BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS' REGULAR MEETING

October 18, 2006

A meeting of the Bay Area Air Quality Management District Board of Directors will be held at 9:45 a.m. in the 7th floor Board Room at the Air District headquarters, 939 Ellis Street, San Francisco, 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' REGULAR MEETING
A G E N D A

WEDNESDAY **BOARD ROOM**
OCTOBER 18, 2006 **7TH FLOOR**

9:45 A.M.

CALL TO ORDER

Opening Comments — Gayle B. Uilkema, Chair
Roll Call — Clerk of the Boards
Pledge of Allegiance

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.*

PROCLAMATION/COMMENDATION

The Board of Directors will present a plaque to Jack Bean, Air Quality Program Manager in the Compliance and Enforcement Division for his dedicated service of over 36 years to the cause of air pollution control.

CONSENT CALENDAR (ITEMS 1 – 7)

Staff/Phone (415) 749-

1. Minutes of October 4, 2006 — **M. Romaidis/4965** mromaidis@baaqmd.gov

2. Communications — **J. Broadbent/5052** jbroadbent@baaqmd.gov

   Information only

3. Monthly Activity Report — **J. Broadbent/5052** jbroadbent@baaqmd.gov

   Report of Division Activities for the month of September 2006

4. Quarterly Report of the Clerk of the Board — **J. Broadbent/5052** jbroadbent@baaqmd.gov

5. Quarterly Report of Air Resources Board Representative Honorable Mark DeSaulnier — **J. Broadbent/5052** jbroadbent@baaqmd.gov

6. Update to Affirmative Action Plan — **J. Broadbent/5052**

jbroadbent@baaqmd.gov

Pursuant to Division III, Section 2 of the District's Administrative Code the Board of Directors affirms its policy to provide equal employment opportunities and commits itself and the District to implementing an Affirmative Action Plan. Receive and file.

7. Consider Establishing a New Classification of Purchasing Agent with a Salary Set at Pay Range 122 Effective as of the Date of Board Approval **J. Broadbent/5052**
jbroadbent@baaqmd.gov

The Board of Directors will consider establishing a new classification of Purchasing Agent with a salary set at Range 122.

COMMITTEE REPORTS AND RECOMMENDATIONS

8. Report of the **Public Outreach Committee** Meeting of October 11, 2006

CHAIR: B. WAGENKNECHT **J. Broadbent/5052**
jbroadbent@baaqmd.gov

9. Report of the **Ad Hoc Committee on Climate Protection** Meeting of October 12, 2006

CHAIR: G. UILKEMA **J. Broadbent/5052**
jbroadbent@baaqmd.gov

Action(s): *The Committee may recommend Board of Directors' approval of the establishment of a Climate Protection Grant Program with an initial allocation of $2,000,000.00 subject to the review of the Budget and Finance Committee for the redesignation of the requested funds.*

10. Report of the **Mobile Source Committee** Meeting of October 16, 2006

CHAIR: T. SMITH **J. Broadbent/5052**
jbroadbent@baaqmd.gov

Action(s): *The Committee may recommend Board of Directors' approval of the following:*

A) Air District's continued participation in implementing the California Air Resources Board FY 2006/2007 Carl Moyer Program in the San Francisco Bay Area;

B) Contractor(s) for the FY 2006/2007 Vehicle Buy Back Program vehicle dismantlers; and

C) Allocation of available FY 2006/07 Transportation Funds for Clean Air Funds (TFCA).

PUBLIC HEARING

11. Public Hearing to Consider Proposed Amendments to Regulation 8, Rule 5: Storage of Organic Liquids and Adoption of a California Environment Quality Act (CEQA) Negative Declaration

H. Hilken/4642
hhilken@baaqmd.gov

The proposed amendments to Regulation 8, Rule 5 would set requirements for tank shells, tank pontoons, tank cleaning agents, tank degassing, and removal of sludge; create a voluntary self-inspection and maintenance program; and clarify exemptions and language throughout the rule.

CLOSED SESSION

12. Conference with Legal Counsel –

Existing Litigation Government Code Section 54956.9(a))

Pursuant to Government Code Section 54956.9(a), a need exists to meet in closed session with legal counsel to consider the following case:

A. ***Paul Mauriello v. Bay Area AQMD*** *(Public Employment Relations Board, Unfair Practice Charge No. SF-CE-336-M)*

B. ***Bay Area AQMD v. Pacific Steel Casting Company, et al.****, Alameda County Superior Court, Case No. RGO6284043*

OPEN SESSION

OTHER BUSINESS

13. Report of the Executive Officer/APCO

14. Chairperson's Report

15. 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)

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

17. Adjournment

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.

AGENDA: 1

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: October 10, 2006

Re: Board of Directors' Draft Meeting Minutes

RECOMMENDED ACTION:

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

DISCUSSION

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

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

AGENDA: 1

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 ELLIS STREET – SAN FRANCISCO, CA 94109

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

Call To Order

Opening Comments: Chair Gayle B. Uilkema called the meeting to order at 9:46 a.m.

Pledge of Allegiance: The Board of Directors recited the Pledge of Allegiance.

Roll Call: Present: Gayle B. Uilkema, Chair, Tom Bates, Harold Brown, Chris Daly (9:53 a.m.), Mark DeSaulnier, Jerry Hill, Yoriko Kishimoto, Carol Klatt, Liz Kniss (10:08 a.m.), Patrick Kwok, Jake McGoldrick (9:49 a.m.), Mark Ross (10:05 a.m.), Michael Shimansky, John Silva, Tim Smith, Brad Wagenknecht.

Absent: Dan Dunnigan, Erin Garner, Scott Haggerty, Janet Lockhart, Nate Miley, Pamela Torliatt.

Proclamation/Commendation: There were none.

Director Jake McGoldrick arrived at 9:49 a.m.

Public Comment Period: The following individual came forward and spoke on the Pacific Steel Casting facility in Berkeley:

David Whipple
Berkeley, CA 94706

Chair Uilkema requested that staff contact Mr. Whipple to discuss his concerns.

Director Chris Daly arrived at 9:53 a.m.

Consent Calendar (Items 1 – 4)

1. Minutes of September 20, 2006

2. Communications. Correspondence addressed to the Board of Directors. For information only.

3. District Personnel on Out-of-State Business Travel

   In accordance with Section 5.4 (b) of the District's Administrative Code, Fiscal Policies and Procedures Section, the Board was notified by memoranda the list of District personnel who traveled on out-of-state business.

4. Set Public Hearing for October 18, 2006 to Consider Proposed Amendments to Regulation 8, Rule 5: Storage of Organic Liquids and Adoption of a California Environmental Quality Act (CEQA) Negative Declaration

The proposed amendments to Regulation 8, Rule 5 would set requirements for tank shells, tank pontoons, tank cleaning agents, tank degassing, and removal of sludge; create a voluntary self-inspection and maintenance program; and clarify exemptions and language throughout the rule.

Board Action: Director Wagenknecht moved approval of the Consent Calendar; seconded by Director Daly; carried unanimously without objection.

Committee Reports and Recommendations

5. Report of the Stationary Source Committee Meeting of September 25, 2006

Director Silva presented the report and stated that the Committee met on Monday, September 25, 2006.

Staff presented a report on proposed amendments to Regulation 8, Rule 5: Storage of Organic Liquids. The report included background information, descriptions of the equipment, the proposed amendments, and the rule development process. The public hearing to consider the amendments to the regulation is scheduled for October 18, 2006.

The Committee received an update on the Refinery Flare Minimization Plans. All Plans were submitted on August 1, 2006 and have been reviewed for completeness. Two of the Plans are complete and three are incomplete. The Air District staff is working with the three refineries that have incomplete Plans to achieve a completeness determination of their Plans by the November 1, 2006 deadline. Copies of Flare Minimization Plans were distributed for Board member review. The Committee will continue to be updated on the process.

Staff presented a report on proposed amendments to Regulation 9, Rule 9: Nitrogen Oxides from Stationary Gas Turbines. The Committee received information on the affected facilities and equipment, the progress since the public workshop, a review of the second draft of proposed amendments, the current status of the rule development process, and the next steps. It is anticipated that the public hearing on the amendments will come before the Board of Directors in December, 2006.

The next meeting of the Committee will be at the Call of the Chair.

Board Action: Director Silva moved that the Board of Directors' approve the report of the Stationary Source Committee; seconded by Director Wagenknecht; carried unanimously without objection.

6. Report of the Budget and Finance Committee Meeting of September 27, 2006

Action(s): The Committee recommended Board of Directors' approval of the following:

A) *Transfer $961,860 from the Reserve for Building and Facilities and approve an increase in the FY 2006/2007 Building Maintenance Capital Outlay budget of $961,860, and authorize the Executive Officer/APCO to issue purchase orders not to exceed $961,860 for deferred maintenance of carpet, furniture, server space and ADA compliance of restrooms;*

B) *Amend the FY 2006/2007 Budget by increasing the Department of Homeland Security (DHS) Grant Revenue from $1,943,818 to a total of $2,087,103, and correspondingly increase the budget for BioWatch (Program 809), and authorize the Executive Officer/APCO to issue a purchase order for monitoring equipment not to exceed $143,285; and*

C) *Transfer $425,000 from the Reserve for Radio Replacement and approve an increase in the FY 2006/2007 Communications Equipment Capital Outlay budget by $425,000, and authorize the Executive Officer/APCO to issue purchase orders with a total not to exceed $425,000.*

Director Daly presented the report and stated that the Committee met on Wednesday, September 27, 2006 and the fourth quarter financial report for fiscal year 2005/2006 was presented.

Staff presented a report on deferred maintenance requirements for carpeting, furniture, server space, and American's with Disabilities Act (ADA) compliance of the restroom on the 7th floor. The Committee recommends that the Board of Directors transfer $961,860 from the Reserve for Building and Facilities and approve an increase in the FY 2006/2007 Building Maintenance Capital Outlay budget of $961,860, and authorize the Executive Officer/APCO to issue purchase orders not to exceed $961,860.

The Committee received a report regarding the Department of Homeland Security award of additional grant funds to allow the purchase of monitoring equipment for possible future expansions into indoor transportation hubs and to provide back-up equipment for the existing network. The Committee recommends that the Board of Directors amend the fiscal year 2006/2007 Budget by increasing the Department of Homeland Security Grant Revenue from $1,943,818 to a total of $2,087,103, and correspondingly increase the budget for BioWatch (Program 809), and authorize the Executive Officer/APCO to issue a purchase order for monitoring equipment not to exceed $143,285.

Staff presented a report on the replacement of the current Field Communications System, which was constructed in the mid-1970's. None of the bids received integrated both voice communications and data transmission. Staff recommended acceptance of Telepath's bid for radio communication technology and the use of Verizon's air-cards for remote field access to the District's computer systems. The Committee recommends that the Board of Directors' transfer $425,000 from the Reserve for Radio Replacement and approve an increase in the fiscal year 2006/2007 Communications Equipment Capital Outlay budget by $425,000, and authorize the Executive Officer/APCO to issue purchase orders with a total not to exceed $425,000. In addition, staff was requested to report back to the Committee at its next meeting regarding the issue of terminating leases on towers that are currently being used and use of the District's FCC radio frequencies.

The next meeting of the Committee will be at the call of the Chair.

Board Action: Director Daly moved that the Board of Directors approve the recommendations and the report of the Budget and Finance Committee; seconded by Director Brown.

Director Daly noted that staff will present a report at the next meeting regarding leases on towers being used and the FCC radio frequencies. The motion then carried unanimously without objection.

7. Report of the Personnel Committee meeting of September 28, 2006

Action(s): The Committee recommended Board of Directors' approval of an appointment to the alternate Attorney member position on the Air District's Hearing Board.

Director Kwok presented the report and stated that the Committee met on September 28, 2006 to conduct interviews of candidates to fill the alternate Attorney Member position on the District's Hearing Board. The Committee interviewed six candidates and considered the application of one candidate that was unable to participate in the interview process.

The Committee recommends that the Board of Directors approve the appointment of Valerie J. Armento to fill the alternate Attorney Member position on the District's Hearing Board to fill the remainder of a term that expires on June 3, 2009.

The next meeting of the Committee will be at the Call of the Chair.

Board Action: Director Kwok moved that the Board of Directors approve the recommendation for the alternate Attorney Member position on the District's Hearing Board for the stated term of office; seconded by Director Kishimoto; carried unanimously without objection.

Presentation

8. Community Air Risk Evaluation Program Update

Staff provided an update on the Community Air Risk Evaluation (CARE) Program.

Philip Martien, Ph.D., Senior Advanced Projects Advisor, presented the report and discussed the following:

- CARE Program objectives
- Emissions concentrations, exposure, and health effects

Director Mark Ross arrived at 10:05 a.m. and Director Liz Kniss arrived at 10:08 a.m.

- The three phases of the Program
- The CARE Task Force and its role
- Development of toxic air contaminant (TAC) emissions estimates
- Cancer toxicity-weighted emissions
- Chronic, non-cancer toxicity-weighted emissions

- Acute toxicity-weighted emissions
- Maps showing spatial distribution of diesel particulate matter and acrolein in the Bay Area
- Demographic and health data
- Findings of Phase I – risks from emitted pollutants and sources
- Mitigation measures to areas with high TAC emissions and sensitive populations

Dr. Martien stated that the next steps will include modeling concentrations and continued mitigation. During Phase II, the District will continue to improve emissions estimates and will participate in health risk assessments at the Port of Oakland and rail yards. Mitigation measures will continue through all three Phases. Phase III will begin in Spring of 2008.

Discussion included looking at the ratio of toxic air pollutants compared to all air emissions in the Bay Area; airport ground emissions; exposure when bicycling; chromium emissions; and focusing on compounds with greatest health effects.

Chair Uilkema noted that the Joint Policy Committee (JPC) is discussing the issue of housing next to high density travel corridors and invited Board members to attend the JPC meetings. In response to a question from Director Ross, Dr. Martien stated that the South Coast AQMD has completed their MATES III program. In response to a question from Director Daly, Jean Roggenkamp, Deputy APCO, stated that staff is reviewing the public meeting process for this Program.

Other Business

9. Report of the Executive Officer/APCO – Ms. Roggenkamp reviewed the following:

A) Jack Broadbent and other members of the Executive staff toured the Pacific Steel Casting facility to review the progress being made.
B) The Spare the Air program season ends October 13th and summary of this year's program will be provided to the Board at a future meeting.
C) On September 21, 2006, the US Environmental Protection Agency (EPA) set a more stringent 24-hour average PM2.5 particulate matter standard. The standard went from 65 micrograms per cubic meter to 35 micrograms per cubic meter. For the new standard, EPA will make designations of attainment and non-attainment areas in 2009. The designations will be based on data collected in 2006 through 2008.

10. Chairperson's Report – Chair Uilkema reported on the following items:

A) Thanked the Committee members for attending their respective meetings.
B) If any Board member is interested in being on the Nominating Committee, they should contact the Chair.
C) If any Board member is interested in being nominated, they should contact the Chair.
D) The Climate Protection Summit is scheduled for November 10th. If Board members are interested in attending, they should contact the Chair, Mrs. Goodley, or Mr. Broadbent.

E) In October 2007, the Air & Waste Management Association (AWMA) will be sending a delegation to China. If Board members are interested in attending this conference, they should contact the Chair, Mrs. Goodley, or Mr. Broadbent. The funds for this trip will need to be approved by the Board and included in the budget for next year.

11. Board Members' Comments – There were none.

12. Time and Place of Next Meeting – 9:45 a.m., Wednesday, October 18, 2006 – 939 Ellis Street, San Francisco, CA 94109

13. Adjournment – The meeting adjourned at 10:51 a.m.

Mary Romaidis
Clerk of the Boards

AGENDA: 2

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: October 10, 2006

Re: Board Communications Received from October 4, 2006 through October 17, 2006

RECOMMENDED ACTION:

Receive and file.

