had received and document that the funds were expended for the intended projects.

The auditor determined that two project sponsors did not account for TFCA funds adequately. These project sponsors expended TFCA funds without the adequate financial documentation to justify the expense, and a disclaimer report for each of these two projects

was issued by the auditor. Disclaimer reports are issued when an auditor reviews an agency's financial statements and cannot, based on these statements, form an opinion as to the appropriateness of the expenditures of the funds being audited.

The Livermore Amador Valley Transit Authority (LAVTA) was granted \$45,000 in TFCA Regional Funds in fiscal year 2001/2002 to implement a middle and high-school free transit pass program in the Tri-Valley area (project #01R24). However, LAVTA did not track the number of student riders on LAVTA bus routes and, therefore, the actual number of student passes used could not be verified. After a review of LAVTA's records, the auditor determined that the information necessary to verify the appropriateness of the use of the TFCA funds for the free transit pass program had not been provided by LAVTA, and issued a disclaimer report for this project. In response, LAVTA states that instead of using the TFCA funds to print student passes, the funds were used to offset the operating costs of providing free service to students in the LAVTA service area through the first eight weeks of school. Air District staff is working with LAVTA staff to obtain documentation that the TFCA funds were appropriately used to cover the operating costs of those routes during the free transit pass program project period.

The auditor also issued a disclaimer report for a California Department of Transportation District 4 (Caltrans) bicycle locker project funded in fiscal year 1998/1999 (project #98R27). The auditor requested timesheets to verify labor costs incurred during implementation of the project, but Caltrans was unable to provide any timesheets related to this project. In the absence of evidence to support these labor charges, the auditor could not substantiate the labor costs claimed by Caltrans, and was unable to render an audit opinion on expenses for this project. The TFCA funding agreement requires that the project sponsor maintain timesheets with labor costs incurred during the implementation of a project; however, the time taken to complete this project exceeded Caltrans' internal policy for document retention, and, following that policy, the timesheets for this project were not retained. To avoid this type of situation in the future, Air District staff will explore the feasibility of a time limit to complete TFCA projects.

Except for the above two projects, the auditor concluded that TFCA revenues were adequately accounted for and used to reduce emissions from motor vehicles. The remaining findings in the audit report are minor in nature and fall into six administrative categories associated with reporting and monitoring of project funding agreement requirements: 1) record retention; 2) missing report information; 3) line item budget compliance; 4) separate accountability for TFCA (regional and local) project expenditures; 5) failure to submit quarterly reports on a timely basis to the Air District; and 6) lack of use of the Air District logo or acknowledgement of the Air District's participation in the funding of the project in promotional materials.

AUDIT RECOMMENDATIONS

The auditor made several suggestions to help improve the administration and fiscal management of TFCA funds:

- 1) The Air District should conduct "interim audits" for all projects that are not completed within three years from the date of the funding agreement to ensure supporting documentation is available for audit purposes.

- 2) Inclusion of a penalty provision within the funding agreements to emphasize the importance of timely reporting.
- 3) Develop a checklist to aid review of reports for required information.
- 4) Separate accountability for project expenditures for projects funded with Regional and local (i.e., County Program Manager) TFCA funds.
- 5) The Air District should impose penalty provisions that address failure to follow the use of the District's logo and publicity requirement.

All of the auditor recommendations are already adequately addressed in the TFCA program except for recommendation number one, interim audits. Staff will develop a method to address this recommendation in the next revision of the TFCA policies.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Andrea Gordon
Reviewed by: Henry Hilken

Attachment

**BAY AREA AIR QUALITY
MANAGEMENT DISTRICT**

Audit Summary Report
TFCRA Regional Fund

For the Project Period Ended June 30, 2004

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report
TFCA Regional Fund

For the Project Period Ended June 30, 2004

Table of Contents

	Page(s)
Introduction	1
Audit Process	2-3
Current Period Findings and Recommendations	4-9
Attachments:	
A – Health and Safety Code Section 44241	10-11
B – Health and Safety Code Section 44242.....	12
C – Listing of Audited Projects	13

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

INTRODUCTION

The Bay Area Air Quality Management District (District), created by the California Legislature in 1955, is the state's first regional agency dealing with air pollution. The District regulates stationary sources of air pollution in the San Francisco Bay Area. The District's jurisdiction includes Alameda County, Contra Costa County, Marin County, Napa County, City/County of San Francisco, San Mateo County, Santa Clara County, southern Sonoma County, and south-western Solano County. The primary mission of the District is to achieve ambient air quality standards designed to protect the public's health and the environment. The District is governed by a 22-member Board of Directors who has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction.

The State of California Health and Safety Code Sections 44241 and 44242¹ authorize a surcharge on the motor vehicle registration fee (surcharge) to be used by the District and local governments to fund projects that implement transportation control measures in accordance with the District's Clean Air Plan. These projects are designed specifically to reduce air pollution from mobile sources. The Department of Motor Vehicles (DMV) collects the surcharge and subvenes the amounts collected to the District.

The District administers a portion of these funds through the Transportation Fund for Clean Air (TFCA) program. Under the TFCA Program, money is allocated to two funds: (1) 60% is placed in a Regional Fund for distribution by the District, and (2) 40% is placed in the Program Manager Fund and allocated to designated agencies (known as Program Managers). Program Managers are responsible for allocating funds to eligible agencies within a specific geographic area subject to approval by the District. Allowable projects under Health and Safety Code Section 44241 include the following:

- Ridesharing programs
- Purchase or lease of clean fuel buses for schools and transit operators
- Provision of local feeder or shuttle bus service to rail stations, ferry stations and airports
- Arterial traffic management projects
- Demonstrations in congestion pricing of highways, bridges and public transit
- Rail bus integration and regional transit information systems
- Low emission vehicle projects
- Bicycle facility improvement projects
- Physical improvements that support "Smart Growth" projects ²

¹ Health and Safety Code Sections 44241 and 44242 are provided in Attachment A and B.

² A smart growth project is a project that promotes development of communities that encourage alternatives to the automobile, such as transit, walking and cycling.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

State law requires that any agency receiving TFCA funding be subject to an audit, at least once every two years³. Health and Safety Code Section 44242 provides legal compliance guidelines for the District to follow in the event revenues are not spent appropriately or when projects do not result in emission reductions.

The District retained the firm Macias Gini & Company LLP, Certified Public Accountants, to conduct financial and compliance audits of completed projects funded through the Regional Fund for the project period ended June 30, 2004. These audits were conducted during the months of June through September 2005. A listing of the 44 projects audited is provided in Attachment B.

AUDIT PROCESS

The audits were designed to address numerous financial and compliance objectives; however, the principal objectives of the audits were to (1) to provide assurance that amounts reported in the schedules of expenses are fairly stated, and (2) determine whether projects financed through the District's Regional Fund met funding agreement requirements. The audit procedures were specifically designed for TFCA financial and compliance requirements. The audit approach is described below:

Auditing Standards and Specific Procedures

The financial audits were performed in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States for the project period ended June 30, 2004.

Procedures performed included, but were not limited to:

- Gaining an understanding of the project sponsors' internal controls over financial reporting through observation, inquiry and review of supporting documentation.
- Tracing expenditures reported in the close out report, for completed projects, to the general ledger.
- Vouching TFCA revenues to supporting evidential matter.
- Vouching TFCA expenditures related to vendor disbursements, payroll and administrative charges to supporting documentation.
- Determining whether advanced TFCA funds were held in interest bearing accounts; and that the interest generated from the TFCA funds was used on approved TFCA projects.
- Conducting interviews with project sponsors to inquire about known, alleged or suspected fraud related to the program.