DISCUSSION

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

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

BAY AREA AIR QUALITY MANAGEMENT DISTRICT AGENDA: 3

Memorandum

To: Chair, Gayle B. Uilkema
and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 18, 2006

Re: Report of Division Activities for the Month of September 2006

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

Facilities Projects in Process:

Project	Start	Complete	Status
Phase IV HVAC Replacement	9/01/05	TBD	Awarded contract for asbestos abatement work on the west side of the roof.
Roof top penthouse equipment room needs a new roof	2/15/06	ASAP	Existing roof is old and needs to be replaced at the earliest possible date. Water getting into elevator and HVAC equipment. Lawson Roofing received purchase order to set a schedule to begin work.
5th Floor West Office Space Deferred Maintenance	10/4/06	12/15/06	Materials on order

COMPLIANCE & ENFORCEMENT DIVISION – K. WEE, DIRECTOR

Enforcement Program

Staff received air monitoring results from three ongoing Naturally Occurring Asbestos (NOA) Project sites in San Francisco (Hunter's Point), San Jose (Hitachi) and Hayward (LaVista). Staff met or spoke with consultants and developers for each project to discuss monitoring action levels, proposed revisions to the air monitoring approach, how to interpret monitoring results relative to action levels and additional dust mitigation measures implemented. Staff met with Pacific Steel Casting's (PSC) representatives on September 12, 2006 at the District office to continue discussions on their pending permit condition appeal. The APCO, DAPCO-Operations, Legal Counsel, and staff attended a tour of PSC on September 27, 2006 to observe the progress of Plant #3 odor collection and abatement equipment construction.

Compliance Assurance Program

During the month of September, 646 facility inspections were completed. Staff accompanied EPA Region IX inspectors on a routine inspection at Owens-Corning in Santa Clara to determine compliance with the facility's fiberglass manufacturing operations. The facility was in compliance. Staff attended the Alameda County Environmental Task Force meeting on September 13, 2006. On September 14, 2006 staff attended the CARB community meeting on Planned Studies to Estimate Health Risk from Diesel Soot Pollution in West Oakland. The planned studies will cover operations at the Port of Oakland, Union Pacific Rail Yard, and the adjacent West Oakland community.

Compliance Assistance Program

Staff met with representatives from Hitachi Global Storage Technologies, San Jose, to evaluate the facility's ISO14001 Environmental Management System as a potential model for other Bay Area industrial facilities. Staff participated in a US EPA Performance Track review of the DuPont EKC Technology facilities in Hayward. Staff met with all refineries individually to review and discuss Flare Minimization Plans (FMPs) issues and communicate the information needed to complete District review. Staff then sent two complete and three incomplete FMP notification letters to the refineries. Flare data for June was added to the website.

Operations

Four Marsh Smoke Management Plans were reviewed and approved for the Solano County marsh area. The first two In-Service Training classes were completed and inspection staff completed CARB recertification for visible emissions evaluation (VEE).

(See Attachment for Activities by County)

ENGINEERING DIVISION – B. BATEMAN, DIRECTOR

Toxics Program

The Toxic Evaluation Section completed a total of 36 health risk screening analyses (HRSAs) during September. The majority of these HRSAs were for diesel engine emergency generators and gas stations. Staff participated in CARB's process to revise Airborne Toxic Control Measures (ATCMs) for Perchloroethylene Dry Cleaners and Chrome Plating Operations. The proposed amendments to the ATCM for Chrome Plating Operations are in the process of being revised by CARB staff based on direction provided by their Board at a Public Hearing on September 28, 2006. Pacific Steel Casting Company (Berkeley) submitted their updated Air Toxics Hot Spots Emissions Inventory Report in September, but the report was found to be incomplete because of a lack of full documentation of source test results. The emissions inventory, when approved by the District, will serve as a basis for completing a Health Risk Assessment for the facility.

Title V Program

During September, staff completed modifications to several Synthetic Minor Permits, started public notice periods for several Title V Permit Renewals, and issued a number of Title V Minor/Significant Permit Revisions. Staff continued work to revise the Title V permits, and Statements of Basis, for the five Bay Area refineries. The revisions to the Chevron, Tesoro, and ConocoPhillips Title V permits have been submitted to EPA for review. For the Chevron Refinery Title V permit, the final revised permit that addresses EPA comments was prepared, and should be issued in October. For the Tesoro Title V permit, staff has addressed all of EPA's comments and is currently working on integrating the changes into the permit and Statement of Basis in preparation for final issuance. The proposed revisions to the Valero Title V permit, and the comment response letters, began routing for signature.

Permit Evaluation Program

Engineering Division staff continued to actively participate in the District's Flare Working Group related to the refinery's Flare Minimization Plans (FMPs). Additional information received from Chevron and Shell led to a finding that the FMPs for these two facilities were complete. Incomplete letters were finalized for the Tesoro, Valero, and ConocoPhillips FMPs. Staff participated in a conference call with the Western States Petroleum Association and the refineries to discuss the District's FMP update process, completion determination deficiencies, and the approval process. Staff also met with the individual refineries to discuss the District's FMP completeness determinations and deficiencies.

Staff continued permit evaluations for significant refinery projects, including Chevron's Energy and Renewal Project, ConocoPhillips' Clean Fuels Expansion Project (CFEP), and Valero's VIP Modification Project. Staff met numerous times with Chevron, ConocoPhillips, and Valero representatives to discuss these permit applications. Final issuance of the Chevron permit will need to wait for certification of the EIR by the City of Richmond – this is not expected until January 2007 at the earliest. ConocoPhillips submitted major changes to their application on September 15, 2006. At the Valero meeting, staff discussed proposed changes to the Valero Improvement Project (VIP).

Staff is continuing to work with Pacific Steel Casting Company on improving the carbon abatement system permit conditions for the new control system being installed to reduce odorous emissions at their Plant #3. Installation of the new control system has nearly been completed, with initial startup expected in October.

Staff has addressed all public comments received on Ameresco's proposal to install six internal combustion engines at the Ox Mountain Landfill (Half Moon Bay). This proposal is the first landfill gas combustion project to include catalytic controls for NOx and CO.

Engineering Special Projects Program

Staff continued the technical review process for internal combustion engines, gas turbines, and pressure relief devices at refineries, in support of rule development efforts. Progress was made in several projects that are directed at updating and improving Engineering Division policies and procedures. Staff completed a draft recommendation to revise policies related to BACT and offset requirements for Landfill Gas-to-Energy facilities. Work began in compiling data to be used to update the Cost Recovery Study, which evaluates District fee revenue in relation to regulatory program activity costs. Engineering Division staff also reviewed and provided comments on the draft report submitted by the District's contractor related to control technologies to reduce emissions of greenhouse gases from permitted stationary sources.

LEGAL DIVISION – B. BUNGER, DISTRICT COUNSEL

The District Counsel's Office received 90 Violations reflected in Notices of Violation ("NOVs") for processing.

Mutual Settlement Program staff initiated settlement discussions regarding civil penalties for 55 Violations reflected in NOVs. In addition, Mutual Settlement Program staff sent six Final 30 Day Letters regarding civil penalties for 10 Violations reflected in NOVs. Finally, settlement negotiations by Mutual Settlement Program staff resulted in collection of $28,225 in civil penalties for 42 Violations reflected in NOVs.

Settlement negotiations by counsel in the District Counsel's Office resulted in collection of $1,700 in civil penalties for five Violations reflected in NOVs.

(See Attachment for Penalties by County)

PLANNING DIVISION – H. HILKEN, DIRECTOR

Community Air Risk Evaluation (CARE) Program

Staff presented a status report on the CARE program at the September 13, 2006, Executive Committee meeting. Staff completed a report on CARE Phase I findings and recommendations, which was distributed at the Executive Committee meeting, sent to CARE Task Force members, and posted on the District website. Staff participated in a community meeting at the Port of Oakland with ARB, the Port of Oakland, and members of the West Oakland community to discuss the health risk assessments ARB is preparing for the West Oakland area.

Rule Development Program

Staff posted notice of a public hearing, and a draft initial study and CEQA negative declaration for proposed amendments to Regulation 8, Rule 5: Storage of Organic Liquids. The Board will consider the amendments at a public hearing on October 18, 2006. Staff posted notice of a second workshop, scheduled for October 13, 2006, on proposed amendments to Regulation 9, Rule 9: Nitrogen Oxides from Stationary Gas Turbines. Staff updated the Stationary Source Committee on the status of these two rules. Staff met with Contra Costa County Hazardous Materials Programs staff to discuss the County's efforts on pressure relief devices in refineries.

Air Quality Planning Program

Staff convened a meeting of the Climate Protection Summit steering committee. Staff met with ICLEI, PG&E, MTC, Stop Waste and BART representatives to develop procedures to assist local jurisdictions in preparing local greenhouse gas emission inventories. Staff attended the CAPCOA Planning Managers Symposium, at which staff led a panel on climate protection. Staff attended the monthly Focusing Our Vision Steering Committee meeting. Staff attended an Urban Land Institute seminar on Transit Oriented Development. Staff participated in a quarterly meeting of the California Hydrogen Business Council. Staff participated in an ARB workshop on emission reduction strategies for heavy-duty diesel trucks operating at maritime ports in California and participated in ARB's Maritime Air Quality Technical Working Group meeting.

Research and Modeling

Staff downloaded and is reviewing the Bay Area section of ARB's preliminary emissions inventory created for central California PM modeling. Staff participated in two Central California Ozone Study/California Regional Particulate Air Quality Study (CCOS/CRPAQS) Technical Committee meetings and one Policy Committee meeting. The CCOS/CRPAQS committees decided to establish a project that will study the relationship between meteorology and PM2.5 concentrations in the Bay Area, Sacramento, and the San Joaquin Valley from 2000 through 2006.

OUTREACH AND INCENTIVES – J. COLBOURN, DIRECTOR

Spare the Air: Staff was interviewed by media regarding the 10th and 11th Spare the Air Days that occurred on September 1, 2006 and September 12, 2006. Both Spare the Air days received extensive media coverage.

Staff presented the results of the Spare the Air/Free Fare program at the quarterly CAPCOA Public Outreach Committee meeting held in Davis on September 15, 2006. Staff received positive feedback from state Air District representatives for the exceptional media coverage generated by the District's Spare the Air/Free Fare program.

Staff prepared for the 2006/2007 Spare the Air Tonight season, which begins November 20, 2006. Staff collaborated with MTC staff on the evaluation of the Spare the Air/Free Fare 2006 campaign. This season will conclude on Friday, October 13, 2006.

Media: Staff was interviewed by media on Friday, September 22, 2006, regarding the condition of local air quality in light of a three-alarm fire at EB Stone & Son Inc., a fertilizer manufacturing plant located in a rural area of Solano County.

Staff also responded to media and public inquiries regarding wildfires impacting the northern Bay Area, particularly Napa and Marin counties. In response to these calls, staff issued a News Advisory on Friday advising the public to minimize their exposure to smoke.

The Executive Officer/APCO served as Master of Ceremonies for the Clean Diesel Bus Program press event held at Treasure Island on September 26, 2006. This project was a collaborative effort among the Metropolitan Transportation Commission, local transit agencies and the Air District to retrofit approximately 1,700 local buses.

Outreach Programs: Staff outreached to Bay Area elected officials and government representatives announcing a series of ARB Public Fleet Rule compliance workshops that are scheduled at various locations throughout the state in October & November. Local workshops are scheduled in Sacramento on October 31, 2006 and in Oakland on November 29, 2006.

Staff attended an ARB roundtable discussion at the Port of Oakland on September 14, 2006, which focused on planned studies and health risk assessments intended to estimate diesel/soot-related health risks at the Port and in the surrounding West Oakland community.

Staff also attended meetings of the West Oakland Toxics Reduction Collaborative on September 19th and 20th. The first meeting was a discussion of Port-related diesel PM reduction strategies. The second meeting was a brainstorming session focusing on defining and collecting data to create solutions to clean up the Port's diesel truck fleet.

Staff prepared 500 informational packets regarding open burning, including the new DVD "Burning Cleaner, Burning Better," for distribution to Napa County viticulture community. This outreach project was conducted in partnership with the Napa County Agricultural Commission.

Staff continued preparations for the 2007 Aviation Symposium scheduled to be held at the Stanford Court Hotel, March 4-7, 2007. The Executive Officer and former Board Chairperson Marland Townsend will speak at this event.

Staff attended a meeting of the Contra Costa EJ Resource Team on September 27, 2006. The Team discussed truck counting, rerouting, asthma triggers and county resources, and provided updates on the West County Indicators project. The project is intended to identify and measure air toxics present in North Richmond in collaboration with government regulators and the community.

Grant Programs:

On July 19, 2006 the Board of Directors approved the following staff's recommendations:

- the Vehicle Incentive Program (VIP) for fiscal year (FY) 2006/2007, including the VIP guidelines and an allocation of $600,000 in Transportation Fund for Clean Air (TFCA) Regional Funds;

- the allocation of $2,240,000 in Mobile Source Incentive Fund revenues to fund the Lower-Emission School Bus Program without requiring matching funds from participating school districts; and

- the selection of Direct Mail Center as the contractor for the FY 2006/2007 Vehicle Buy Back Program direct mail service provider, authorizing the Executive Officer to execute a contract for up to $88,935 to provide such service.

Staff continued the evaluation of the 90 TFCA Regional Fund grant applications to present grant award recommendations at the October 16, 2006 Mobile Source Committee meeting.

A kick-off meeting was held with the firm selected to conduct the fiscal audit of the TFCA program. Staff received three proposals as part of the procurement process for motor vehicle scrapping services for the Vehicle Buy Back (VBB) Program.

A total of 415 eligible motor vehicles were purchased and scrapped by the three VBB Program contractors during this month.

Other: Staff welcomed Richard Lew, Community Outreach Manager, to the Outreach and Incentives Division. Richard has served as a District employee for 26 years. His most recent assignment has been supervising inspectors in the Refinery Specialty Group. He brings to this position extensive knowledge about the District's programs and experience with effectively responding to community concerns.

TECHNICAL DIVISION – G. KENDALL, DIRECTOR

Air Quality

Ozone and $PM_{2.5}$ levels remained in the Good or low-Moderate air quality category from September 1st through September 10th due to onshore winds and cool temperatures. On September 11th and 12th, the State 8-hour ozone standard was exceeded at most eastern Bay Area monitoring sites. On September 12th, two sites also exceeded the State 1-hour ozone standard: Concord (103 ppb) and Fremont (99 ppb). For the remainder of the month, ozone was in the Good category. $PM_{2.5}$ air quality also stayed in the Good category, except for four days air quality with Moderate air quality near the end of the month due to light winds and warm temperatures.

On August 3rd and August 17th, the State 24-hour PM_{10} standard was exceeded at the San Jose Tully monitoring site, most likely the result of nearby construction activities.

Air Monitoring

All 29 air monitoring stations were operational during the month of September 2006 with all equipment operating on routine, EPA-mandated schedules.

Meteorology and Forecasting

May and June 2006 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. Work began on a contract with Sonoma Technology, Inc. to develop a new air quality data management system, funded by an EPA grant.

Quality Assurance

The Quality Assurance (QA) group conducted regular, mandated performance audits of 30 monitors at six Air District air monitoring stations. H_2S and SO_2 monitors were audited at the Chevron Refinery Ground Level Monitoring (GLM) networks. All GLM monitors passed the audit.

Laboratory

In addition to ongoing routine analyses, a sample collected from the outlet of a meat grill at Chili's Restaurant on Santana Row in San Jose was analyzed for organic particulate matter. A sample from the wet scrubber water tank at Container Management Services LLC, Richmond was analyzed for arsenic, mercury, lead, chromium, formaldehyde, and chloride.

Three whole air grab samples collected in the vicinity of the 9/22/06 fire at EB Stone, Suisun were analyzed for non-methane hydrocarbons. Seventeen whole air samples from the Caldecott Tunnel were analyzed for methane, carbon monoxide, and carbon dioxide as part of an ongoing cooperative study with UC Berkeley.

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 Rodeo Refinery's open path monitor monthly report for the month of August was reviewed. The Source Test Section participated in the District's Rule Development efforts for Refinery Cooling Towers, Gasoline Bulk Terminals, and Char-broilers.

These facilities have received one or more Notices of Violations
Report period: September 1, 2006 – September 30, 2006

Alameda County

Status Date	Site #	Site Name	City	Regulation Title
9/26/2006	L3268	Synergy Enterprises	Hayward	Asbestos Demolition, Renovation & Mfg.
9/06/2006	C0056	West A Valero	Hayward	Gasoline Dispensing Facilities
9/06/2006	C8930	ABE Petroleum - Olympic Oil	Hayward	Gasoline Dispensing Facilities
9/06/2006	C9849	Foothill Chevron	Hayward	Gasoline Dispensing Facilities
9/29/2006	C9342	24-7 GAS & FOOD MART	Oakland	Gasoline Dispensing Facilities
9/06/2006	C8818	ARCO Facility #06148 - BALAJI ANGLE	Oakland	Gasoline Dispensing Facilities
9/06/2006	C5460	Unocal #5781	Oakland	Gasoline Dispensing Facilities
9/13/2006	D0435	Pleasanton Car Wash	Pleasanton	Gasoline Dispensing Facilities
9/13/2006	D0435	Pleasanton Car Wash	Pleasanton	Gasoline Dispensing Facilities
9/13/2006	C9033	Raintree Carwash	San Leandro	Gasoline Dispensing Facilities
9/06/2006	C8384	Valero	San Lorenzo	Gasoline Dispensing Facilities

Contra Costa County

Status Date	Site #	Site Name	City	Regulation Title
9/12/2006	R7585	Carone and Company Inc.	Concord	Portable Equip Registration Program and ST requirement
9/06/2006	A0011	Shell Martinez Refinery	Martinez	Major Facility Review (Title V)
9/11/2006	A7034	Pacific Atlantic Terminals LLC	Martinez	Major Facility Review (Title V)
9/21/2006	R6604	Single Family Dwelling (SFD)	Martinez	Open Burning
9/06/2006	C1464	Bedrock Pinole Chevron #4014	Pinole	Gasoline Dispensing Facilities
9/21/2006	A0016	ConocoPhillips - San Francisco Refinery	Rodeo	Major Facility Review (Title V); NOx & CO from Stationary Gas Turbines; Equipment Leaks
9/06/2006	C9129	Sponges Car Wash	San Ramon	Gasoline Dispensing Facilities

Marin County

Status Date	Site #	Site Name	City	Regulation Title
9/08/2006	C5664	Kwick Serve-Corte Madera	Corte Madera	Gasoline Dispensing Facilities
9/06/2006	A1360	Rich Readimix Concrete, Inc	Greenbrae	Particulate Matter & Visible Emissions
9/29/2006	C9547	Econo Gas	Larkspur	Gasoline Dispensing Facilities
9/07/2006	C7948	Unocal SS #7380	Mill Valley	Gasoline Dispensing Facilities

These facilities have received one or more Notices of Violations
Report period: September 1, 2006 – September 30, 2006
(continued)

Napa County

Status Date	Site #	Site Name	City	Regulation Title
NONE				

San Francisco County

Received Date	Site #	Site Name	City	Regulation Title
9/19/2006	C9896	Hertz Rental Car Facility	San Francisco	Gasoline Dispensing Facilities

San Mateo County

Received Date	Site #	Site Name	City	Regulation Title
9/26/2006	R7956	Dante Serzo	Daly City	Asbestos Demolition, Renovation & Mfg.
9/18/2006	A2266	Browning-Ferris Industries of CA, Inc	Half Moon Bay	Solid Waste Disposal Sites
9/18/2006	R5963	Jack Chen Const.	Millbrae	Asbestos Demolition, Renovation & Mfg.
9/26/2006	C9072	ARCO Facility #00573 - IQBAL SINGH BAINS	Redwood City	Gasoline Dispensing Facilities
9/26/2006	C9938	San Mateo Auto Care	San Mateo	Gasoline Dispensing Facilities
9/20/2006	B7972	FibroGen Inc	South San Francisco	Authority to Construct; Permit to Operate

Santa Clara County

Received Date	Site #	Site Name	City	Regulation Title
9/27/2006	C7200	ARCO Facility #00707-BP W Coast Products	Los Altos	Gasoline Dispensing Facilities
9/25/2006	B8002	Best Kitchen & Bath Corp	Milpitas	Authority to Construct; Permit to Operate
9/14/2006	A6044	O L S Energy-Agnews	San Jose	Failure to Meet Permit Conditions
9/06/2006	C6637	East Side Union High School District	San Jose	Gasoline Dispensing Facilities
9/26/2006	D0032	ARCO Facility #00538	Sunnyvale	Gasoline Dispensing Facilities
9/25/2006	C9809	DBA McKee Beacon Service	San Jose	Gasoline Dispensing Facilities

These facilities have received one or more Notices of Violations
Report period: September 1, 2006 – September 30, 2006
(continued)

Solano County

Received Date	Site #	Site Name	City	Regulation Title
NONE				

Sonoma County

Received Date	Site #	Site Name	City	Regulation Title
NONE				

Outside Bay Area

Received Date	Site #	Site Name	City	Regulation Title
9/05/2006	F4406	Williams Tank Lines/Mike Stewart	Stockton	Gasoline Bulk Terminals & Gasoline Delivery Vehicles

September 2006 Closed NOV's with Penalties by County

Alameda

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
7-Eleven	C9983	Livermore	$1,000	1
Alameda Valero	D0425	Alameda	$3,000	1
Asbestos Management Group of California	Q7996	Oakland	$4,500	2
Crow Canyon Dry Cleaners	A9994	Dublin	$250	1
Darren Lee	Q9348	Oakland	$1,000	2
Express Gas & Mart	C8200	Oakland	$200	1
WAFAB International	B7772	Livermore	$750	2

Total Violations Closed: 10

Contra Costa

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
ARCO - RICHMOND	A0057	Richmond	$1,000	2
El Sobrante Shell Food Mart	C1355	El Sobrante	$350	1
Lafayette Valero	D0517	Lafayette	$300	1
Mirage Auto Craft	B7197	Concord	$750	3
Valero Refining Co SS#3801	D0354	Richmond	$350	1

Total Violations Closed: 8

September 2006 Closed NOV's with Penalties by County (continued)

Marin

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
Econo Gas	C9547	Larkspur	$1,500	1

Total Violations Closed: 1

San Francisco

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
Chevron Inc, #90142	C7647	San Francisco	$400	1
Hertz Rental Car Facility	C9896	San Francisco	$500	1

Total Violations Closed: 2

San Mateo

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
Alameda Newspaper Group/San Mateo Times	A5070	San Mateo	$1,000	1
ARCO Facility #00725 - YA-HU SHEN	C3221	San Mateo	$150	1
Brentwood Auto Service	D0462	South San Francisco	$950	3
Crocker Cleaners	B2285	Daly City	$500	1
Jack Chen Const.	R5946	Millbrae	$575	2

Total Violations Closed: 8

September 2006 Closed NOV's with Penalties by County (continued)

Santa Clara

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
ARCO Facility #02121-GOLDEN CROWN FINANG	C3568	Milpitas	$400	1
City of Mountain View (Shoreline)	A2740	Mountain View	$1,200	3
Micro-Chem Inc	A9023	Santa Clara	$1,850	3
Q Cleaners	B0734	San Jose	$500	2

Total Violations Closed: 9

Solano

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
Fairfield-Suisun Sewer District	A1404	Fairfield	$1,000	1

Total Violations Closed: 1

September 2006 Closed NOV's with Penalties by County (continued)

Sonoma

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
Charles Hildreth	R3458	Petaluma	$1,500	1
Giovanni Sansome	R5339	Sonoma	$500	1
Goode Printing & Mailing	B6205	Rohnert Park	$1,350	2
Pacific Hardwood Cabinetry	B6174	Santa Rosa	$850	2
Santa Rosa Bare Woods	B6046	Santa Rosa	$1,000	1

Total Violations Closed: 7

District Wide

Site Name	Site Occurrence	City	Penalty Amount	# of Violations Closed
Dandee Transportation	B2611	Bakersfield	$750	1

Total Violations Closed: 1

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 *national* 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 cubit meter
ULEV	Ultra low emission vehicle
ULSD	Ultra low sulfur diesel
USC	United States Code
UV	Ultraviolet
VMT	Vehicle miles traveled (usually per *day*, 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: October 9, 2006

Re: Update to Affirmative Action Plan

RECOMMENDATION

Receive and file.

BACKGROUND

Pursuant to Division III, Section 2 of the District's Administrative Code, the Board of Directors affirms its policy to provide equal employment opportunities and commits itself and the District to implementing an Affirmative Action Plan (AAP). The Human Resources Officer (HRO) reviewed the AAP upon his appointment in July of 2003 and determined that it had not been updated since 1995. This lapse was probably due to passage of Proposition 209 in November of 1996 and subsequent threats of legal action by the Pacific Legal Foundation directed at local government agencies that continued to promulgate affirmative action plans.

Since the passage of Proposition 209 the legality of affirmative action plans has been affirmed so long as the actions prescribed by the plans are narrowly and carefully tailored to remedy past discrimination while not creating quotas or an unfair advantage for minorities and females. The Air District contracted with an expert on affirmative action plan development, Biddle Consulting Group, to assist in preparing an updated, legally viable plan that fulfills the Board's commitment to equal employment opportunities and affirmative action. The HRO and the consultant updated the AAP in 2004 and advised the Executive Committee at the meeting of November 29, 2004. Since then, the AAP was been updated in 2005 and again this year.

DISCUSSION

The updated Affirmative Action Plan is comprised of two parts: 1) a narrative that explains the basis for the plan, its goals, and the roles and responsibilities for staff in administering the plan; and, 2) exhibits with data showing the racial and ethnic breakdown of the District's workforce along with analysis of the availability of minorities and women based on 2000 census data to determine where women and minorities may be underrepresented in particular job groups. The Plan is updated each year to reflect new hiring data and workforce analysis to determine whether the District is moving toward its goals.

The latest data comparing incumbency to availability indicates that the District has fewer female incumbents relative to the available pool of candidates in 4 out of 8 job groups, and fewer minority incumbents relative to the available pool of candidates in 2 out of 8 job groups. A compensation analysis indicates that females are paid less than males in 4 out of

8 job groups where the difference in pay cannot be attributed to seniority. When compared to last year's AAP update, the new data suggests that the District has made some progress relative to minorities, with the number of job groups with fewer minority incumbents relative to the available pool of candidates decreasing from 3 out of 8, to 2 out of 8. However, there was no improvement in the data for females, with the data still showing the number of job groups with fewer female incumbents relative to the available pool of candidates holding steady at 4 out of 8; the same is true for the compensation analysis.

A complete copy of the Affirmative Action Plan, including detailed reports, is available from staff upon request.

BUDGET CONSIDERATION/FINANCIAL IMPACT

There is no fiscal impact beyond what has already been contemplated and approved in the current budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Michael K. Rich

AGENDA: 7

BAY AREA AIR QUALITY MANGEMENT DISTRICT
Memorandum

To: Chair Uilkema and Members
of the Board of Directors

From: Jack Broadbent
Executive Officer/APCO

Date: October 9, 2006

Re: Consider Establishing a New Classification of Purchasing Agent with a Salary Set at Pay Range 122 Effective as of the Date of Board Approval

RECOMMENDATION

Approve establishing a new job classification of Purchasing Agent with a salary set at Pay Range 122. This would be a one-incumbent classification responsible for centralization and coordination of District purchases in order to realize efficiencies and reduce costs.

BACKGROUND

One Purchasing Agent position was added to the current budget as part of the budget process for FY 2006-07. The Human Resources Office has now completed discussions with the Employees' Association on the job classification description and pay level for the new job classification of Purchasing Agent. The Board of Directors' approval of the classification and the attached draft job description is needed in order for the position to be added to the classification system.

Currently, the District's purchasing is decentralized, meaning that various staff in different Divisions order equipment, materials and supplies. Centralizing the purchasing function will result in savings by eliminating duplication of effort, applying best purchasing practices, and leveraging economies of scale.

BUDGET CONSIDERATION/FINANCIAL IMPACT

There is no financial impact beyond that already contemplated during approval of the current budget.

Respectfully Submitted,

Jack Broadbent
Executive Officer/APCO

Prepared by: Michael Rich

October, 2006

PURCHASING AGENT

DEFINITION

Under general supervision, purchases materials, supplies, general services, equipment and other items commonly used by all sections; assists with bid notices and selection of bidders; tracks and ensures delivery of ordered items; and performs related work as required.

DISTINGUISHING CHARACTERISTICS

Purchasing Agent is a specialized class responsible for coordinating and administering all purchasing activities, Requests for Proposals (RFPs), Requests for Quotes (RFQs), and contracts for assigned commodities and user sections. Purchasing Agent is a standalone class assigned to the Finance, Administration and Information Services Division. The incumbent works within a framework of established procedures. Incumbents are expected to perform a full range of duties with only occasional instruction or assistance. The incumbent is responsible for organizing ancillary services which are a part of the section's operations.

EXAMPLES OF DUTIES (Illustrative Only)

Secures and compares information regarding price, quality, availability and related data for a wide variety of materials, supplies, general services, and equipment.

Places orders to purchase maintenance, operational, and repair supplies, services, and equipment; reconciles discrepancies between purchase orders and accompanying invoices.

Expedites purchase orders and assists in follow-up on contracts for materials, supplies, services and equipment; arranges change orders and billing corrections.

Interviews sales personnel, obtains samples and literature, visits manufacturers, and attends demonstrations to become better informed of products of interest.

Assists in developing diversified sources for purchasing supplies and equipment; provides information regarding procedures and policies to others.

Assists in the preparation of formal purchasing proposals, RFPs, RFQs and contracts for materials, supplies, services, and equipment; assists in purchasing related studies.

Assists in the preparation of purchasing specifications when standard or other specifications are not available.

Arranges for the rental of equipment.

Assists in establishing order points and determining standard order quantities and economies of scale for materials and supplies, keeping in mind the present and projected demands and market conditions.

Confers with District representatives regarding purchasing requirements, language or interpretation of specification provisions and other contract issues.

Negotiates price, terms of service contracts, and settlement of claims and price changes for damaged and disputed shipments and change orders.

Keeps informed of current and long-range trends in the purchasing and supply fields.

Maintains purchasing records and reference files.

QUALIFICATIONS

Knowledge of:

Principles and practices of purchasing for a centralized purchasing operation.

Practices and methods of purchasing by specification and competitive bidding.

Principles of contract negotiations.

Principles of government RFPs, RFQs and contracts.

Sources of supply, marketing practices, pricing methods and differentials.

Data entry and manipulation using an automated system or personal computer.

Ability to:

Gather, calculate, tabulate and analyze data including financial comparisons to determine “best buy”.

Prepare concise, clear reports, RFPs, RFQs, and correspondence.

Deal courteously and effectively with customer departments, business community, other agencies, and vendors.

Speak clearly and effectively.

Organize and prioritize work.

Meet deadlines.

Maintain accurate and pertinent computer and manual records.

Interpret and follow applicable rules, regulations and procedures.

Other Requirements:

Must possess a valid California Driver's License and meet the automobile insurability requirements of the District.