3 The District has interpreted this to mean that every two years they will engage an independent audit firm to audit projects completed during that time period.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Compliance Auditing Procedures

The audits were performed in accordance with the requirements outlined in the Health and Safety Code, individual funding agreements and *Government Auditing Standards*. The principal focus of the compliance auditing procedures was to ensure TFCA revenues were used in accordance with the program's objectives (i.e., for the reduction of emissions from motor vehicles.) Detailed tests on select transactions were performed to verify compliance with the Health and Safety Code and individual funding agreements, but were not designed to provide assurance on overall project compliance.

Auditing procedures performed included, but were not limited to:

- Testing expenditures for allowable costs in accordance with section 44241 of the Health and Safety Code.
- Determining whether the project sponsor submitted detailed invoices to the District for reimbursement as required in Attachment A of the funding agreement.
- Determining whether the project sponsor submitted to the District all reports and that the reports contained all information required as specified on Attachment C of the funding agreement.
- Determining whether administrative costs were adequately supported and did not exceed the 5% cap.
- Determining whether other specific terms of the funding agreement were adhered to; i.e., proper monitoring, use of the TFCA logo, acknowledgement of District as a funding source, etc.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

CURRENT PERIOD FINDINGS AND RECOMMENDATIONS

A summary of audit findings is provided below.

Finding 2004-1 Disclaimer Reports

Livermore/Amador Valley Transit Authority - Attachment A of the funding agreement (agreement) between the District and Livermore Amador Valley Transit Authority (LAVTA), allows for reimbursement of \$45,000 related to a student ticket purchase program sponsored by LAVTA in the Tri-Valley area. The agreement states that invoices for reimbursement (submitted to the District) -

“shall specify the time period of the invoice; state the number of tickets purchased under the program; itemize staff charges to the project, if any; any payments to vendors, consultants, or contractors with an explanation of the goods or services provided for the project.”

However, LAVTA did not specifically track project expenditures or maintain any other auditable support for the \$45,000 in charges claimed for reimbursement. Instead, LAVTA developed an estimate based on ridership trends. After evaluating LAVTA's estimate, we determined that adequate evidence to support our audit opinion could not be obtained. Situations like this, that preclude auditors from performing necessary auditing procedures, are referred to as scope limitations. Due to a lack of substantive evidence and because we have no alternative way of substantiating the amount of tickets used in this program, we were unable to form an audit opinion and have therefore issued a disclaimer report⁴ on this project. We recommend the District discontinue the allowance of reimbursements to projects that substantially deviate from the terms of the agreement. In this case, the deviation was so significant that it rendered the schedule of expenses for this project un-auditable. Additionally, the District should consider whether the procedures outlined in Health and Safety Code 44242(c) should be performed.

California Department of Transportation - Attachment A of the funding agreement (agreement) between the District and the California Department of Transportation - District 4 (Caltrans) allowed for \$84,000 of funding for the purchase and installation of bicycle locker units. In connection with our audit we requested time sheets to test labor costs incurred in the implementation of the project. However, Caltrans informed us that they were unable to provide time sheets related to this project. In the absence of evidence to support these labor charges, we were not able to substantiate the amount of labor costs claimed by Caltrans, and therefore unable to render an opinion on the schedule of expenses for this project. Accordingly, we have issued a disclaimer report. See comments and recommendation at 2004-2, *Record Retention*.

4 Auditors will issue disclaimer reports when it is not possible to perform procedures sufficient in scope to enable the auditor to form an opinion on the financial statements.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Finding 2004-2 Record Retention

All project funding agreements contain provisions requiring mandatory record retention. There are two sections of note: (1) Section II.3 of the funding agreement requires project sponsors to - “*keep necessary records of project activities expenses and charges to document and support invoices submitted to the . . . District*” and, (2) Section IV.1 states - “*This agreement will remain in effect for three (3) years after the completion of the project . . .*” From these provisions, we understand the requirements to mean project sponsors must maintain all necessary records related to the project for at least 3 years following completion of the project.

Twenty-seven of the forty-four projects (61%) we audited had funding agreements dated prior to 2001. In fact, some of the agreements go back as far as 1996. Given the significant time period between project inception and project audit, several project sponsors have struggled to provide the necessary documentation needed for purposes of the audit. In one case, a project sponsor simply could not provide the information. These difficulties are due, in part, to conflicts between the record retention policies of the project sponsors and those stipulated in the funding agreements. Additionally, sometimes requested records have been lost or otherwise misplaced due to turnover in project management staff.

Failure to maintain project records could result in an audit scope limitation. In other words, without sufficient records, we may be unable to develop enough evidence to render an opinion on the schedule of expenses for the project. To avoid this problem, we recommend the District conduct “interim audits” for all projects extending beyond three years from the date of the funding agreement.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Finding 2004-3 Late Filing of Reports

Attachment C of the funding agreement requires Project Sponsors to submit quarterly status reports from project inception through project completion. Once a project is completed, the project sponsor is required to submit a final “close out” report. While performing our audits, we noted a significant level of noncompliance with report filing requirements. A summary of Project Sponsors who late filed reports is provided in the table below.

<u>Project Sponsors</u>	<u>Project Numbers</u>
Bay Area Rapid Transit	96R81
City of Suisun City	00R49
City of Dublin	99R65
Sonoma County Transit	00R33
	99R43
	99R42
City of Berkeley	00R57
City of Sunnyvale	00R17
City of Oakland	00R26
San Francisco Municipal Transportation Agency	97R99
	99R15
Presidio Trust	00R68
Santa Clara Valley Transportation Authority	01R39
City of Berkeley	00R56
City of Oakland	00R26
San Francisco International Airport	99R29
City of Belmont	00R62
Livermore/Amador Valley Transit Authority	01R24
Solano Transportation Authority	96R54
County of Sonoma	99R41
City of San Jose	99R55
	01R23
County of San Francisco	00R65
	02R45
City of Walnut Creek	01R10
City of Union City	01R13
	02R53
City of Orinda	01R41
City of Alameda	02R15
County of Alameda	02R25
	98R75
Peninsula Corridor Joint Powers Board	02R54
University of California, Berkeley	96R114
City of Cupertino	97R11
City of Santa Rosa	99R16

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Since the inception of the TFCA Regional Fund program project sponsors have regularly failed to timely file reports with the District. We recommend the District consider inclusion of a penalty provision within the funding agreements to discourage this behavior and emphasize the importance of timely reporting.

Finding 2004-4

Missing Report Information

Attachment C of the funding agreement calls for various information to be included in both the quarterly progress reports and the final report. We noted several project sponsors failed to include all required information in their reports. A summary describing the type of information missing, by project, is provided in the following table.

<u>Project Sponsors</u>	<u>Project Numbers</u>	<u>Type of Information Missing</u>
BART ⁵	96R81	Redeployment Plan for missing lockers
City of Dublin	99R65	No indication that the Air District is mentioned in promotional materials
San Francisco International Airport	00R66	Vehicle identification numbers
Santa Clara Valley Transportation Authority	01R39	Vehicle identification numbers
City of Santa Rosa	99R16	Summary of problems or future plans
Solano Transportation Authority	96R54	Survey, photos, accounting, and promotional information
Sonoma County Transit	99R43	Vehicle identification numbers
City of Sunnyvale	00R17	Future plans to purchase similar trucks
City of Union City	01R13	Summary of problems encountered and future plans
University of California, Berkeley	96R114	No indication that the Air District is mentioned in promotional materials

We recommend the District develop a checklist to review these reports upon submission and reject all reports failing to contain the required information. Additionally, resolution and follow up procedures should be developed.

⁵ As a result BART surrendered the 15% retention in the amount of \$95,477.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Finding 2004-5

Metropolitan Transportation Commission Funding

The Air District entered into a funding agreement with the Metropolitan Transportation Commission (MTC) to fund project 02R40 for a regional rideshare program. In accordance with the funding agreement, the District was to provide funding for up to 50.1% of the project costs, provided these costs did not exceed \$3,900,555. The project came in under budget at \$3,494,942 and MTC was reimbursed in the amount of \$1,730,106 or 49.5%. We have advised the MTC, based on our understanding of the funding agreement, it is unclear whether MTC is eligible to receive an additional \$20,860 or .6% based on the funding agreement. We recommend the District further review the finding on this project.

Finding 2004-6

Maintaining Separate Accountability

The District entered into a single funding agreement with the (MTC), which provided funding from both the Regional Fund and the Program Manager Fund for a single program. MTC pooled these resources with other non-TFCA resources to finance the program. During our audit, we noted that the MTC did not maintain separate accountability for expenditures related to these program resources, which made it difficult to audit the program from a “Regional Fund” only perspective.

When funding a single project through both the Regional Fund and the Program Manager Fund, we suggest the District include a requirement in the funding agreement to maintain separate accountability for project expenditures, by funding agreement. This will facilitate the audit process and enhance the program’s monitoring and administration process.

Finding 2004-7

Budgetary Compliance and Control

During the course of our audits, we noted the level of detailed budget information included in Attachment A of the funding agreements varied significantly from one project to another. More specifically, 26 out of the 44 projects audited had single line item budgets, whereas the remaining 18 projects had multiple line item budgets. It is unclear whether project expenditures are required to be controlled at the “line item budget level” or at the “total project budget level.” We recommend the District clarify its intent on this issue and adopt monitoring procedures as appropriate. For example, if the District intends to maintain control at the line item level, project sponsors should be required to report on the projects at this level of detail during the course of the project. As quarterly reports are submitted and reimbursements requested, District staff should review these submissions for budgetary compliance.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Finding 2004-8

Enforcement of Logo and Publicity Requirements

The funding agreement requires the District's approved TFCA logo be applied to any vehicles leased or purchased with TFCA funds and that the District be acknowledged in any project related publicity materials. We noted the City of Berkeley and City of San Jose did not apply the District's approved TFCA logo to vehicles funded by the TFCA program. Additionally, the City of Dublin (Dublin), the University of California at Berkeley (Cal), and Solano Transportation Authority (STA) failed to acknowledge the District in their project related publicity materials.

We recommend the cities of Berkeley and San Jose obtain and apply the approved District logo, to the vehicles and send District staff a picture capturing the logo on the vehicle accompanied by a signed confirmation as verification and proof of compliance. To address project sponsors like Dublin, Cal and STA, who fail to mention the District in their project related promotional campaigns, the District should consider imposing penalty provisions that addresses failure to follow the District's logo and publicity requirements.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Attachment A

Health and Safety Code Section 44241

44241. (a) Fee revenues generated under this chapter in the bay district shall be subvended to the bay district by the Department of Motor Vehicles after deducting its administrative costs pursuant to Section 44229.
- (b) Fee revenues generated under this chapter shall be allocated by the bay district to implement the following mobile source and transportation control projects and programs that are included in the plan adopted pursuant to Sections 40233, 40717, and 40919:
- (1) The implementation of ridesharing programs.
 - (2) The purchase or lease of clean fuel buses for school districts and transit operators.
 - (3) The provision of local feeder bus or shuttle service to rail and ferry stations and to airports.
 - (4) Implementation and maintenance of local arterial traffic management, including, but not limited to, signal timing, transit signal preemption, bus stop relocation and "smart streets."
 - (5) Implementation of rail-bus integration and regional transit information systems.
 - (6) Implementation of low-emission and zero-emission vehicle programs and of demonstration projects in telecommuting and in congestion pricing of highways, bridges, and public transit. No funds expended pursuant to this paragraph for telecommuting projects shall be used for the purchase of personal computing equipment for an individual's home use.
 - (7) Implementation of a smoking vehicles program.
 - (8) Implementation of an automobile buy-back scrappage program operated by a governmental agency.
 - (9) Implementation of bicycle facility improvement projects that are included in an adopted countywide bicycle plan or congestion management program.
 - (10) The design and construction by local public agencies of physical improvements that support development projects that achieve motor vehicle emission reductions. The projects and the physical improvements shall be identified in an approved area-specific plan, redevelopment plan, general plan, or other similar plan.
- (c) Fee revenue generated under this chapter shall be allocated by the bay district for projects and programs specified in subdivision (b) to cities, counties, the Metropolitan Transportation Commission, transit districts, or any other public agency responsible for implementing one or more of the specified projects or programs. Fee revenues shall not be used for any planning activities that are not directly related to the implementation of a specific project or program.
- (d) Not less than 40 percent of fee revenues shall be allocated to the entity or entities designated pursuant to subdivision (e) for projects and programs in each county within the bay district based upon the county's proportionate share of fee-paid vehicle registration.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

(e) In each county, one or more entities may be designated as the overall program manager for the county by resolutions adopted by the county board of supervisors and the city councils of a majority of the cities representing a majority of the population in the incorporated area of the county. The resolution shall specify the terms and conditions for the expenditure of funds. The entities so designated shall be allocated the funds pursuant to subdivision (d) in accordance with the terms and conditions of the resolution.

(f) Any county, or entity designated pursuant to subdivision (e), that receives funds pursuant to this section, at least once a year, shall hold one or more public meetings for the purpose of adopting criteria for expenditure of the funds and to review the expenditure of revenues received pursuant to this section by any designated entity.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Attachment B

Health and Safety Code Section 44242

44242. (a) Any agency which receives funds pursuant to Section 44241 shall, at least once every two years, undertake an audit of each program or project funded. The audit shall be conducted by an independent auditor selected by the bay district in accordance with Division 2 (commencing with Section 1100) of the Public Contract Code. The district shall deduct any audit costs which will be incurred pursuant to this section prior to distributing fee revenues to cities, counties, or other agencies pursuant to Section 44241.
- (b) Upon completion of an audit conducted pursuant to subdivision (a), the bay district shall do both of the following:
- (1) Make the audit available to the public and to the affected agency upon request.
 - (2) Review the audit to determine if the fee revenues received by the agency were spent for the reduction of air pollution from motor vehicles pursuant to the plan prepared pursuant to Sections 40233 and 40717.
- (c) If, after reviewing the audit, the bay district determines that the revenues from the fees may have been expended in a manner which is contrary to this chapter or which will not result in the reduction of air pollution from motor vehicles pursuant to that plan, the district shall do all of the following:
- (1) Notify the agency of its determination.
 - (2) Within 45 days of the notification pursuant to paragraph (1), hold a public hearing at which the agency may present information relating to expenditure of the revenues from the fees.
 - (3) After the public hearing, if the district determines that the agency has expended the revenues from the fees in a manner which is contrary to this chapter or which will not result in the reduction of air pollution from motor vehicles pursuant to the plan prepared pursuant to Sections 40233 and 40717, the district shall withhold these revenues from the agency in an amount equal to the amount which was inappropriately expended. Any revenues withheld pursuant to this paragraph shall be redistributed to the other cities within the county, or to the county, to the extent the district determines that they have complied with the requirements of this chapter.
- (d) Any agency which receives funds pursuant to Section 44241 shall encumber and expend the funds within two years of receiving the funds, unless an application for funds pursuant to this chapter states that the project will take a longer period of time to implement and is approved by the district or the agency designated pursuant to subdivision (e) of Section 44241. In any other case, the district or agency may extend the time beyond two years, if the recipient of the funds applies for that extension and the district or agency, as the case may be, finds that significant progress has been made on the project for which the funds were granted.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Audit Summary Report TFCA Regional Fund