Education and Experience

A typical way to obtain the knowledge and skills outlined above is:

Equivalent to an associate degree with major coursework in business or public administration or a closely related field and two years of paraprofessional technical purchasing experience in a variety of purchasing or buying functions.

AGENDA: 8

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chair Gayle B. Uilkema and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 11, 2006

Re: Report of the Public Outreach Committee Meeting of October 11, 2006

RECOMMENDED ACTION

For information only.

BACKGROUND

The Public Outreach Committee met on Wednesday, October 11, 2006 and received three presentations:

1) Spare the Air Tonight 2006/2007 – Wintertime Outreach Plan;
2) New Video *Burning Cleaner, Burning Better*; and an
3) Update on the Spare the Air - Summer 2006.

Attached are the staff reports presented to the Committee.

Chairperson Brad Wagenknecht will give an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

AGENDA: 4

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Wagenknecht and
Members of the Public Outreach Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 2, 2006

Re: Spare the Air Tonight 2006/2007- Wintertime Outreach Plan

RECOMMENDED ACTION

For information only.

BACKGROUND

Staff will present the upcoming Spare the Air Tonight wintertime outreach campaign including media, advertising and survey strategies.

DISCUSSION

The Air District will begin its Spare the Air Tonight wintertime outreach program November 20, 2006, focusing on curtailing wood burning in fireplaces and woodstoves, and driving less. The campaign will run through February 16, 2007.

Media and Outreach Strategy:

Staff will conduct wintertime outreach through local broadcast and print media and distribution of associated "Spare the Air Tonight" collateral materials.

1) Secure the participation of local broadcast and print media in announcing "Spare the Air Tonight." This will include:

   - A press release prior to November 20 to announce the program.
   - Media advisories before the major wintertime holidays, such as Thanksgiving, Christmas and New Year's Eve.
   - Public service announcements for radio stations that encourage residents to sign up for AirAlerts.

2) "Spare the Air Tonight" collateral:

   - Bookmarks containing information about particulate matter.
   - Tipcard about woodburning.
   - Handbook about woodburing and particulate matter.
   - Video commercial featuring Executive Officer on "Spare the Air Tonight".

Surveys

As in previous Spare the Air Tonight campaigns, surveys will be conducted the day after a Spare the Air Tonight advisory. The purpose of the survey is to gauge the public's attitude and behavior with respect to burning wood, their awareness of the Spare the Air Tonight Program, as well as the impact that the Program has had on awareness, opinions and behavior relevant to particulate matter, burning wood, and air quality.

Other

The Spare the Air web page – www.sparetheair.org – is being updated to reflect the winter program.

Staff will continue to work with the nearly 2000 employers in the Spare the Air program.

BUDGET CONSIDERATIONS/FINANCIAL IMPACT

Funds were allocated for the *Spare the Air Tonight* activities in the 2006-07 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Karen M. Schkolnick
Reviewed by: Jack M. Colbourn

AGENDA: 5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Wagenknecht and
Members of the Public Outreach Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 2, 2006

Re: "*Burning Cleaner, Burning Better*" DVD Outreach

RECOMMENDED ACTION

For information only.

BACKGROUND

Staff will report on the newly produced "Burning Cleaner, Burning Better" video demonstrating proper burning techniques in order to minimize particulate matter (PM) generated from agricultural burns.

DISCUSSION

The burning season begins November 1, 2006. Studies indicate that wood smoke can contribute approximately 25-33 % of $PM_{2.5}$ emissions within the District. To help reduce $PM_{2.5}$ emissions and increase open burning compliance rates the District partnered with the Napa County Fire Marshall, Ms. Kate Dargan, now acting State Fire Marshall, to produce a video for the agricultural community that details the requirements of the District's Regulation 5 – Open Burning. The Open Burning regulation was adopted to ensure proper burning techniques for agricultural waste authorized to be burned under State law, in order to reduce air pollution and protect public health and safety.

The Air District developed in both English and Spanish a new 10-minute DVD, "*Burning Cleaner, Burning Better*", explaining Regulation 5 and demonstrating proper open burning methods. The District solicited input from the Napa County Planning Department, Napa County Agricultural Commissioner and USDA Natural Resources Conservation Service in the development of the video. The video shows how to conduct a compliant burn and how burning properly can increase burning efficiency, safety, and reduce air pollution. The video was produced by Balzac Communications & Marketing of Napa.

In September, 500 informational packets were distributed to agricultural businesses in Napa County. The packets contained:

- "*Burning Cleaner, Burning Better"* DVD;
- Copy of Regulation 5;
- Open burning information checklist (in English and Spanish);
- Pamphlet on open burning with important Air District phone numbers;
- Recent Air District compliance advisories; and
- Air District's notification Form "B" (vineyard or orchard pruning and attrition fires).

OTHER CONTRIBUTORS

Other Contributors to the project include:

Dave Whitmer – Napa County Agricultural Commissioner
Heather McCollister – Napa County Conservation, Development & Planning
Phillip Blake – USDA Natural Resources Conservation Service
Gabrielle Avina – CDF/Napa County Fire Marshal
Roger Archey – Balzac Communications & Marketing

BUDGET CONSIDERATIONS/FINANCIAL IMPACT

Funding for this outreach program was included in the 2005-06 budget and continued in the current budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Luna Salaver
Reviewed by: Jack M. Colbourn

AGENDA: 6

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Wagenknecht and Members of the Public Outreach Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 4, 2006

Re: 2006 *Spare the Air* Program Update

RECOMMENDED ACTION

For information only.

BACKGROUND

The *Spare the Air* program was created to notify the public when air pollution is expected to reach unhealthy concentrations and to encourage residents to take individual action to reduce harmful pollutants. A free transit element was introduced in 2004. This year the Air District and the Metropolitan Transportation Commission partnered with 26 regional transit operators to offer free rides, all day long, on the first six *Spare the Air* weekdays. The 2006 smog season began June 1, and closes on October 13, 2006.

DISCUSSION

The *Spare the Air/Free Fare* campaign launched with a well-attended press conference on Treasure Island. Eleven *Spare the Air* advisories have been issued to date. Originally, the Air District and the Metropolitan Transportation Commission (MTC) approved funding for three free transit days whenever a *Spare the Air* day fell on a non-holiday weekday; however, a heat wave early in the season necessitated issuing advisories on June 22, 23, and 26. In July, MTC Commissioners and the Air District Board approved funds for an additional three days. A second heat wave resulted in the issuance of three advisories on July 17, 20, and 21; thus concluding the *Free Fare* portion of the program. The non-free fare *Spare the Air* days occurred on July 22, 23, 24, and on September 1, and 12.

Coverage included 207 print articles, 407 mentions on local television stations, over 20 radio interviews and over 70 internet articles resulting in an advertising value of $1,369,696. International media interest included Canada and Australia.

Public response to the *Spare the Air* program far exceeded expectations. Public involvement included:

- Transit: Use of transit increased by 15% - with an average of 225,000 more riders using transit on each *Free Fare* day.
- Driving: Over 10 percent of Bay Area drivers reduced at least one trip to help *Spare the Air*—the most ever in the history of the program.
- AirAlerts: AirAlert registrants reached an all time high of over 40,000 individuals.

Advertising

The *Spare the Air/Free Fare* program was a well-publicized campaign. Buses on 14 transit systems carried a bold, new *Spare the Air* wrap. The Golden Gate Transit Authority bus was featured in the new "Beautiful Day" television ad. All participating transit systems carried *Spare the Air/Free Fare* posters, signs or banners.

The 2006 media campaign had a large broadcast presence including:

- The premiere of the "Beautiful Day" television ad on the *American Idol* season finale.
- 1243 spots aired on television, with the bulk of these airing on cable stations including CNN, BRAVO, A&E, MTV, Fox Sports and ESPN.
- 148 radio spots aired on KCBS, KGO, KLLC, KNBR, KFOG, KKIQ, and KOIT.
- Real time radio spots aired when *Spare the Air* days were announced.
- A total of 195 television advertising spots were aired on Chinese (KTSF-TV) Spanish, (Telemundo) and Filipino (AZN) stations.
- 47 radio spots aired on Asian stations to reach Chinese and Vietnamese audiences.

Billboard advertising included the electronic Silicon View billboard and three other billboards viewable from the 580, 800 and 101 freeways.

New this year to the *Spare the Air* program was use of Internet advertising. An on-line campaign ran on Fandango.com and Google.com. Over 1 million impressions were delivered in one month on Fandango. The Google campaign resulted in 363,333 impressions and 3,700 new visits to the District website.

Survey Information

1,250 participants were surveyed on all *Free Fare* days to measure program effectiveness.

- 10% of drivers reduced at least one trip during *Spare the Air* days and made cleaner air choices (walking, cycling, public transit, etc.) Of those who reduced driving, 3% also refrained from using polluting products.
- 81% had heard of the *Spare the Air* program.
- 66% were aware that it was a *Spare the Air* day and transit was free.
- 76% were exposed to *Spare the Air* news stories and/or PSAs.
- 49% stated that they would be likely to use transit if it was free.

Staff will present the *Spare the Air* 2006 emissions reductions resulting from the campaign.

In January 2007, staff will present recommendations for future program refinements. Ideas that are being considered include: emissions reductions measures by stationary sources, re-defining *Free Fare* program (reduced fares, free morning commute only, mixture of free and all-day rides, etc.), and soliciting funding from private partners.

Potential measures for industrial sources and public entities include:

- Refraining from gasoline-powered landscaping;
- Shifting refueling truck deliveries and automobile refueling to certain hours;
- Curtailing activities involving use of paints, solvents, etc.; such as tank cleaning at refineries; and
- Enhancing employer-based transportation measures.

BUDGET CONSIDERATION/FINANCIAL IMPACT

Funds for the advertising, media and employer campaigns have been allocated in the 2005-06 and 2006-07 budgets. Supplementary funds for the additional three days were approved at the July 19, 2006, regular board meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Luna Salaver
Reviewed by: Jack M. Colbourn

AGENDA: 9

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Gayle B. Uilkema and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 10, 2006

Re: Report of the Ad Hoc Committee on Climate Protection Meeting of October 12, 2006

RECOMMENDED ACTIONS

The Ad Hoc Committee on Climate Protection may recommend Board of Director approval of the initiation of a new Bay Area Climate Protection Grant program with an initial allocation of $2 million dollars, subject to the review by the Budget and Finance Committee of the redesignation of the requested funds.

DISCUSSION

The Ad Hoc Committee on Climate Protection will meet Thursday, October 12, 2006. The Committee will:

1) Discuss Assembly Bill 32 (Nunez);
2) Receive an update on the Climate Protection Summit, and
3) Consider recommending that the Board of Directors approve the establishment of a Climate Protection Grant Program.

Chair Gayle B. Uilkema will give an oral report of the meeting. Attached are the staff reports submitted to the Committee for your review.

BUDGET CONSIDERATION/FINANCIAL IMPACTS

At the October 4, 2006 Board of Directors meeting, the Board approved the transfer of $425,000 from the Reserve for Radio Replacement in order to replace the District's field communication system. Because the cost of the replacement system was considerably less than originally anticipated, over $3 million dollars will remain in the Reserve for Radio Replacement. Staff proposes to use $2 million dollars from this Reserve to establish the new climate protection grant program

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Gayle B. Uilkema and Members
of the Ad Hoc Committee on Climate Protection

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 3, 2006

Re: Update on State Assembly Bill 32

RECOMMENDED ACTION

None. For information only.

BACKGROUND

On Thursday September 28, 2006, Governor Schwarzenegger signed into law Assembly Bill 32, The California Global Warming Solutions Act of 2006. This landmark legislation is the first of its kind in the United States and the world. Essentially, it mandates that the state reduce greenhouse gas emissions to 1990 levels by the year 2020.

DISCUSSION

Assembly Bill 32 assigns the California Air Resources Board (CARB) the lead role in developing a regulatory program to meet the new statutory targets, and establishes a number of tasks and respective deadlines to be achieved by ARB in the next six years. District staff will brief the committee on provisions and implications of the new legislation.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

None at this time. Long term budget implications for the District as a result of the new legislation have not been identified.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Ana Sandoval
Reviewed by: Dave Vintze

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Gayle B. Uilkema and Members
of the Ad Hoc Committee on Climate Protection

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 3, 2006

Re: Update on Climate Protection Summit

RECOMMENDED ACTION

None. For information only.

BACKGROUND

As a primary initiative of the District's Climate Protection Program initiated in June 2005, the District will be hosting a Climate Protection Summit on November 10, 2006 at the Yerba Buena Center for the Arts in San Francisco.

DISCUSSION

Staff will update the Committee on the progress made in planning the Summit since the last Ad-Hoc Committee meeting. Progress includes:

- Identification of key themes that will determine the content of the Summit
- Development of the Summit program
- Securing speakers for the event
- Securing sponsors for the event
- Development of new initiatives for the District to announce at the summit
- Outcomes from Summit steering committee meetings

BUDGET CONSIDERATION / FINANCIAL IMPACT:

Costs for the Climate Protection Summit are currently included in the FY 06/07 budget and are being supplemented through event sponsorships.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Ana Sandoval
Reviewed by: Dave Vintze

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Gayle B. Uilkema and Members
of the Ad Hoc Committee on Climate Protection

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 3, 2006

Re: Initiation of a Climate Protection Grant Program

RECOMMENDED ACTION

Recommend Board of Directors approval of a new Bay Area climate protection grant program with an initial allocation of $2,000,000, subject to review by the Budget and Finance Committee of the redesignation of the requested funds.

BACKGROUND

In preparation for the Climate Protection Summit to be held November 10, 2006, staff has identified numerous barriers that local governments, businesses, community non-profit and other nongovernmental organizations have encountered in pursuing climate protection activities and programs. These include insufficient financial resources to develop and implement climate protection projects and programs.

In addition, staff and existing climate protection organizations operating within the Bay Area anticipate a substantial increase in climate protection activities from government and nongovernmental organizations in the months and years following the Summit. This increase in activity could strain existing resources of government and nongovernmental organizations and impede implementation of Bay Area climate protection efforts.

DISCUSSION

District staff has identified various actions that can be taken by the District to support voluntary climate protection activities in the Bay Area. One of these actions would include developing a climate protection incentive fund to provide grants to assist government and nongovernmental organizations with the development and implementation of greenhouse gas emission reduction measures. The establishment of the climate protection incentive fund would be a first step in developing a long term grant program that could include the establishment of a non-profit foundation.

A benefit of a climate protection incentive fund or foundation is that such funds could be used creatively for projects and programs that go beyond the current District grant

programs. However, in order to receive funding, projects would need to reduce criteria and/or toxic air pollutant emissions in addition to obtaining greenhouse gas emission reductions. The objective would be to fund projects that achieve local and regional air quality benefits, and also reduce emissions contributing to climate change.

The climate protection incentive fund or the foundation would be the first of its kind in the Bay Area in that it would focus on climate protection activities within the region. To staff's knowledge, there is currently no other public agency grant program in the Bay Area which focuses on climate protection activities at a regional level.