For the Project Period Ended June 30, 2004

Attachment C

Listing of Audited Projects

Project #	Cat	Sponsor	Project Title	TFCA Funds Awarded
96R81	7d	BART	Bicycle Parking Demonstration	\$ 541,034
98R27	7d	Caltrans District 4	Bicycle Lockers - 41 units/82 bicycle capacity	43,502
02R15	3a	City of Alameda	Heavy Duty Vehicle Replacement: 12 Natural Gas Refuse Trucks	469,520
00R62	7d	City of Belmont	Bicycle Lockers - 50 spaces	60,000
00R56	7c	City of Berkeley	Bicycle Boulevards - Russell and Ninth St. (4.78 mi.)	93,628
00R57	1a	City of Berkeley	Natural Gas Vehicle Purchase - 1 Mini-Bus	35,000
97R11	8a	City of Cupertino	Arterial Management - DeAnza Blvd. (15 signals)	300,000
99R65	7a	City of Dublin	Class 1 Bicycle Path - Alamo Canal (0.8 mi.)	154,080
00R26	7e	City of Oakland	Bicycle Rack Program - 150 racks	16,429
01R23	3a	City of Oakland	Natural Gas Vehicle Purchase - 10 Refuse Trucks	373,141
01R41	9a	City of Orinda	Traffic Calming - Orinda Way Central Village North	370,000
99R55	3a	City of San Jose	Natural Gas Vehicle Demonstration - 14 HDV Refuse Collection Trucks	859,986
01R12	6a	City of San Leandro	West San Leandro Shuttle	147,000
99R16	3a	City of Santa Rosa	Natural Gas Vehicle Demonstration - 5 HDV	74,686
00R49	7a	City of Suisun City	Class 1 Bicycle Path - Highway 12 (2.86 mi.)	160,000
00R17	3a	City of Sunnyvale	Natural Gas Vehicle Purchase - 20 Refuse Trucks	1,000,000
01R13	1a	City of Union City	Natural Gas Vehicle Purchase - 2 Transit buses	300,000
02R53	3a	City of Union City	Heavy Duty Vehicle Replacement: 1 CNG Street Sweeper	30,500
01R10	7e	City of Walnut Creek	Bicycle Racks - 112 bicycle capacity	4,352
02R25	7b	County of Alameda	Class 3 Bicycle Route: Dublin Canyon Road	64,013
98R75	7a	County of Alameda	Class 1 Bicycle Path - Iron Horse Trail (1.1 mi.)	419,436
00R65	7e	County of San Francisco	Bicycle Racks - 700 bicycle capacity	97,600
99R72	3a	County of San Francisco	Natural Gas Vehicle Demonstration - 4 HDV Class 8 Trucks	280,000
02R45	7b	County of San Francisco (DPT)	Class 2 Bicycle Lanes: Cabrillo Avenue	63,568
99R41	7b	County of Sonoma	Class 2 Bicycle Lanes - West Third St. (0.23 mi.)	80,000
01R24	5c	Livermore/Amador Valley Transit Authority	Ridesharing - Tri-Valley School Pass Program	45,000
01R06	5b	Metropolitan Transportation Commission	Regional Rideshare Program	1,000,000
02R40	5b	Metropolitan Transportation Commission	Regional Rideshare Program	896,011
02R54	6a	Peninsula Corridor Joint Powers Board	Caltrain Shuttle Program	915,444
00R68	1a	Presidio Trust	Natural Gas Vehicle Purchase - 5 Shuttle Buses	175,000
00R66	1a	San Francisco International Airport	Purchase Sixteen Shuttle Buses (10 NG, 6 Propane)	426,589
00R67	1a	San Francisco International Airport	Natural Gas Vehicle Purchase - 4 Buses (40 ft.)	140,000
99R29	1a	San Francisco International Airport	Natural Gas Vehicle Demonstration - 23 Hotel/Parking Shuttle Buses	680,263
97R99	1a	San Francisco MUNI	Transit Bus Replacements - 2 CNG	500,000
99R15	1c	San Francisco MUNI	Transit Bus Purchase - 2 Diesel Electric Hybrid	486,234
01R11	5g	San Jose State University - Assoc. Students	Campus Ridesharing Program	149,271
01R39	6a	Santa Clara Valley Transportation Authority	Shuttle Bus Service - ACE Commuter Rail	504,197
02R08	6a	Santa Clara Valley Transportation Authority	Shuttle Program: Altamont Commuter Express	648,957
96R54	7a	Solano Transportation Authority	Bicycle Path-Solano Bikeway	392,000
00R33	1a	Sonoma County Transit	Natural Gas Vehicle Purchase - 4 Transit Buses (30 ft.)	590,000
99R42	1a	Sonoma County Transit	Transit Bus Purchase - 4 CNG	775,000
99R43	3a	Sonoma County Transit	Natural Gas Vehicle Demonstration - 4 CNG Refuse Trucks	220,000
02R21	7e	Town of Los Gatos	Installation of Bicycle Racks	25,510
96R114	7a	University of California, Berkeley	Cross Campus Bicycle Path	111,412

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: January 5, 2006

Re: Reallocation of Diesel Back-Up Generator Mitigation Funds to Fund Hybrid
Electric Trucks

RECOMMENDED ACTION:

- 1) Recommend Board approval of the allocation of \$100,000 in Diesel Back-Up Generator (BUG) Mitigation funds for four diesel hybrid-electric trucks.
- 2) Recommend Board authorization for the Executive Officer/APCO to enter into a contract with FedEx Express for the hybrid-electric truck project.

BACKGROUND

Non-renewable fuels, such as gasoline, diesel and natural gas, power most motor vehicles in California. Advances in cleaner fuel formulations, engine design and emission control systems have led to a significant reduction in harmful emissions from motor vehicles. In recent years, the use of hybrid-electric engines for light-duty, medium-duty and heavy-duty vehicles have received increased attention. Hybrid-electric engines achieve better fuel economy and lower emissions than gasoline, diesel or natural gas engines.

Five years ago FedEx Express (FedEx) and Environmental Defense entered into a partnership agreement with the goal of prompting the development of an environmentally and economically superior pick-up and delivery truck that would meet or exceed the operational capabilities of FedEx's current W700 truck model. Specifically, FedEx requested proposals for a truck that would achieve aggressive targets of 50% better fuel economy and 90% lower nitrogen oxides (NOx) and particulate matter (PM) emissions, and be economically competitive with the W700 truck model. These goals were defined in reference to FedEx's 1999 W700 truck. An E700 vehicle was developed, which achieved FedEx's fuel economy and emission goals, except for the NOx target, which was revised and met at 65%. Both the W700 and E700 trucks have a gross vehicle weight rating (GVWR) of 16,000 lbs., with a cargo capacity of approximately 6,000 lbs. and 700 cubic feet.

Ultimately, two companies submitted prototypes for testing performed at Southwest Research Institute. Based on that testing, FedEx decided to proceed with the hybrid diesel-electric truck designed by Eaton and purchased 18 units for testing in regular revenue service. These trucks have been in service for over a year and have performed well, with approximately 99% availability for service, comparable to the rest of the FedEx fleet. The E700 truck uses lithium-ion batteries, and regenerative braking to achieve improvements in emissions and fuel economy. The next step in this

project is to expand the presence of these hybrids within the FedEx fleet, which will be accomplished with the addition of 75 hybrid vehicles in May 2006.

DISCUSSION

In May 2006, FedEx Express will place in service 75 E700 diesel hybrid-electric trucks, in addition to the 18 that are already operating in Sacramento, CA; Tampa, FL; New York, NY; and Washington D.C. The purchase price of the hybrid trucks is significantly higher than that of a traditional FedEx delivery truck. Therefore, FedEx is searching for supplemental funding to offset the incremental cost of these vehicles. Securing such funding plays a pivotal role in determining the geographic placement of the hybrid trucks.

The FedEx diesel hybrid-electric trucks will provide the dual benefits of reduced emissions and energy consumption. Not only will this provide immediate benefits in air quality and energy conservation, but it will also demonstrate the viability of these vehicles, and encourage other fleet operators to incorporate vehicles based on this design into their fleets. FedEx states they are committed to the overall goal of acting as a catalyst for change in the truck market, that has until now been almost exclusively the domain of standard diesel trucks.

In 2002 the California Air Resources Board's (CARB) provided the Air District with \$2,484,533 in Diesel Buck-Up Generator Mitigation funds to pursue voluntary emission reduction programs to offset impacts from increased use of diesel back-up generators during the rolling blackouts that occurred due to electricity shortages in 2000 and 2001. A portion of those funds is available due to previously approved projects completed under budget.

In order to make the aforementioned benefits of hybrid-electric vehicles available to the Bay Area and to gain additional insights into the development of hybrid-electric trucks, staff is recommending that the Air District allocate \$100,000 of currently available BUG Mitigation funds to fund four FedEx E700 diesel hybrid-electric trucks. Staff also proposes to allocate any remaining BUG Mitigation funds to one of the of the BUG Mitigation projects approved by the Board of Directors (e.g., Diesel Particulate Traps for Heavy-Duty Fleets, Lower Emission School Buses).

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer /APCO

Prepared by: Juan Ortellado
Reviewed by: Henry Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: January 5, 2006

Re: Presentation Comparing the Cost of Diesel Versus Natural Gas Fuel

RECOMMENDED ACTION:

Receive and file.

BACKGROUND

The Air District administers grant and incentive programs that fund projects that result in the reduction of emissions in the Bay Area. Through the years, these programs have helped implement numerous heavy-duty vehicle projects, including, but not limited to, replacement of older polluting vehicles with new clean air vehicles, engine repowers, engine retrofits, alternative fuel projects, and advanced technology demonstrations. The grant and incentive programs are focused on the reduction of mobile source emissions regardless of the technology, and are essentially fuel-neutral.

At the September 13, 2005 Mobile Source Committee meeting, Sam Altshuler, P.E., Senior Program Manager of the Clean Air Transportation Group at Pacific Gas & Electric offered to provide a presentation comparing the costs of diesel versus natural gas fuel, and the Committee asked that this item be agendized.

DISCUSSION

Air District staff will provide a summary of recent trends in diesel and natural gas costs, and Mr. Altshuler will provide information on projected diesel and natural gas fuel costs from the present through 2010.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Alison Kirk
Reviewed by: Henry Hilken

BOARD RETREAT 10:30 A.M. – ISSUE:Non-Vehicle Based Projects

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chair Uilkema and
Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: January 11, 2006

Re: Presentation on Non-Vehicle Based Project Criteria Used in the
Transportation Fund for Clean Air (TFCA) program

RECOMMENDED ACTION

This item is for Board of Director discussion and direction to staff.

BACKGROUND

The Transportation Fund for Clean Air (TFCA) is a grant program administered by the Air District that has been providing funds for the implementation of air quality projects and programs in the Bay Area since 1992. To date, over \$190 million of TFCA funds have been allocated to more than 600 projects around the Bay Area. It is estimated that these projects have reduced over 20,000 tons of emissions of ozone precursors and particulate matter.

The Mobile Source Committee (Committee or MSC) has directed staff to perform a more in-depth review of certain project types funded by TFCA. On April 25, 2005 staff reported to the MSC on the strategy to comply with the Committee direction, which included a performance review of selected TFCA project types to be conducted by a contractor and a workshop with congestion management agencies. This report to the Board of Directors on the in-depth review directed by the Committee focuses on pedestrian and bicycle projects.

DISCUSSION

TFCA Background

Pursuant to California Health and Safety Code (HSC) Sections 44241 and 44242, the Air District has imposed a \$4 per vehicle annual surcharge on all motor vehicles registered within the boundaries of the Air District¹. This is the funding source for the Air District's program known as the Transportation Fund for Clean Air. TFCA revenues are awarded to

¹ Revenues from an additional \$2 surcharge in motor vehicle registrations, authorized by Assembly Bill 923, are not part of TFCA. These revenues will be used to implement the Air District's Mobile Source Incentive Fund (MSIF), which will provide incentives for the implementation of additional mobile source projects.

qualified project sponsors to implement eligible projects that reduce motor vehicle emissions and support the implementation of selected transportation and mobile source control measures in the Air District's strategies to achieve state and national air quality standards.

By law, sixty percent of TFCA revenues are allocated by the Air District through the TFCA Regional Fund. A portion of the TFCA Regional Fund is earmarked for eligible programs implemented directly by the Air District, including the Smoking Vehicle Program, Vehicle Buy Back Program, Vehicle Incentive Program, and Spare the Air Program; the balance of the Regional Fund is allocated on a competitive basis to eligible projects proposed by project sponsors. The remaining forty percent of the TFCA revenues is returned to the designated Program Manager, the Congestion Management Agency, in each county. Each Program Manager submits for approval by the Air District an annual expenditure plan of recommended projects for its forty percent share.

The Health and Safety Code was recently amended by Assembly Bill (AB) 694 (Chan) to update the list of mobile source and transportation control projects and programs that can be funded by TFCA revenues. The currently eligible project types can be classified as belonging to one of the following two project categories:

Projects that reduce motor vehicle emission rates:

- clean fuel buses for school districts and transit operators
- engine repowers, engine retrofits, fleet modernization, alternative fuels, and advanced technology demonstrations
- arterial traffic management projects (e.g., signal timing, transit signal preemption, bus stop relocations, "smart streets")
- smoking vehicles program
- automobile buy-back scrappage programs

Projects that reduce motor vehicle trips:

- ridesharing programs
- local feeder bus or shuttle services to rail and ferry stations and to airports
- rail-bus integration and regional transit information systems
- demonstration projects in telecommuting and in congestion pricing
- bicycle facility improvement projects
- physical improvements that support the development of projects that achieve motor vehicle emission reductions ("smart growth" projects)

Another recent relevant change to the TFCA-enabling legislation authorized by AB 694 is that, starting in calendar year 2006, private entities are eligible to apply for TFCA funds for the implementation of clean vehicle projects, under conditions to be approved by the Air District Board of Directors.