Staff will present to the Ad Hoc Committee a proposed conceptual outline for the climate protection grant program. Examples of types of projects that may be eligible for funding include the following:

- Alternative energy infrastructure
- Green technology development
- Public involvement campaigns
- Adaptation/mitigation measures

Eligible award recipients also remain to be determined; however staff is currently considering the following groups:

- K-12 Schools
- Community based organizations
- Faith based groups
- Other non-governmental non-profit organizations
- Local governments

If approved, the new grant program could be announced at the November 10 summit with a call for projects commencing in early 2007.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

At the October 4, 2006 Board of Directors meeting, the Board approved the transfer of $425,000 from Reserve for Radio Replacement in order to replace the District's field communication system. Because the cost of the replacement system was considerably less than originally anticipated, over $3 million will remain in Reserve for Radio Replacement. Staff proposes to use $2 million from this Reserve to establish the new climate protection grant program.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Ana Sandoval
Reviewed by: Dave Vintze

AGENDA: 5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chair Gayle B. Uilkema and Members of the Board of Directors

From: Jack P. Broadbent Executive Officer/APCO

Date: October 12, 2006

Re: Report of the Mobile Source Committee Meeting of October 16, 2006

RECOMMENDED ACTIONS

The Mobile Source Committee may recommend Board of Directors' approval of the following:

A) *Implementation of Year 8 Carl Moyer Program in the Bay Area for all eligible project types with the exception of Fleet Modernization projects;*

B) The selection of Environmental Engineering Studies, Inc., Pick-N-Pull, and Pick Your Part as the vehicle scrapping contractors for the fiscal year (FY) 2006/2007 Vehicle Buy Back (VBB) Program; and authorization for the Executive Officer/APCO to execute contracts for vehicle scrapping and related services with Environmental Engineering Studies, Inc., Pick-N-Pull, and Pick Your Part, which will distribute, on a monthly reimbursement basis, the $7 million allocated for this purpose to the VBB Program in FY 2006/2007;

C) The replacement of up to $7,386,585 in Transportation Fund for Clean Air (TFCA) Regional Fund revenues with the same amount in Mobile Source Incentive Fund (MSIF) funding for the Air District's Vehicle Buy Back Program for fiscal year (FY) 2006/2007, with $2,655,239 contingent upon approval by the Metropolitan Transportation Commission (MTC) on the use of these funds for TFCA Regional Fund projects; and

D) FY 2006/2007 TFCA Regional Fund grant awards listed in Attachment 1 of agenda item 6 attached, totaling up to $12,350,489, with the projects listed under "Contingent Projects" funded upon approval by MTC on the use of $2,655,239 for TFCA Regional Fund projects.

DISCUSSION

The Mobile Source Committee will meet on Monday, October 16, 2006 to discuss the items listed above.

Chairperson Tim Smith will give an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACTS

The financial impacts from the above items are as follows:

A) The Carl Moyer Program distributes "pass-through" funds from CARB to private companies and public agencies on an invoice basis. Staff costs for the administration of the Carl Moyer Program will be included under Program 607 – Carl Moyer Program in the proposed FY 2007/2008 budget. CARB has allocated $238,850 to the Air District for administrative and outreach costs related to the Carl Moyer Program Year 8 funding cycle.

   The Air District is obligated to match the Carl Moyer Program funds in the amount of $1,619,320. The Air District meets this obligation through the expenditure of motor vehicle surcharge revenues on eligible emission reduction projects that qualify for Carl Moyer Program matching purposes. As such, the local match requirement will have no impact on the Air District's budget.

B) Funds to implement the FY 2006/07 VBB Program are included in the Air District's approved FY 2006/2007 budget.

C) None.

D) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

AGENDA: 4

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: October 10, 2006

Re: Implementation of the Year 8 Carl Moyer Program in the San Francisco Bay Area

RECOMMENDED ACTION

Recommend Board of Directors' approval of implementation of Year 8 Carl Moyer Program in the Bay Area for all eligible project types with the exception of Fleet Modernization projects.

BACKGROUND

The Bay Area Air Quality Management District (Air District) has participated in the Carl Moyer Program, in cooperation with the California Air Resources Board (CARB), since the Program began in fiscal year (FY) 1998/1999. The Carl Moyer Program provides grants to public and private entities mainly to reduce emissions from existing heavy-duty diesel engines by either replacing or retrofitting them. Legislative changes enacted in 2004 made projects to reduce emissions from light-duty vehicles and on-road fleet modernization eligible for Carl Moyer Program funding as well. Carl Moyer Program grants are awarded to cover some, or all, of the incremental cost to purchase new, low-emission engines; to repower or retrofit existing engines and vehicles; and to scrap light-duty vehicles. Eligible heavy-duty diesel engine applications include on-road trucks and buses, off-road equipment, marine vessels, locomotives, stationary agricultural pump engines, forklifts, and airport ground support equipment. To date, the Air District has allocated over $14.8 million in Carl Moyer Program funding to projects in the Bay Area that achieved emission reductions of oxides of nitrogen (NOx) and particulate matter (PM) at a cost effectiveness of less that $13,600/ton.

DISCUSSION

Since the Committee approved procedures for allocating the Carl Moyer Program incentives for Year 7 funds in February 2005, CARB has issued new guidelines and advisories resulting in the following changes:

- Eligible Project Types: additional project types include fleet modernization projects, additional agricultural sources; and scrappage or repair of light-duty vehicles.

- Emission Reductions Calculation: CARB has changed the cost-effectiveness (Carl Moyer Program dollars per ton of emissions reduced) threshold, from $13,600/ton for Year 7 projects, to $14,300/ton for Year 8 projects. CARB has also directed that reactive organic gases (ROG) be includedin the calculation of aggregate emission reductions, and that tailpipe (combustion) PM emission reductions be weighted by a factor of twenty to better reflect the impact of diesel PM on public health.

Staff has evaluated the Carl Moyer Program requirements imposed by CARB, including the requirements for fleet modernization projects. Fleet modernization grants would provide incentives to replace high-polluting heavy-duty vehicles that are model year 1990 or older with newer, lower-emission replacement vehicles that are model year 1999 or newer. Tasks that must be completed for the implementation of fleet modernization projects include:

- Develop Request for Proposals (RFP) to solicit applications from Electronic Monitoring Units (EMU) contractors. Project sponsors funded under this category must agree to have the replacement vehicle equipped with an EMU, which will electronically record vehicle usage and location of the vehicle throughout the project life.

- Develop Request for Proposals (RFP) to solicit applications from specialized vehicle scrapping contractors. Fleet Modernization projects require that the heavy-duty vehicles that are replaced are scrapped by a facility approved by the Air District.

- Develop policies and submit to CARB for approval. Given the complexity of this project type, CARB requires air districts to submit policies addressing the air district's agreements with vehicle dealerships, scrapping contractors, reimbursement and contracts.

In addition, staff will be evaluating the experience of air districts that have conducted fleet modernization pilot projects to assist in the development of a Bay Area program. Staff has prepared a schedule to achieve the above tasks and expects to incorporate fleet modernization in the Carl Moyer Program Year 9 funding cycle. Given the timeframe and resources required, staff recommends that the Air District not fund fleet

modernization projects with Carl Moyer Program Year 8 funding cycle dollars, which must be obligated by the Air District Board of Directors by June 30, 2007.

Amount of Funding Available

CARB has allocated $10,557,157 in Carl Moyer Program funding to the Air District for the Year 8 (FY 2006/2007) funding cycle. This consists of $10,318,307 that can be awarded by the Air District to projects that reduce emissions from eligible projects, plus $238,850 to help cover the Air District's administrative expenses related to the implementation of the Carl Moyer Program. The Air District's funding share represents 12.4% of the $84.9 million that will be distributed directly to air districts statewide.

Procedures to Allocate Carl Moyer Program Funds

To allocate Carl Moyer Program funds in the Year 8 funding cycle, CARB has directed air districts to use the Carl Moyer Program guidelines issued January 6, 2006, as updated by subsequent interim Program Advisories. Based upon current guidelines, all projects must achieve a cost-effectiveness of $14,300 or less per ton of reduced emissions (NOx, ROG, and weighted PM combined) in order to be eligible to receive Carl Moyer Program funding. The Air District's basic process for allocating Year 8 Carl Moyer Program funds is summarized in Attachment A.

The Carl Moyer Program funds will continue to be distributed in accordance with California Health and Safety Code Section 43023.5, which requires that at least 50% of funds be allocated to projects to reduce emissions in those areas with the most significant exposure to air contaminants. The process for identifying and ranking projects with the most significant exposure ("impacted communities") will be similar to the process used for Year 7 (FY 2004/2005) funding cycle, as described below:

- The methodology defines impacted communities based on exposure to fine particulates ($PM_{2.5}$). $PM_{2.5}$ is the component of PM that has been shown to have the most direct impact on human health.

- The methodology defines three levels of impacted community, based upon the level of PM exposure, with greater weight given for higher levels of exposure.

- The methodology includes income data. For the purpose of AB 1390, impacted communities (based on PM exposure) that are also low-income will receive greater weight in the project selection process.

- The methodology will analyze where the equipment covered by the grant application would be deployed, to determine how each project would potentially reduce emissions in an impacted community. Projects that most directly reduce emissions in an impacted community will receive greater weight in the project selection process.

Proposed Schedule

Staff plans to issue a call for Carl Moyer Program applications in fall 2006, and to bring a list of recommended projects to the Mobile Source Committee for review and approval in early 2007.

BUDGET CONSIDERATION / FINANCIAL IMPACT

The Carl Moyer Program distributes "pass-through" funds from CARB to private companies and public agencies on an invoice basis. Staff costs for the administration of the Carl Moyer Program will be included under Program 607 – Mobile Source Grants in the proposed FY 2007/2008 budget. CARB has allocated $238,850 to the Air District for administrative and outreach costs related to the Carl Moyer Program Year 8 funding cycle.

The Air District is obligated to match the Carl Moyer Program funds in the amount of $1,619,320. The Air District meets this obligation through the expenditure of motor vehicle surcharge revenues to eligible emission reduction projects that qualify for Carl Moyer Program matching purposes. As such, the local match requirement will have no impact on the Air District's budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Joseph Steinberger
Reviewed by: Jack M. Colbourn

Attachment A

Proposed Procedures to Allocate Year 8 Carl Moyer Program Funds

The proposed procedures for distributing the Carl Moyer Program funds in the Bay Area for the Year 8 cycle are summarized below.

1. The Air District will comply with the program and project requirements and methodologies set forth in California Air Resources Board's (CARB) "Carl Moyer Program Guidelines," issued January 6, 2006, and subsequent Carl Moyer Program Advisories issued by CARB.

2. The Air District will accept applications for all eligible engine types as established by CARB with the exception of Fleet Modernization projects. The Air District may set aside Carl Moyer Program funds for the light-duty Vehicle Buy Back Program. The Air District, at its sole discretion, may disqualify a project from consideration if it finds that the project is ambiguous, speculative, or that implementation may not be in compliance with Air District or CARB policies.

3. All applications will be reviewed and ranked by Air District staff from the most cost-effective to the least cost-effective, based upon CARB guidelines and methodology. Funding will be awarded to the most cost-effective projects, but in no case will a grant be awarded to any project with a cost-effectiveness above $14,300 per ton of emissions reduced (NOx, ROG, and weighted PM combined).

4. California Health and Safety Code Section 43023.5 requires the Air District to distribute at least 50% of the Carl Moyer Program funds in those areas with the most significant exposure to air contaminants. Funding will be awarded on a competitive basis, with the most cost-effective projects generally receiving the available incentives. However, the Air District may make adjustments to the award rankings in order to fully comply with the requirements of this State law.

5. No applicant is guaranteed funding. Actual reimbursement of project costs by the Air District is conditional upon receipt of adequate funding from CARB.

6. The list of projects recommended for Year 8 Carl Moyer Program grants will be forwarded for review by the Air District's Mobile Source Committee for subsequent approval by the full Board of Directors. Grant applicants will receive formal notification of their incentives within fifteen (15) working days from the Board of Directors approval of their grant applications.

7. A successful grant applicant will have thirty (30) days from the date that the Air District issues a funding agreement governing the grant to sign the agreement. Failure to sign the funding agreement within thirty (30) days may result in the forfeiture of the incentive.

8. Grant recipients will be required to properly destroy any old diesel engine replaced with a Carl Moyer Program grant.

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: October 10, 2006

Re: Vehicle Scrapping Contractor Selection for the Vehicle Buy Back Program

RECOMMENDED ACTION

Recommend Board of Directors' approval of:

1) The selection of Environmental Engineering Studies, Inc., Pick-N-Pull, and Pick Your Part as the vehicle scrapping contractors for the fiscal year (FY) 2006/2007 Vehicle Buy Back (VBB) Program; and

2) The authorization for the Executive Officer/APCO to execute contracts for vehicle scrapping and related services with Environmental Engineering Studies, Inc., Pick-N-Pull, and Pick Your Part, which will distribute, on a monthly reimbursement basis, the $7 million allocated for this purpose to the VBB Program in FY 2006/2007.

BACKGROUND

In FY 2006/2007, the Air District will enter its twelfth funding cycle for the VBB Program. Through the eleven previous funding cycles, the Air District has allocated a total of approximately $27 million to scrap over 35,000 vehicles. During the FY 2004/2005 funding cycle, vehicle eligibility and incentive levels were revised so that model year 1985 and older vehicles are eligible for the VBB Program and $650 is paid for each purchased vehicle. Funding allocated to the current FY 2005/2006 contracts with the scrapping firms is expected to be expended within the next two months. The Air District's FY 2006/2007 budget allocated $7 million in TFCA funds to continue the implementation of the VBB Program.

DISCUSSION

In August 2006, the Air District issued a Request for Proposals (RFP) seeking contractors for the FY 2006/2007 VBB Program. The scope of work contained in the RFP conforms to the California Air Resources Board-adopted Voluntary Accelerated Light-Duty Vehicle Retirement (VAVR) Regulation that went into effect in July 2000. The RFP was mailed to

31 companies and posted on the Air District website. Responses to the RFP were due in September 2006.

The Air District received three proposals in response to the RFP. The proposals were submitted by Environmental Engineering Studies, Inc. (EES), Pick-N-Pull Auto Dismantlers, and Pick Your Part Auto Recycling. The Air District has previously contracted with all three bidders to carry out the VBB Program. Therefore, Air District staff is familiar with their performance related to this program.

Air District staff evaluated the new proposals using five criteria set forth in the RFP. The criteria were:

1. **Price** (50 points maximum). Points awarded based on the overhead price.
2. **Available Resources/Customer Relations** (20 points maximum). Points awarded based on responsiveness to queries and requests, and the estimated number of days it would take for the contractor to purchase a vehicle.
3. **Coverage/Availability** (15 points maximum). Points awarded based on the number and geographical distribution of scrapping sites, number of buy back days per month, and convenience of daily schedules.
4. **Advertising** (5 points maximum). Points awarded according to the advertising budget and description of the proposed campaign to target potential sellers of eligible vehicles.
5. **Understanding of the Program and Thoroughness of the Proposal** (10 points maximum). Points awarded based on the extent to which a proposal demonstrates an understanding of the VBB Program and responds thoroughly to the RFP.

The results of the staff evaluation of the proposals are summarized below.

Price Evaluation. The overhead bid prices per vehicle for each proposal are presented in Table 1 below. Because proposals in recent years have included steadily increasing general overhead and advertising costs, the RFP specifically outlined expected costs for those items. Two of the three proposals included the expected level of $200 for general overhead costs and $20 for advertising overhead costs. The third proposal from EES had a higher general overhead rate of $220 per vehicle and $32 advertising overhead rate. The RFP did not prohibit higher rates but required a detailed description of the costs if they exceeded the expected costs. The reason provided by EES for the higher general overhead rate is that EES manages ten independent dismantling yards, which requires an additional layer of management. The other bidders do not have a middle manager, but rather operate their own dismantling yards. The reason provided by EES for the higher advertising overhead rate is that they plan to further improve their advertising program by expanding the geographical zones targeted by their advertisements and by increasing the number of papers and magazines that carry their advertisements, which is expected to result in a higher rate of eligible vehicles purchased and scrapped.

Table 1
Overhead Bid Prices

Funding Levels	Environmental Engineering Studies, Inc.	Pick-N-Pull	Pick Your Part
Price paid per vehicle	$650	$650	$650
Cost for General Overhead	$220	$200	$200
Cost for Advertising Overhead	$32	$20	$20
Total Cost per vehicle	$902	$870	$870

Available Resources/Customer Relations Evaluation. This category evaluated the number of staff answering calls, hours of telephone availability, and ability to process the necessary paperwork to determine vehicle eligibility. Both EES and Pick-N-Pull had operators available seven days a week while Pick Your Part had operators available six days a week and received messages via voicemail on Sundays. All proposals indicated that the respective contractors would be able to access the Department of Motor Vehicles (DMV) registration history if eligible vehicle owners were unable to provide this information. All proposing contractors have the capability of processing the vehicle in one day, but EES provided the most detailed description of this process.

Coverage/Availability Evaluation. EES scored highest in this category because their coverage included a total of ten yards in the Bay Area. The ten EES vehicle buy back locations are located in the cities of Santa Rosa, East Palo Alto, Pittsburg, San Jose, Hayward, Newark, Richmond, San Francisco, Rodeo and Vallejo. Pick-N-Pull has six vehicle buy back sites, located in the cities of San Jose, Newark, Oakland, Windsor, Richmond and Fairfield. Pick Your Part also has a total of six buy back sites located in the cities of Hayward, Milpitas, Redwood City, Richmond, San Francisco and San Jose.

Advertising Evaluation. The EES proposal scored higher under this criterion for their use of diverse methods of advertising and expansion of their advertising campaign. Staff attributes EES's ability to purchase vehicles at a rate that is almost twice that of Pick-N-Pull and nearly four times the rate of Pick Your Part to their advertising program. As noted above, the FY 2006/2007 RFP specifically outlined expected advertising overhead costs of $20 per vehicle. While EES's proposal exceeded the recommended advertising overhead cost, staff believes that the additional expense may further increase the rate of vehicle purchases by EES.

Understanding of the Program and Thoroughness of the Proposal Evaluation. All three firms that submitted proposals have a good understanding of the program, as evidenced in their proposals and by past experience with the VBB Program. However, EES's proposal was clearly more thorough and well structured.

The scoring and total points for each of the RFP's criteria is contained in Table 2 below. Based on the point scores in Table 2, staff recommends that the District select Environmental Engineering Studies, Inc., Pick-N-Pull, and Pick Your Part as vehicle scrapping contractors for FY 2006/2007 and that the $7 million in FY 2006/2007 funding allocated to the scrapping of vehicles under the VBB Program be distributed on a monthly reimbursement basis to all three contractors until all the funds have been expended.

Table 2
Points for Each Criterion

Criteria	Environmental Engineering Studies, Inc.	Pick -N- Pull	Pick Your Part
Price (50 points)	47	50	50
Available Resources/Customer Relations (20 points)	20	18	16
Coverage/Availability (15 points)	13	11	9
Advertising (5 points)	5	3	2
Understands program/ thoroughness of proposal (10 points)	10	8	6
Total Points for All Criteria	95	90	83

BUDGET CONSIDERATION / FINANCIAL IMPACT:

Funds to implement the FY 2006/07 VBB Program are included in the Air District's approved FY 2006/2007 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Joseph Steinberger
Reviewed by: Jack M. Colbourn

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: October 10, 2006

Re: Transportation Fund for Clean Air Regional Fund Grant Awards for FY 2006/2007

RECOMMENDED ACTIONS

Recommend Board of Directors (Board) approval of:

1) The replacement of up to $7,386,585 in Transportation Fund for Clean Air (TFCA) Regional Fund revenues with the same amount in Mobile Source Incentive Fund (MSIF) funding for the Air District's Vehicle Buy Back Program for fiscal year (FY) 2006/2007, with $2,655,239 contingent upon approval by the Metropolitan Transportation Commission (MTC) on the use of these funds for TFCA Regional Fund projects; and

2) Staff recommendations for FY 2006/2007 TFCA Regional Fund grant awards listed in Attachment 1, totaling up to $12,350,489, with the projects listed under "Contingent Projects" funded upon approval by MTC on the use of $2,655,239 for TFCA Regional Fund projects.

BACKGROUND

Pursuant to California Health and Safety Code 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 District[a]. This is the funding source for the Air District's program known as the Transportation Fund for Clean Air (TFCA). TFCA revenues are awarded to public agencies 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, 60% of TFCA revenues are allocated by the Air District through a grant program known as 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, the Spare the Air Program, the Vehicle Buy Back Program, and the Vehicle Incentive Program. The balance is allocated on a competitive basis to eligible projects proposed by eligible project sponsors. Starting with this funding cycle, the legislation that

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

enables the TFCA program authorizes as eligible project sponsors not only public agencies, but non-public entities as well.

The Air District received 90 grant applications totaling $26.7 million in funding requests for the FY 2006/2007 TFCA Regional Fund. Six grant applications were found to be ineligible because they did not meet program policies, and four grant applications were withdrawn by their sponsors. Fifty-two projects met all the relevant eligibility criteria. Staff is recommending awarding grants totaling up to approximately $12.5 million to up to 52 eligible projects, with approximately $2.7 million in funding contingent on approval by MTC. Attachment 1 lists the projects recommended for TFCA Regional Fund grant awards.

DISCUSSION

A discussion of the TFCA Regional Fund process follows.

TFCA Regional Fund Schedule

The milestone dates of the grant application and review process are outlined below.

Action	Date
Issue Application Guidance	May 26, 2006
Application Workshop	June 13, 2006
Application Submittal Deadline	July 24, 2006
Evaluation of Applications	July 25 - September 29, 2006

Evaluation Criteria

The Board-adopted criteria to score and rank TFCA Regional Fund grant applications for FY 2006/2007 are shown in Table 1. The evaluation criteria emphasize cost effectiveness in reducing emissions by allotting 60% of the total possible points to this criterion. Cost effectiveness is calculated by dividing the total TFCA funds proposed for the project by a factor representing the estimated lifetime emission reductions for the project, yielding TFCA funds per ton of reduced emissions. The Board-approved cost effectiveness threshold is currently $90,000/ton of reduced emissions.

Table 1: FY 2006/2007 TFCA Regional Fund Scoring Criteria

Criteria	Maximum Points
1. TFCA Cost Effectiveness	60
2. Greenhouse Gas Emission Reductions	10
3. Other Project Attributes–	10
4. Clean Air Policies and Programs	10
5. Disadvantaged and PM-Impacted Communities	10
Total	100

The Board establishes minimum point scores for projects to be eligible to receive TFCA Regional Funds. For the FY 2006/2007 funding cycle, the minimum scores are 40 points for public-agency projects and 36 points for non-public entity projects. The intent of this policy is to assure that TFCA funding is provided only to projects that achieve an acceptable level of cost effectiveness and benefit to the region.

Returned and Withdrawn Grant Applications

Staff reviewed the applications to determine eligibility, based on compliance with all relevant policies adopted by the Board to govern the TFCA program. Table 2 provides a listing of grant applications that were not evaluated because they were deemed ineligible for funding based on one or more of the Board-adopted policies.

Table 2: Returned Grant Applications

Sponsor	Project	Reason
County of San Francisco	CCSF Telecommuting Program Expansion	Did not comply with TFCA Regional Fund Policy # 1 re: funding of planning activities not directly related to the implementation of a specific project.
County of San Francisco	Transportation Demand Management (TDM) Survey	Did not comply with TFCA Regional Fund Policy # 1 re: funding of planning activities not directly related to the implementation of a specific project.
Port of San Francisco	Fisherman's Wharf Pedestrian Transit Sign Program	Did not comply with TFCA Regional Fund Policy # 1 re: requirement that a project must result in the reduction of motor vehicle emissions.
County of San Francisco	UCSF Class Pass Program	Did not comply with TFCA Regional Fund Policy # 18 re: duplication of existing TFCA-funded projects.
Green Energy Network	Sonoma County Sustainable Transportation Center (Ethanol projects)	Did not comply with TFCA Regional Fund Policy # 27 re: requirement that clean air vehicle infrastructure be for advanced technology.
City of Berkeley	Ashby BART Station / Ed Roberts Campus	Did not comply with TFCA Regional Fund Policy # 31 re: requirement that physical improvements result in motor vehicle emission reductions.

The following project sponsors withdrew their grant applications. California Wine Tours and Golden Gate Petroleum withdrew grant applications for retrofit diesel emission control devices because their projects were not ready to proceed. The San Francisco Water District withdrew a grant application for heavy-duty compressed natural gas water trucks because the project was not ready to proceed. Google.org withdrew a grant application for a light-duty vehicle project, due to changes in the sponsor's plans.

Available Funds

TFCA Regional Funds totaling approximately $12.5 million can be made available for allocation in FY 2006/2007. These funds consist of anticipated receipts from motor vehicles registered in the Air District during calendar year 2006, interest on TFCA Regional Funds, and a reallocation of funds initially budgeted for the Vehicle Buy Back Program. Table 3 provides a summary of the total TFCA Regional Funds currently available.

Table 3: FY 2006/2007 TFCA Regional Funds

Source/Program	Amount	Comment
1. Projected CY 2006 DMV Receipts	$22,292,670	Based on CY 2005 actual receipts
2. FY 2006/2007 District Admin. Costs	$1,300,992	Per adopted Air District budget
3. FY 2006/2007 County Program Manager Funds	$8,396,671	40% of (Line 1 minus Line 2)
4. New FY 2006/2007 Funds Available for Regional Fund	$12,595,007	(Line 1 minus Line 2) minus Line 3
5. Projected CY 2006 Regional Fund Interest	$1,667,907	Based on CY 2005 actual Regional Fund interest
6. Total Available New Funds for Regional Fund	$14,262,914	Line 4 plus Line 5
7. Clean Air in Motion Program	$2,655,239	Alameda & Santa Clara Program Manager funds to MTC for Vehicle Buy Back (VBB) Program in exchange for CMAQ funds
8. Total Regional Funds	$16,918,153	Line 6 plus Line 7
9. FY 2006/2007 Board-Approved District Projects	$11,018,942	Smoking Vehicle $775,424 VBB Program $7,386,585 Spare the Air Program $1,429,349 Vehicle Incentive Program $600,000 Air District Overhead Costs $827,584
10. Additional Funding for the Spare the Air Program	$800,000	VBB Program funds reallocated to Spare the Air Program in July '06
11. Proposed Reallocation of VBB Program funds	$7,386,585	VBB Program budget, with $2,655,239 contingent on MTC agreement
12. Total Available for FY 2006/2007 Regional Fund Grant Awards	$12,485,796	((Line 8 minus Line 9) minus Line 10) plus Line 11
13. Recommended TFCA Regional Fund Grant Awards	$12,350,489	52 TFCA Regional Fund Projects

Project Funding

Fifty-two projects, totaling approximately $12.4 million in funding requests, achieved the relevant minimum point score and complied with the $90,000 per ton cost-effectiveness threshold. Attachment 1 lists the final project scores and ranking for the eligible projects. If approximately $7.4 million in funds initially budgeted for the Vehicle Buy Back Program are reallocated to the TFCA Regional Fund, then Regional Fund revenues are sufficient to fund all 52 eligible projects listed in Attachment 1. In turn, to fully fund the Vehicle Buy Back Program for FY 2006/2007, staff recommends the allocation of the same amount, up to approximately $7.4 million, to the Vehicle Buy Back Program from MSIF revenues.

Staff is recommending reallocation of the full Vehicle Buy Back Program budget for FY 2006/2007, with approximately $2.7 million contingent on approval by MTC. MTC, through its Clean Air in Motion program, committed Congestion Mitigation and Air Quality

(CMAQ) funds to provide funds for the Vehicle Buy Back Program. However, the Federal Highway Administration had indicated that vehicle buy back programs are not eligible for CMAQ funding. Due to this, MTC worked with the Air District and the Santa Clara County and Alameda County Program Managers so that the Air District could use FY 2006/2007 Santa Clara and Alameda County TFCA Program Manager funds to provide funds for the Vehicle Buy Back Program, and these Program Managers could in turn use CMAQ funding from MTC to implement CMAQ-eligible projects locally. Since $2.7 million was thus earmarked for the Vehicle Buy Back Program, staff will secure MTC's approval before reallocating this portion of the Vehicle Buy Back Program budget.

Supplementing the Vehicle Buy Back Program with the MSIF

The MSIF was established pursuant to AB 923 (Firebaugh, codified as Health and Safety Code Section 44225), which authorized local air districts to increase their motor vehicle registration surcharge up to an additional $2 per vehicle. AB 923 stipulates that air districts may use the revenues generated for, among other programs, accelerated vehicle retirement or repair programs.

Approximately $11.7 million in MSIF funds were available to the Air District as of June 30, 2006. Additional revenues averaging approximately $890,000 per month continue to accrue to the MSIF account on an on-going basis. Although the Board approved allocations of MSIF funds in March 2006 and September 2006, there will be ample time between accrual and expenditure of MSIF funds, due to the time required for grantees to execute a contract with the Air District, begin implementation of projects, and submit invoices to request payment on a reimbursement basis after projects have been completed.

Staff recommends the allocation of up to approximately $7.4 million in MSIF revenues to fully fund the Vehicle Buy Back Program for FY 2006/2007. Doing so will allow the Air District to use TFCA Regional Fund revenues originally budgeted for the Vehicle Buy Back Program to fund eligible projects proposed for funding by the FY 2006/2007 TFCA Regional Fund, as listed in Attachment 1.

Projects Not Recommended for Funding

Attachment 2 lists the projects that are <u>not</u> recommended for funding because they did not achieve the minimum point score required – 40 points for public agencies or 36 points for non-public entities.

Emission Reductions

The 52 projects recommended for funding will result in estimated emission reductions of 587 tons of ozone precursors and particulate matter (PM), and 60,909 tons of carbon dioxide (CO_2) over the life of the projects. The resulting overall cost effectiveness estimated for these projects is $22,447/ton[b].

[b] TFCA dollars per ton of emissions reduction (ozone precursors and weighted particulate matter). The cost effectiveness calculations used for project evaluation includes a weighted factor of 20 for the reduction of particulate matter emissions.

Grant Allocations Summary

Table 4 shows the funding, by project type, for the 52 projects not administered by the Air District that are recommended to receive TFCA Regional Fund grant awards.

Table 4:
Recommended FY 2006/2007 TFCA Regional Fund Grant Allocations by Project Type

Project Type	No. of Projects	TFCA $	% of Total TFCA Regional Fund $
Retrofit – Diesel	19	$4,152,955	34%
Natural Gas Vehicles	10	$3,083,463	25%
Shuttle Programs	7	$2,305,202	19%
Ridesharing Projects	4	$1,150,400	9%
Repower – Diesel	4	$439,567	4%
Arterial Management Projects	1	$422,731	3%
Smart Growth Projects	1	$351,508	3%
Bicycle Projects	4	$232,599	2%
Shuttle Buses	2	$212,064	2%
Totals	**52**	**$12,350,489**	**100%***

* Total may not add to 100% due to rounding.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Under Recommended Action #1, the Vehicle Buy Back Program will be supplemented by funding from the Mobile Source Incentive Fund.