The TFCA Application and Funding Process

All TFCA Regional Fund grant applications are evaluated, scored, and ranked by Air District staff using criteria approved by the Board of Directors. Projects are funded in the order of ranking. As previously mentioned, County Program Managers submit for approval

by the Air District annual expenditure plans of recommended projects for their corresponding share of the annual TFCA revenues. To determine funding eligibility, Air District staff evaluates TFCA Regional Fund applications and County Program Manager expenditure plans relative to consistency with Health and Safety Code requirements and Board policies, including:

- *Consistency with State Law:* the projects shall be consistent with one of the eligible project categories listed in California Health and Safety Code Section 44241.
- *Consistency with the Clean Air Plan:* the projects shall be consistent with transportation control measures or mobile source measures contained in the Clean Air Plan.
- *Reduction of Emissions from Motor Vehicles:* the projects shall reduce emissions from motor vehicles.
- *Consistency with Board Adopted Policies:* the projects shall be consistent with the most recently adopted Board policies regarding the TFCA program.

In order to be recommended for funding, all projects must also comply with Board-adopted criteria, which emphasize cost effectiveness in reducing emissions. Cost effectiveness is calculated by dividing the total TFCA funds for the project by the estimated lifetime emission reductions of reactive organic gases (ROG), oxides of nitrogen (NOx) and particulate matter (PM) yielding TFCA funds (\$) per ton of reduced emissions. The current Board-approved cost effectiveness threshold is \$90,000/ton of reduced emissions for each project. The intent is to assure that TFCA funding is provided only to projects that achieve an acceptable level of cost effectiveness and benefit to the region.

The Regional Fund also includes other evaluation criteria:

- the promotion of clean air policies and programs,
- the location of a project (additional points awarded to projects located in economically disadvantaged communities),
- the promotion of alternative transportation modes, and
- other project attributes.

The grant application evaluation process used by staff was originally based on California Air Resources Board (CARB) guidance². For each funding cycle, staff prepares and distributes application materials to collect information about each project seeking TFCA funds. Staff also conducts a public workshop for potential TFCA Regional Fund applicants.

As part of the grant application evaluation process, staff performs a comprehensive review of all submitted materials, especially of the estimates and assumptions used for the calculation of the project's emission reductions and cost effectiveness. Staff also works closely with project sponsors to obtain the most accurate information related to the project. Appendix A shows relevant emission reduction inputs (i.e., default values) compiled by the

² *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects for Evaluating Motor Vehicle Registration Fee Projects and Congestion and Mitigation and Air Quality Improvement (CMAQ) Projects.*

Air District, such as the effective life of a project and the number and length of trips reduced by the implementation of a project, for most TFCA project types. Additionally, valuable data acquired from previous similar projects funded by TFCA through the years is also readily available to staff. Staff uses all these resources to objectively evaluate grant applications.

TFCA Funding of Bicycle and Pedestrian Projects

In response to the direction received from the MSC, staff has compiled in-depth information regarding TFCA funding of bicycle and pedestrian³ projects. Bicycle projects funded by TFCA include bicycle paths and lanes, as well as bicycle racks and lockers. Pedestrian projects funded by TFCA include crosswalks, pedestrian refuges and other pedestrian facility improvements and enhancements. Bicycle and pedestrian projects are considered air quality projects because they make walking and cycling safer and more convenient, and thus provide attractive non-polluting alternatives to motor vehicles, especially for shorter trips. The Ozone Strategy includes transportation control measures related to bicycle and pedestrian facilities.

The staff evaluation of the cost effectiveness for bicycle and pedestrian projects requires the estimate of the number and length of vehicle trips reduced due to project implementation. To determine the projects' cost-effectiveness, staff carefully analyzes the trip reduction estimates and other relevant information provided by the project sponsor. Staff considers default values developed by Air District staff based on CARB guidance, US Census mode-share data, monitoring data from previously funded projects, and data review from federal and professional reports. Staff also takes into account the project context, CARB's emission factors, and its own professional judgment and experience. Staff conveys all the available data and information to spreadsheets especially prepared for the evaluation of cost-effectiveness of project types that can be funded by TFCA.

Table 1 shows the total amount of TFCA funds allocated to date to the two main categories of project types: projects that reduce vehicle emission rates and projects that reduce vehicle trips. Total TFCA funds allocated to date have been almost evenly split between both categories of projects; however, the Regional Fund funds a greater percentage of vehicle emission rate reduction projects while the County Program Manager Fund funds more trip reduction projects.

³ Pedestrian projects fall under the smart growth project type, and are typically only one of several components of this project type. Since it is difficult to sort data specifically for pedestrian projects, the data presented here are for smart growth projects as a whole.

Table 1. Allocation of TFCA Funds to Trip Reduction and Vehicle Emission Rate Reduction Projects

Project Categories	Regional Program		Program Manager Fund		Total TFCA Funds	
	TFCA Funds Awarded	%	TFCA Funds Awarded	%	TFCA Funds Awarded	%
Trip Reduction Projects	\$65,116,685	36%	\$75,213,567	68%	\$140,330,252	48%
Vehicle Emission Rate Reduction Projects	\$115,979,705	64%	\$34,781,966	32%	\$150,761,670	52%
Sub-total	\$181,096,390		\$109,995,533		\$291,091,922	
Admin	\$10,700,476		\$4,536,837		\$15,237,313	
Totals	\$191,796,866		\$114,532,369		\$306,329,235	

Table 2 shows the total cumulative allocation of TFCA funds to the different types of eligible projects to date. The data indicate that about 11% of the combined TFCA funds have been allocated to bicycle projects, while about 2% of the funds have been awarded to smart growth projects, which include pedestrian projects.

Table 2. Allocation of TFCA Funds to Eligible Project Types to Date

Project Type	Regional Fund		Program Manager Fund		Total TFCA Funds	
	TFCA Funds Awarded	%	TFCA Funds Awarded	%	TFCA Funds Awarded	%
Rideshare/Transit	\$25,660,115	14%	\$37,663,550	34%	\$63,323,665	22%
Shuttles	\$23,331,866	13%	\$16,420,869	15%	\$39,752,735	14%
Bicycles	\$11,026,076	6%	\$20,198,678	18%	\$31,224,754	11%
Smart Growth	\$5,098,628	3%	\$930,469	1%	\$6,029,097	2%
Arterial Management	\$9,991,233	6%	\$15,026,786	14%	\$25,018,018	9%
Vehicle Buy Back	\$29,670,364	16%	\$3,920,629	4%	\$33,590,993	12%
Light-Duty Vehicles	\$8,955,336	5%	\$5,547,573	5%	\$14,502,909	5%
Heavy-Duty Vehicles	\$59,655,123	33%	\$4,263,614	4%	\$63,918,737	22%
Smoking Vehicle Program	\$6,904,548	4%	\$0	0%	\$6,904,548	2%
Fueling/Infrastructure	\$803,102	0%	\$6,023,364	5%	\$6,826,466	2%
Subtotal	\$181,096,390	100%	\$109,995,533	100%	\$291,091,922	100%
Admin	\$10,700,476		\$4,536,837		\$15,237,313	
Totals	\$191,796,866		\$114,532,369		\$306,329,235	

Table 3 shows the number and percentage of TFCA Regional Fund grant applications for different project types from 2000 to 2005 that received funding. As can be seen, about a quarter of the grant applications for bicycle projects have not been funded; applications for smart growth projects have a higher rate of success.

Table 3. TFCA Regional Fund Grant Applications Funded and Not Funded from 2000 to 2005

Project Type	Number of Applications	Number of Projects Funded	Number of Projects Not Funded	% of Projects Not Funded
Rideshare/Transit	29	24	5	17%
Shuttles	44	31	13	30%
Bicycles	78	59	19	24%
Smart Growth	21	19	2	10%
Arterial Management	31	15	16	52%
Heavy-Duty Vehicles	83	71	12	14%
Fueling/Infrastructure	1	0	1	100%
Total	287	219	68	31%

TFCA Performance Review

As part of the in-depth evaluation of certain project types funded by TFCA, the firm ICF Consulting, Inc. was contracted by the Air District to: 1) conduct an assessment of the range of emissions reductions that can be achieved by specific project types, including bicycle and pedestrian projects; and 2) assess the emissions reductions and cost-effectiveness of a representative sample of completed TFCA projects. The first task of the contractor, a literature review on the transportation and emission reduction impacts of selected transportation control measures (TCMs), has been recently completed. This effort was focused on ten selected TCMs eligible for TFCA funding, and relied heavily on research by the Transportation Research Board (TRB)⁴. This comprehensive report reviewed and summarized all relevant literature published before 2002 (more than 80 sources), and also adjusted estimated emission impacts from different studies so they are in comparable terms.

For each of the project types of interest, the consultant assessed transportation impacts, emissions impacts, and other health and economic impacts. Because the methodology used in the TRB report differs from that currently used by the Air District in several respects, the cost effectiveness figures presented in this review cannot be directly compared to Air District TFCA cost effectiveness estimates.

The literature review found evidence that the ten selected types of projects can reduce automobile use and associated emissions or, in the case of signal timing and incident management, reduce congestion and associated emissions.

⁴ Special Report 264, entitled *The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience*

- Several studies have calculated the emission reduction cost effectiveness of **bicycle racks, lockers, and parking stations**, with widely varying results. Much of the research to date has focused on more expensive bicycle lockers rather than inexpensive bicycle racks.
- Many transit agencies have reported increased bicycle usage following installation of **bicycle racks on buses**. A recent survey of transit agencies suggests that these projects lead to increased transit usage. There is very little research on the trip reduction and emissions impacts of bike racks on buses.
- A variety of research suggests that the provision of **bicycle paths and lanes** induces drivers to switch to bicycling mode. Few studies have quantified automobile travel and emission reduction benefits from these projects.
- There is clear evidence that **pedestrian facility improvements** and, in some cases, **traffic calming** projects are associated with increased pedestrian activity. There is more limited evidence that pedestrian facility improvements reduce automobile use and emissions. Recent studies of Safe Routes to School programs have found that pedestrian facility improvements (such as sidewalk gap closure) result in more children walking to school.
- There is extensive evidence that **regional ridesharing** programs and **vanpool/buspool** programs reduce vehicle use and emissions. The literature suggests these projects are often highly cost effective at reducing emissions, although impacts can vary widely by project.
- **Traffic signal timing** and **incident management** projects reduce vehicle idling and smooth traffic flow. Many studies have documented congestion reduction, emission reduction, and economic benefits resulting from these projects. Some beneficial impacts of these projects may be offset due to higher speeds (which can lead to greater NOx emissions and discourage non-motorized travel) and induced traffic.
- **Transit signal priority** projects have been demonstrated to reduce bus travel time and improve service reliability, which can lead to greater transit ridership and less auto travel. Research to date has not been able to isolate the ridership and emissions benefits of these projects because they are often bundled with other transit improvements.

Table 4 summarizes the TRB report's emission reduction cost effectiveness for some project types. Among these project types, regional ridesharing and traffic signal timing projects appear to be the most cost-effective, followed closely by vanpool/buspool projects. Despite the limited data available, the cost effectiveness of bicycle racks, lockers and parking stations seems to be better than that of a few other project categories. No comparable cost effectiveness estimates were available for four of the project types considered (including pedestrian facility improvements), and two others (incident management and bicycle path/lane/route projects) have only one or two examples in the literature. While there is evidence that these six project types can reduce emissions, it is difficult to draw firm conclusions about their cost effectiveness.

One notable observation is the wide variation in cost effectiveness *within* project types. This suggests that the specific context of each project may have greater bearing on cost effectiveness than the project type.

It is clear from this literature review that little is known about the emission reduction cost effectiveness of some TFCA project types, particularly transit signal priority, bicycle paths/lanes/routes, bicycle racks on buses, pedestrian facility improvements, and traffic calming. The experiences of TFCA project sponsors represent a source of information to develop a better understanding of these project types.

Table 4. Summary of Annual Cost Effectiveness by Project Type (thousands of 2000 \$/ton)

Project Type	Number of Projects	Low	High	Mean	Median
Regional Ridesharing	3	\$1.2	\$16.0	\$8.2	\$7.4
Vanpool/Buspool	6	\$5.2	\$89.0	\$24.3	\$10.5
Signal Timing	3	\$6.0	\$27.2	\$13.7	\$7.9
Incident Management	2	\$2.4	\$199.8	\$101.1	\$101.1
Transit Signal Priority	0	N/A	N/A	N/A	N/A
Bicycle Paths, Lanes, and Routes	1	\$67.5	\$67.5	\$67.5	\$67.5
Bicycle Racks, Lockers, Parking Stations	5	\$10.4	\$295.6	\$123.1	\$98.8
Bicycle Racks on Buses	0	N/A	N/A	N/A	N/A
Pedestrian Facility Improvements	0	N/A	N/A	N/A	N/A
Traffic Calming	0	N/A	N/A	N/A	N/A
HOV facilities	2	\$15.7	\$336.8	\$176.2	\$176.2
Park-and-ride lots	4	\$8.6	\$70.7	\$41.3	\$43.0
Miscellaneous TDM	8	\$2.3	\$33.2	\$15.0	\$12.5
Employer trip reduction	7	\$5.7	\$175.5	\$48.0	\$22.7
Telework	10	\$13.3	\$8,227	\$1,248	\$251.8
Transit shuttles, feeders, paratransit	15	\$12.3	\$1,974	\$335.6	\$87.5
New transit capital systems/vehicles	6	\$8.5	\$470.8	\$127.0	\$66.4
Conventional transit service upgrades	10	\$3.8	\$120.1	\$37.7	\$24.6
Conventional fuel replacement buses	5	\$11.0	\$39.9	\$20.6	\$16.1
Alternative-fuel buses	11	\$6.7	\$568.7	\$225.4	\$126.4
Alternative-fuel vehicle programs	2	\$4.0	\$31.6	\$17.8	\$17.8
Modal subsidies and vouchers	14	\$0.8	\$471.0	\$87.6	\$46.6
Charges and fees	6	\$0.8	\$49.4	\$16.6	\$10.3

Source: Transportation Research Board, *The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience*, Special Report 264, 2002.

Summary

The following points summarize this review of the TFCA funding of bicycle and pedestrian projects:

- Bicycle and pedestrian projects are eligible for TFCA funding.
- Bicycle and pedestrian measures are included as Transportation Control Measures in the Ozone Strategy.
- The Board of Directors can decide how to allocate TFCA funding; there is no legislative requirement to fund all eligible project types.
- Bicycle and pedestrian projects have been funded by TFCA for at least six years, and received approximately a combined 13% of the total allocated TFCA funds.
- Bicycle and pedestrian projects have varying rates of cost effectiveness, but ultimately result in emission reduction benefits due to increased bicycling and pedestrian activity.