Respectfully submitted,

Jack P. Broadbent
Executive Officer /APCO

Prepared by: David Wiley
Reviewed by: Jack M. Colbourn

ATTACHMENT 1
TFCA Regional Fund Grant Applications - FY 2006/2007
Project Scores and Ranking - Projects Recommended for Funding

Proj#	Cnty (1)	P/N (2)	Sponsor	Project Description	Yrs Eff	TFCA $ Per Ton (3)	TFCA $ Awarded	Cumulative Total $	CRITERIA POINT SCORES					
									TFCA Funding Eff	Green-house Gas ER	Other Attrib.	Clean Air Pol.	Disadv. & PM	TOTAL SCORE
06R07	CC	P	City of El Cerrito	Implement pedestrian, bicycle, and transit access improvements and traffic calming measures along San Pablo Avenue between Carlson Boulevard and Macdonald Avenue.	20	$31,375	$351,508	$351,508	54	10	10	10	4	88
06R75	SM	P	City of Redwood City	Provide peak period shuttle service to the Redwood City Caltrain Station, downtown area, Fair Oaks neighborhood, and neighborhoods west of El Camino Real, using one diesel bus with an ARB-certified PM filter.	1	$32,386	$14,064	$365,572	53	10	10	10	4	87
06R74	ALA	P	City of Berkeley	Operation of one 24 passenger gasoline shuttle bus route from the Ashby BART station to West Berkeley area employers during morning and afternoon weekday peak periods.	1	$29,916	$20,600	$386,172	55	0	10	10	6	81
06R32	SF	P	San Francisco International Airport	Purchase 17 compressed natural gas heavy-duty shuttle buses.	7	$22,201	$198,000	$584,172	58	10	0	10	2	80
06R43	SC	P	Eastside Union High School	Repower 2 heavy-duty diesel school buses with cleaner diesel engines.	10	$9,826	$105,926	$690,098	60	0	10	2	5	77
06R26	ALA	P	City of Berkeley	Purchase 6 compressed natural gas solid waste collection vehicles.	10	$15,017	$150,000	$840,098	60	2	0	10	5	77
06R72	ALA	P	City of Berkeley	Market alternative transportation options to Berkeley residents, employees and students.	1	$22,394	$32,529	$872,627	58	4	0	10	5	77
06R45	SC	P	Ravenswood City School	Repower 3 heavy-duty diesel school buses with cleaner diesel engines.	10	$23,382	$142,989	$1,015,616	58	0	10	2	4	74
06R44	SC	P	Milpitas Unified School District	Repower 2 heavy-duty diesel school buses with cleaner diesel engines.	10	$18,381	$95,326	$1,110,942	60	0	10	2	1	73
06R46	SON	P	River Delta Unified School	Repower 2 heavy-duty diesel school buses with cleaner diesel engines.	10	$13,571	$95,326	$1,206,268	60	0	10	2	0	72
06R48	REG	P	San Francisco International Airport	Retrofit 27 diesel shuttle vehicles with PM/NOx Level 3 emission reduction devices.	5	$20,622	$609,711	$1,815,979	59	0	0	10	3	72

(1) REG = regional/multi-county.
(2) Public/Non-Public Entity.
(3) TFCA$ divided by est. lifetime ER (ozone precursors and weighted PM). May include TFCA County Program Manager funds.

ATTACHMENT 1
TFCA Regional Fund Grant Applications - FY 2006/2007
Project Scores and Ranking - Projects Recommended for Funding

Proj#	Cnty (1)	P/N (2)	Sponsor	Project Description	Yrs Eff	TFCA $ Per Ton (3)	TFCA $ Awarded	Cumulative Total $	CRITERIA POINT SCORES					
									TFCA Funding Eff	Green-house Gas ER	Other Attrib.	Clean Air Pol.	Disadv. & PM	TOTAL SCORE
06R82	REG	P	Metropolitan Transportation Commission	Implement the Regional Rideshare Program, which provides coordinated carpool and vanpool formation assistance, and information on transportation alternatives such as Bike to Work Day, Rideshare Thursday and Spare the Air.	1	$28,034	$1,000,000	$2,815,979	55	2	0	10	3	70
06R37	CC	N	Pleasanton Garbage Service, Inc.	Purchase 4 compressed natural gas solid waste collection vehicles for use in Pleasanton and Sunol.	10	$12,013	$200,000	$3,015,979	60	9	0	0	0	69
06R89	SC	P	San Jose State University - Associated Students	Implement Transportation Solutions, a transportation demand management program which provides alternative commute incentives, such as the University Transit pass program, and ridesharing information to students and employees of San Jose State University.	1	$54,686	$100,000	$3,115,979	42	6	6	10	5	69
06R73	ALA	P	City of Berkeley	Provide a mini-vanpool and carsharing program (Flexvan) to residents and commuters in the City of Berkeley, using 2 gasoline minivans.	1	$35,196	$17,871	$3,133,850	52	0	2	10	4	68
06R40	SOL	N	Solano Garbage Company/Bay Leasing	Purchase 2 compressed natural gas solid waste collection vehicles for use in City of Suisun and unincorporated areas of Solano County.	10	$7,195	$68,452	$3,202,302	60	5	0	0	2	67
06R65	SF	N	Sheedy Drayage	Retrofit 6 heavy duty diesel trucks with Level 3 PM/NOx emission control devices.	5	$10,718	$147,323	$3,349,625	60	0	0	0	7	67
06R41	ALA	N	Tri Ced Community Recycling	Purchase 10 compressed natural gas recycling trucks for use in Hayward.	10	$13,563	$500,000	$3,849,625	60	5	0	0	2	67
06R92	SF	P	University of California, San Francisco	Operation of two 22 passenger compressed natural gas shuttle buses from the Mission Bay Campus in San Francisco to the Powell Street BART station.	1	$48,132	$88,808	$3,938,433	45	0	10	5	6	66
06R88	ALA	P	San Joaquin Regional Rail Commission	Operation of 2 peak-period shuttle buses between the Pleasanton ACE train station in downtown Pleasanton and the Dublin/Pleasanton BART station. The buses will service employment sites located in the Hacienda Business Park in north Pleasanton.	1	$44,674	$50,000	$3,988,433	47	3	10	4	0	64
06R38	CC	N	Sims Hugo New	Purchase 10 compressed natural gas roll-off trucks.	10	$7,351	$500,000	$4,488,433	60	1	0	0	3	64

(1) REG = regional/multi-county.
(2) Public/Non-Public Entity.
(3) TFCA$ divided by est. lifetime ER (ozone precursors and weighted PM). May include TFCA County Program Manager funds.

ATTACHMENT 1
TFCA Regional Fund Grant Applications - FY 2006/2007
Project Scores and Ranking - Projects Recommended for Funding

Proj#	Cnty (1)	P/N (2)	Sponsor	Project Description	Yrs Eff	TFCA $ Per Ton (3)	TFCA $ Awarded	Cumulative Total $	CRITERIA POINT SCORES					
									TFCA Funding Eff	Green-house Gas ER	Other Attrib.	Clean Air Pol.	Disadv. & PM	TOTAL SCORE
06R36	REG	N	Pacific Gas & Electric	Purchase 20 compressed natural gas heavy duty trucks.	10	$21,452	$500,000	$4,988,433	59	2	0	0	3	64
06R55	REG	N	Diamond Tank Lines	Retrofit 2 heavy-duty diesel trucks with PM/NOx Level 3 emission reduction devices.	5	$5,758	$42,793	$5,031,226	60	0	0	0	3	63
06R34	CC	N	Amador Valley Industries, LLC	Purchase 2 compressed natural gas solid waste collection vehicles for use in Dublin.	10	$15,017	$100,000	$5,131,226	60	3	0	0	0	63
06R15	CC	P	County of Contra Costa	Construct Class-2 bicycle lane in the North Richmond area, on Third Street between Grove Avenue and the Class-1 Wildcat Creek Trail and Class-3 bicycle route on Market Street between Third Street and the county limits (0.7 miles total).	15	$71,373	$65,000	$5,196,226	34	3	8	9	9	63
06R68	REG	N	Sonoma County Airport Express	Retrofit 13 diesel buses with PM/NOx Level 3 emission control devices.	5	$3,269	$315,824	$5,512,049	60	0	0	0	2	62
06R58	REG	N	Marin Airporter	Retrofit 15 diesel buses with PM/NOx Level 3 emission control devices.	5	$6,015	$359,478	$5,871,527	60	0	0	0	2	62
06R64	REG	N	S.F. Navigatour, Inc.	Retrofit 3 diesel buses with PM/NOx Level 3 emission control devices.	5	$6,856	$74,914	$5,946,441	60	0	0	0	2	62
06R53	REG	N	Cummins West	Retrofit 2 heavy-duty diesel trucks with PM/NOx Level 3 emission reduction devices.	5	$6,993	$10,000	$5,956,441	60	0	0	0	2	62
06R70	REG	N	Thunderstar Stages	Retrofit 6 diesel buses with PM/NOx Level 3 emission control devices.	5	$7,418	$149,828	$6,106,268	60	0	0	0	2	62
06R69	REG	N	Sysco Food Service	Retrofit 21 heavy-duty diesel trucks with Level 3 PM/NOx emission reduction devices.	5	$7,774	$391,632	$6,497,900	60	0	0	0	2	62
06R54	REG	N	CUSA FL LLC	Retrofit 18 diesel buses with PM/NOx Level 3 emission control devices.	5	$8,082	$430,619	$6,928,518	60	0	0	0	2	62
06R49	REG	N	Black Tie Transportation	Retrofit 6 diesel minibuses with PM/NOx Level 3 emission control devices.	5	$9,224	$31,993	$6,960,511	60	0	0	0	2	62
06R63	REG	N	Royal Coach Lines	Retrofit 16 diesel buses with PM/NOx Level 3 emission control devices.	5	$9,388	$383,191	$7,343,702	60	0	0	0	2	62

(1) REG = regional/multi-county.
(2) Public/Non-Public Entity.
(3) TFCA$ divided by est. lifetime ER (ozone precursors and weighted PM). May include TFCA County Program Manager funds.

ATTACHMENT 1
TFCA Regional Fund Grant Applications - FY 2006/2007
Project Scores and Ranking - Projects Recommended for Funding

Proj#	Cnty (1)	P/N (2)	Sponsor	Project Description	Yrs Eff	TFCA $ Per Ton (3)	TFCA $ Awarded	Cumulative Total $	CRITERIA POINT SCORES					
									TFCA Funding Eff	Green-house Gas ER	Other Attrib.	Clean Air Pol.	Disadv. & PM	TOTAL SCORE
06R94	REG	N	Airline Coach Service	Retrofit 2 minibuses with with PM/NOx Level 3 emission control devices.	5	$13,821	$40,943	$7,384,645	60	0	0	0	2	62
06R42	ALA	N	Waste Management	Purchase 14 compressed natural gas recycling trucks for use in Hayward.	10	$14,499	$500,000	$7,884,645	60	0	0	0	2	62
06R52	REG	N	Compass Transportation	Retrofit 12 diesel buses with PM/NOx Level 3 emission control devices.	5	$16,183	$284,564	$8,169,209	60	0	0	0	2	62
06R59	REG	N	Mercury Tours	Retrofit 10 diesel buses with PM/NOx Level 3 emission control devices.	5	$19,225	$224,490	$8,393,699	60	0	0	0	2	62
06R20	SF	P	Unversity of California, San Francisco	Purchase and install a 50-bicycle cage parking facility for employees, students and patients at Mount Zion Medical Center.	10	$53,577	$39,999	$8,433,698	43	2	8	5	4	62
06R61	REG	N	North Bay Corportation	Retrofit 15 heavy-duty diesel trucks with PM/NOx Level 3 emission reduction devices.	5	$4,582	$288,849	$8,722,548	60	0	0	0	1	61
06R10	SM	P	San Mateo Transit District	Implement a bus adaptive transit signal priority (ATSP) system for 52 intersections along 11 miles of El Camino Real.	4	$77,111	$422,731	$9,145,279	31	10	7	10	1	59
06R86	SF	P	Presidio Trust	Operation of four 26 passenger compressed natural gas shuttle buses for Presidio employees, residents and visitors, from the Presidio to the Embarcadero BART station, Transbay Bus Terminal, and the San Francisco Ferry Building.	1	$88,994	$125,000	$9,270,279	25	10	10	10	4	59
06R66	SM	N	South San Francisco Scavenger Company	Retrofit 5 solid waste collection vehicles with Level 3 PM/NOx emission reduction devices.	5	$27,651	$57,395	$9,327,674	56	0	0	0	2	58
06R67	REG	N	Blue Line Transfer, Inc.	Retrofit 3 solid waste transfer vehicles with Level 3 PM/NOx emission reduction devices.	5	$31,014	$68,501	$9,396,175	54	0	0	0	2	56

(1) REG = regional/multi-county.
(2) Public/Non-Public Entity.
(3) TFCA$ divided by est. lifetime ER (ozone precursors and weighted PM). May include TFCA County Program Manager funds.

ATTACHMENT 1
TFCA Regional Fund Grant Applications - FY 2006/2007
Project Scores and Ranking - Projects Recommended for Funding

Contingent Projects. Contingent Projects are recommended for funding as portions of the inititially approved funds become available.

Proj#	Cnty (1)	P/N (2)	Sponsor	Project Description	Yrs Eff	TFCA $ Per Ton (3)	TFCA $ Awarded	Cumulative Total $	CRITERIA POINT SCORES					
									TFCA Funding Eff	Green-house Gas ER	Other Attrib.	Clean Air Pol.	Disadv. & PM	TOTAL SCORE
06R83	REG	P	Peninsula Corridor Joint Powers Board	Operation of 28 peak-period shuttles to/from various Caltrain stations and employment sites on the Peninsula using 4 compressed natural gas vehicles, 9 gasoline vehicles, and 21 diesel vehicles with an ARB-certified PM filter.	1	$76,278	$1,034,355	$10,430,530	31	2	10	10	3	56
06R90	SC	P	Santa Clara Valley Transportation Authority	Operation of 8 peak-period shuttle bus routes from the Great America ACE train station in Santa Clara to employment sites in Palo Alto, Mountain View, Sunnyvale, Santa Clara, San Jose and Milpitas, using 6 diesel vehicles with ARB-certified PM filter and	1	$64,725	$950,000	$11,380,530	37	0	5	10	3	55
06R18	SF	P	San Francisco MTA	Construct Class-2 bicycle lane (1 mile) between The Embarcadero and Van Ness Avenue.	15	$77,919	$92,600	$11,473,130	31	4	8	10	1	54
06R39	SM	N	South San Francisco Scavenger Co.	Replace 1 diesel roll-off truck with 1 compressed natural gas roll-off truck.	10	$44,282	$91,011	$11,564,141	47	2	0	0	2	51
06R17	SF	P	Golden Gate Park Concourse Authority	Construct Class-1 bicycle path (25 feet) at the Page Street and Stanyan Street entrance to Golden Gate Park that is separated from pedestrian access.	20	$73,532	$35,000	$11,599,141	33	2	7	3	4	49
06R51	REG	N	Coach 21	Retrofit 10 diesel buses with PM/NOx Level 3 emission control devices.	5	$50,944	$240,909	$11,840,050	44	0	0	0	2	46
06R87	ALA	P	San Joaquin Regional Rail Commission	Operation of 2 peak-period shuttle buses between the Pleasanton ACE train station in downtown Pleasanton and the Dublin/Pleasanton BART station. The buses will service employment sites located in the Stoneridge Business Park and Bernal Business Park.	1	$78,019	$36,439	$11,876,489	30	5	10	0	4	49
06R35	SON	N	North Bay Corporation	Purchase 6 compressed natural gas solid waste collection vehicles for use in Santa Rosa.	6	$60,858	$474,000	$12,350,489	39	3	0	0	2	44

(1) REG = regional/multi-county.
(2) Public/Non-Public Entity.
(3) TFCA$ divided by est. lifetime ER (ozone precursors and weighted PM). May include TFCA County Program Manager funds.

ATTACHMENT 2
TFCA Regional Fund Grant Applications - FY 2006/2007
Projects Not Recommended for Funding

Listed below, in alphabetical order by project sponsor, are those project applications that are not recommended for funding.