Next Steps

- The consultant will complete the performance review of selected TFCA project types and provide a final report that will include the analysis of TFCA-funded projects.
- The Air District will conduct a workshop with the congestion management agencies to discuss the TFCA funding of certain project types, including bicycle and pedestrian projects.
- Staff will address any direction provided by the Board of Directors at the January 18, 2006 Board retreat.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: J. Ortellado
Reviewed by: H. Hilken

Encl: Appendix A, Emission Reduction Inputs

Appendix A
Emission Reduction Inputs

Project Types	Source of Emission Reductions	Key Inputs	Monitoring Requirements
Bicycle Projects <ul style="list-style-type: none"> • Class 1 bike path • Class 2 bike lane • Class 3 bike route 	Mode shift from single occupancy vehicle to bicycling.	<u>Bicycle Paths, Lanes and Routes</u> <ul style="list-style-type: none"> • Class 1 projects effective for 20 years, Class 2 and 3 effective for 15 years • Number of one-way trips reduced per day based on length of facility and average daily traffic. The range of trips reduced would be between 0.1 % and 0.8% of the average daily traffic on the roadway. • The default average trip length is 3 miles (one-way) for bicycle projects, or approximately a 15 to 20 minute bike ride. • Bicyclists are presumed to ride 240 days/year. 	<ul style="list-style-type: none"> • Length, width, materials used, and verification that project conforms with design standards • Pre-project and post-project count of cyclists conducted for the AM (7-10 a.m.) and PM (3-6 p.m.) peak periods.
		<u>Bicycle Lockers & Racks</u> <ul style="list-style-type: none"> • Effective for 10 years • Number of one-way trips reduced is: <ul style="list-style-type: none"> - Capacity of locker x 1 trip/day - Capacity of racks x 0.5 trips/day 	Data collection to ascertain: <ul style="list-style-type: none"> • use (at peak periods), • total trip distance, and • commute mode prior to availability of bicycle locker/racks.
Smart Growth (includes pedestrian projects)	Mode shift from single occupancy vehicle to alternative, less polluting, or non-polluting form of transportation, including; transit, carpool/vanpool, bicycling or walking.	<ul style="list-style-type: none"> • Number of trips reduced per day (one-way) and days per year that project would be effective • Number of people using alt. modes of transportation that previously drove alone • Average trip distance • New vehicle trips (e.g., trips to transit station, Park & Ride Lot) 	<ul style="list-style-type: none"> • Count of pedestrians, bicycles, transit riders, and motor vehicles not more than three months prior to start of construction and approximately six months after completion of construction. • Post-construction counts conducted one year after completion of construction.

Project Types	Source of Emission Reductions	Key Inputs	Monitoring Requirements
<p>Ridesharing / Trip Reduction</p> <ul style="list-style-type: none"> • Regional & Local Trip Reduction/Rideshare Programs • Transit Incentive Campaigns • Guaranteed Ride Home • Vanpool/School Carpool Programs • Increased Transit Ridership from Transit Signal Priority Projects 	<p>Mode shift from single occupancy vehicle to alternative, less polluting, or non-polluting form of transportation, including; transit, carpool/vanpool, bicycling or walking.</p>	<ul style="list-style-type: none"> • Effective for 240 weekdays over one year (10 years for Transit Signal Priority Projects) • Number of one-way trips reduced per day typically $\leq 1\%$ (0.2% for Guaranteed Ride Home) of target population • Trip length reduced (14 mi.) based on MTC data for average commute distances in Bay Area • Emissions from new trips (estimated at 3 mi. in length) to access alternative transportation accounted for. 	<ul style="list-style-type: none"> • Size of the ridematching database at the beginning and end of the project implementation period • Number of new vanpools formed during the project implementation period • Number of clients served, by type of service provided (new matchlist, placement calls, etc.) • Placement rate for each type of service provided • Average one-way trip distance for each type of placement • Average number of days per year using the commute alternative, by type of placement
<p>Shuttles / Rail-Bus Integration / Transit Information</p>	<p>Mode shift from single occupancy vehicle to transit.</p>	<ul style="list-style-type: none"> • Effective for 254 weekdays over one year • Number of one-way trips reduced per day typically 50% of shuttle service seating. Surveys used for on-going service to determine trips reduced • Trip length reduced (16 mi.) based on??? • Emissions from new trips to access alternative transportation accounted for. • Shuttle/vanpool emissions accounted for based on emission factors for vehicle class, fuel type and annual miles 	<ul style="list-style-type: none"> • The following data for all shuttle routes funded for the project year: <ul style="list-style-type: none"> a) Average daily ridership; b) Total boardings; c) Revenue miles of service; d) Fuel type of buses providing shuttle service.

Project Types	Source of Emission Reductions	Key Inputs	Monitoring Requirements
Arterial Management <ul style="list-style-type: none"> • Signal Timing Projects 	<u>Signal Timing Projects</u> Signal timing projects reduce emissions by smoothing traffic flow and increasing average vehicle speeds	<u>Signal Timing Projects</u> <ul style="list-style-type: none"> • Typically effective for 250 days/year for 2 years • Length of arterial • Average traffic volumes and speed for each direction and by time of day with an allowable speed increase of 25% (why?). 	<ul style="list-style-type: none"> • Concurrent average traffic speeds and volumes for the morning, mid-day and evening peak hours gathered not more than three months prior to start of construction and one month after completion of construction.
<ul style="list-style-type: none"> • Transit Signal Priority Projects 	<u>Transit Signal Priority Projects</u> Transit signal priority projects reduce emissions by increasing transit vehicle speeds which reduce vehicle emissions and increase ridership	<u>Transit Signal Priority Projects</u> <ul style="list-style-type: none"> • Average increase in transit vehicle speeds, annual vehicle miles, and bus emission characteristics • Elasticity factors for transit ridership based on increased bus speeds and reduced headways 	Gathered no more than three months prior to the start of construction, and one year after completion of construction: <ul style="list-style-type: none"> • Average transit headways during the morning and evening peak hours, off-peak periods, and weekends; • Average daily bus ridership on affected routes; and • Average daily bus ridership of the entire system
Heavy-Duty Vehicle Replacement	Older vehicles with high emissions are replaced with new, lower emission vehicles.	<ul style="list-style-type: none"> • Gross vehicle weight and fuel type • NOx + NMHC certification level • Average annual mileage or fuel consumption 	<ul style="list-style-type: none"> • Make, model, engine size, engine year, engine family, ARB NOx + NMHC certification level, and Vehicle Identification Numbers (VIN), as well as the date each of the new vehicles was put into service.
Heavy-Duty Vehicle Retrofits and Repowers	Older vehicles with high emissions are repowered with cleaner engines that have lower emissions and/or retrofit devices are installed on the vehicles to reduce tailpipe emissions	<ul style="list-style-type: none"> • Existing engine and GVW • Emission certification level of the new engine or retrofit device • Average annual mileage or fuel consumption 	<ul style="list-style-type: none"> • Make, model, engine size, engine year, engine family, and Vehicle Identification Numbers of vehicles • NOx + NMHC certification levels of new engines for repower projects • Emission reduction levels of the retrofit devices • Date vehicle(s) was put into service