Proj#	Cnty	Sponsor	Project Description	TFCA$ Requested
06R21	REG	AC Transit	Demonstrate an energy-efficient electrolyzer that produces hydrogen fuel under pressure with the aid of photovoltaic solar panels.	$300,000
06R05	ALA	Alameda County CMA	Implement a bus transit signal priority (TSP) system for five intersections along MacArthur Avenue between High Street and Canon Avenue/E. 28th Street/Excelsior Avenue.	$500,000
06R71	ALA	Alameda County Congestion Management Authority	Door-to-door marketing of travel information options to households in Berkeley (along the San Pablo and Telegraph transit corridors) and San Leandro (around the San Leandro BART Station).	$550,000
06R29	SM	City/County Association of Governments of San Mateo County	Purchase 2 compressed natural gas shuttle buses as part of the Hydrogen/CNG Powered Shuttle Program in Menlo Park.	$46,200
06R11	SM	City of Belmont	Construct Class-1 bicycle/pedestrian bridge (0.4 miles) over U.S. 101 from the Belmont Sports Complex to Hiller Street.	$1,000,000
06R27	CC	City of Fremont	Purchase one new compressed natural gas street sweeper	$50,025
06R08	ALA	City of Oakland	Implement pedestrian improvements, including sidewalks and accented crosswalks, on 8th Street from Willow Street to Wood Street and on Wood between 7th Street and 8th Street to close a pedestrian gap.	$300,000
06R12	ALA	City of Oakland	Construct Class-2 bicycle lane and Class-3 bicycle route (1.25 miles total) between Park Boulevard and Lincoln Avenue.	$398,380
06R28	ALA	City of Oakland	Purchase 10 compressed natural gas street sweepers.	$735,240
06R76	ALA	City of San Leandro	Operation of a peak-period weekday compressed natural gas shuttle to/from the San Leandro BART Staton to major employment sites in the central and western areas of San Leandro.	$82,000
06R13	SON	City of Santa Rosa	Construct Class-2 bicycle lane (1.6 miles) between McConnel Avenue and Fountaingrove Parkway.	$225,000
06R30	SF	City/County of San Francisco	Replace 5 diesel street sweepers with compressed natural gas vehicles.	$210,000
06R77	CC	Contra Costa County Community Development	Operation of a new weekday shuttle bus route between the San Ramon Transit Center and the Dublin/Pleasanton BART station, using two 40 passenger diesel buses with ARB-certified PM filters.	$50,000
06R16	ALA	County of Alameda	Construct a Class-2 bicycle lane (1.5 miles) from the Livermore City Limits at Isabel Avenue to the Lonestar Entrance.	$450,000
06R14	CC	County of Contra Costa	Construct a Class-2 bicycle lane (0.6 miles) between the City of Pinole city limits to 1,000 feet south of Tara Hill Road.	$500,000
06R47	SF	County of San Francisco	Retrofit 25 heavy-duty diesel trucks with PM-only Level 3 emission reduction devices.	$342,563

ATTACHMENT 2
TFCA Regional Fund Grant Applications - FY 2006/2007
Projects Not Recommended for Funding

Proj#	Cnty	Sponsor	Project Description	TFCA$ Requested
06R31	SC	Gilroy Unified School District	Replace two 1982 diesel school buses with new, cleaner diesel school buses.	$198,000
06R24	SON	North Bay Electric Auto Association	Create a center for sustainable transportation, purchase equipment for converting light-duty vehicles to electric drive, and install a photovoltaic power system.	$139,650
06R81	SC	Pacheco Area Shuttle	Provide vanpool service from Los Banos to Gilroy Caltrain Station. The van will also drop off employees of Gilroy High School and Brownel and South Valley Middle Schools.	$30,000
06R84	SM	Peninsula Corridor Joint Powers Board	Operation of one 25 passenger gasoline shuttle bus route on weekends from the Tamien and San Jose Diridon Caltrain Stations and the Santa Clara Valley Transportation Authority's light rail system.	$26,442
06R85	ALA	Port of Oakland	Replace 18 diesel shuttle buses with compressed natural gas vehicles.	$930,000
06R62	CC	Richmond Sanitary Service	Retrofit 25 refuse collection vehicles with PM/NOx Level 3 emission control devices.	$246,778
06R95	SF	San Francisco International Airport	Replace 7 diesel transit buses with compressed natural gas vehicles.	$294,000
06R33	SON	Sonoma County Transit	Purchase 5 compressed natural gas transit buses.	$750,000
06R19	ALA	University of California, Berkeley	Construct Class-1 bicycle path and Class-3 bicycle route (1.2 miles total) on campus.	$200,970
06R91	SF	University of California, San Francisco	Operation of two 22 passenger compressed natural gas shuttle buses from the Mission Bay Campus in San Francisco to the 16th Street BART station.	$182,307
06R93	SF	Veterans Administration Medical Center	Operation of ten 20-passenger gasoline shuttle buses from the Vetrans Administration Medical Center to the Embarcadero BART Station and Transbay Terminal.	$190,050

AGENDA: 11

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Gayle B. Uilkema
and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 11, 2006

Re: Public Hearing to Consider Adoption of Proposed Amendments to Regulation 8, Rule 5: Storage of Organic Liquids; and Adoption of a CEQA Negative Declaration

RECOMMENDED ACTION

Staff recommends that the Board of Directors take the following actions:

- Adopt proposed amendments to Regulation 8, Rule 5: Storage of Organic Liquids; and
- Adopt a Negative Declaration pursuant to the California Environmental Quality Act (CEQA) for this rule-making activity.

BACKGROUND

The proposed amendments to Regulation 8, Rule 5: Storage of Organic Liquids will implement Control Measure SS 9 ("*Organic Liquid Storage Tanks*") in the Bay Area 2005 Ozone Strategy and make other improvements to the rule. Control Measure SS 9 proposes to reduce organic emissions from storage tanks by supplementing existing requirements in Rule 8-5. Tanks regulated by Rule 8-5 are used for bulk storage of organic liquids or liquid mixtures containing organic compounds. Such tanks are typically found at petroleum refineries and chemical plants, as well as gasoline bulk plants and terminals.

DISCUSSION

Rule 8-5 includes detailed standards for emission control measures, including standards for basic tank design, tank fittings, floating roofs, and standards on the degassing of tanks. In addition, the rule includes monitoring requirements to ensure compliance with these standards. The District has regulated organic liquid storage tanks for many years, and Rule 8-5 is the most stringent tank rule in California. The proposed amendments would:

1. Create a New, Voluntary Self-Inspection and Maintenance Program

This program will increase the inspection frequency at floating roof tanks at a facility, thereby reducing the potential amount of time that a non-complying condition could cause excess emissions.

2. Add New Structural Integrity Requirements

The proposed amendments include a prohibition on liquid leaks through tank shells and emission control requirements on leaking flotation pontoons on floating roof tanks.

3. Add New Requirements for Tank Cleaning

The proposed amendments add new limits on the organic content of cleaning agents used on tank interiors and impose containment standards for sludge removed from tanks during cleaning.

RULE DEVELOPMENT PROCESS

The proposed rule amendments were developed with significant public input. The District formed a technical working group that met in April 2003 and May 2005. Based on the input received at these meetings, and additional meetings with stakeholders in 2006, a draft rule was presented at a public workshop in July 2006. Following this workshop, staff considered written comments received from stakeholders, including the Western States Petroleum Association and U.S. EPA, in the preparation of the proposed amendments. A staff report and draft of the amendments were made available to the public along with the initial study and draft CEQA negative declaration on September 18, 2006.

ENVIRONMENTAL IMPACTS

A CEQA analysis has been prepared by Environmental Audit, Inc. of Placentia, California. This analysis concludes that the proposed amendments would not have any significant adverse environmental impacts. Attached is a Negative Declaration for the proposed amendments pursuant to Public Resources Code § 21080(c) and CEQA Guidelines 15070 et seq. Staff recommends that the Board adopt the attached CEQA negative declaration.

CHANGES TO THE RULE SINCE PUBLICATION

District staff have made minor changes in the proposed amendments to Regulation 8, Rule 5 since publication. The changes make minor corrections and preserve the intent of the rule as discussed with affected industry. These changes are shown in double strikethrough and double underline format and are found in Sections 112, 403, 412, 501, 502, and 603. The changes do not affect the stringency of the standards in the rule. They are not "so substantial as to significantly affect the meaning of the proposed rule" and thus do not require that the public hearing be continued to adopt the proposed amendments.

BUDGET CONSIDERATIONS/FINANCIAL IMPACTS

None. The District already conducts a comprehensive inspection program for organic liquid storage tanks. These amendments will not require additional resources for the District's inspection and monitoring program for tanks.

Respectfully submitted,

Jack P. Broadbent
Executive Officer / Air Pollution Control Officer

Prepared by: Julian Elliot
Reviewed by: Henry Hilken

Attachments:

Proposed Amendments to Regulation 8, Rule 5: Storage of Organic Liquids
Staff Report, including Appendices:

1. Comments and Responses
2. Socioeconomic Analysis
3. CEQA Initial Study and Negative Declaration

REGULATION 8
ORGANIC COMPOUNDS
RULE 5
STORAGE OF ORGANIC LIQUIDS

INDEX

REGULATION 8
ORGANIC COMPOUNDS
RULE 5
STORAGE OF ORGANIC LIQUIDS

(Adopted January 1, 1978)

8-5-100 GENERAL

8-5-101 Description: The purpose of this r~~R~~ule is to limit emissions of organic compounds from storage tanks.

Note: New storage tanks may also be subject to Regulation 10 and storage tanks located at bulk plants may also be subject to the requirements of Regulation 8, Rule 6 or Rule 33.

(Amended 9/4/85; 5/4/88; 1/20/93)

8-5-110 Exemptions: This r~~R~~ule does not apply to emissions from the following sources:

110.1 Storage tanks having a capacity of less than 1.0 m^3 (264 gal).

110.2 Any storage tank installed prior to January 4, 1967~~,~~ which is not used for storage of gasoline to be dispensed to internal combustion engine fuel tanks, and is either of a capacity of less than 7.6 m^3 (2,008 gal), or an underground tank with an offset fill line.

110.3 Any above ground gasoline tank of 7.6 m^3 (2,008 gal) or less capacity installed and in service prior to January 9, 1976, and equipped with a submerged fill pipe.

(Amended 5/4/88; 1/20/93; 11/27/02)

8-5-111 Limited Exemption, Tank Removal From and Return to Service: The requirements of Sections 8-5-304, 305, 306 and~~,~~ 307 ~~and 320~~ shall not apply to storage tanks during or after tank decommissioning, and shall not apply during temporary removal from service provided that the operator complies with the following requirements~~is accomplished~~:

111.1 The operator shall notify~~provides notice to~~ the APCO. This notification shall identify the specific requirement for which an exemption is necessary and explain how the planned or performed activities necessarily prevent compliance with those requirements. The notification requirement may be satisfied in ~~any~~ one of the following ways:

1.1 Three days prior to such work being done, written notification~~notice~~ is received by the APCO; or

1.2 Telephone notification is made to the APCO prior to such work being done, and written notice is received by the APCO within three days after such work has been done.

111.2 The tank is in compliance with all applicable requirements of this rule at the time the notification in Section 8-5-111.1 is made~~prior to notification. The written notice shall contain a statement that, to the best knowledge of the person providing notification, the tank is in compliance, and the basis for that knowledge~~.

111.3 When the floating roof is resting on the leg supports, the process of filling, emptying, and refilling shall be continuous and shall be accomplished as rapidly as possible.

111.4 Vapor recovery shall be used on tanks so equipped during filling and emptying procedures.

111.5 Emissions shall be minimized during the period of exemption. If the tank interior is to be opened to the atmosphere through an access hatch or manway, ~~A~~as much product as possible shall first be drained from the tank, and degassing equipment and an associated abatement device shall be connected and operated, as required by Section 8-5-328, as soon as possible~~before any hatches are opened, and tank degassing equipment and an associated approved emission control system shall be connected and operating as soon as possible~~.

111.6 Effective January 1, 2007, if the tank operator discovers that the tank is not in compliance with all applicable requirements of this rule during the exemption period, telephone notification shall be made to the APCO within 24 hours of discovery and a written report that describes the non-compliance and any corrective actions taken shall be submitted within 60 days of discovery. This telephone notification and report are not required for tanks that are subject to deviation reporting requirements in a Major Facility Permit issued pursuant to Regulation 2, Rule 6. Notification and reporting areWritten notice is not otherwise required when returning a tank to service after the above listed work has been completed.

(Amended 1/20/93; 12/15/99; 11/27/02)

8-5-112 Limited Exemption, Preventative Maintenance and Inspection of Tanks in Operation: The requirements of Sections 8-5-304, 305, 306, 307.2, 307.3 and 328320 shall not apply to storage tanks during preventative maintenance of a vapor control device, tank roof, roof fitting or tank seal; during primary seal inspection; or during removal and installation of a secondary seal provided that the operator complies with the following requirements if the following is accomplished:

112.1 The operator shall notifyprovide notification to the APCO. This notification shall identify the affected tank and the specific requirement for which an exemption is necessary, shall explain how the planned or performed activities necessarily prevent compliance with those requirements, and shall describe the measures to be taken to minimize emissions. For secondary seal installations, the type of installed seal shall be specified. The notification requirement may be satisfied in one of the following waysas follows:

1.1 Three days prior to such work being done, written notificationnotice is received by the APCO; or

1.2 Except for secondary seal replacements, which are subject to subsSection 8-5-112.1.1, telephone notification is made to the APCO prior to such work being done, and written notice is received by the APCO within three days after such work has been done.

112.2 The tank is in compliance with all applicable requirements of this rule at the time the notification in Section 8-5-112.1 is madeDistrict Regulations prior to .the commencement of the work and is certified in accordance with Section 8-5-404.

112.3 Product shall be moved neither in nor out of the storage tank and emissions shall be minimized.

112.4 The time of exemption allowed under this sSection does not exceed 7 consecutive days.

112.5 Effective January 1, 2007, if the tank operator discovers that the tank is not in compliance with all applicable requirements of this rule during the exemption period, telephone notification shall be made to the APCO within 24 hours of discovery and a written report that describes the non-compliance and any corrective actions taken shall be submitted within 60 days of discovery. This telephone notification and report is are not required for tanks that are subject to deviation reporting requirements in a Major Facility Permit issued pursuant to Regulation 2, Rule 6.

112.6 Effective June 1, 2007, the tank operator shall keep the following records for at least 24 months after each use of this exemption:

6.1 The affected tank and the date and duration of the exemption;

6.2 The preventative maintenance, inspection or other activity that was performed;

6.3 The specific standards of this rule for which an exemption was necessary; and

6.4 Actions taken to minimize emissions during the exemption period.

(Adopted 9/4/85; Amended 5/4/88; 1/20/93; 12/15/99; 11/27/02)

8-5-113 Deleted May 4, 1988

8-5-114 Deleted May 4, 1988

8-5-115 Deleted May 4, 1988

8-5-116 Exemption, Gasoline Storage Tanks at Gasoline Dispensing Facilities: The provisions of this rRule shall not apply to any ~~underground~~ gasoline storage tank located at a gasoline dispensing facility subject to the requirements of Regulation 8, Rule 7.

(Adopted January 20, 1993)

8-5-117 Limited Exemption, Low Vapor Pressure: The provisions of this rRule, except for Section 8-5-307.2, shall not apply to tanks storing organic liquids with a true vapor pressure of less than or equal to 25.8 mm Hg (0.5 psia) as determined by Sections 8-5-602 or 604.

(Adopted 1/20/93; Amended 11/27/02)

8-5-118 Limited Exemption, Gas Tight Requirement: The gas tight requirement of Section 8-5-306.2 shall not apply to tanks at facilities that are subject to the requirements of Regulation 8, Rule 18.

8-5-119 Limited Exemption, Repair Period: A tank operator who has implemented an Enhanced Monitoring Program pursuant to Section 8-5-411 and who discovers equipment that fails to meet a requirement listed in Section 8-5-119.1 shall not be deemed in violation of that requirement, provided the operator complies with all of the conditions listed in Sections 8-5-119.2 and 119.3. The period of such an exemption shall not exceed the amount of time necessary to meet the requirement in accordance with Section 8-5-119.2.3. An operator shall not be entitled to this exemption for any violation discovered by the APCO during an APCO-initiated inspection.

119.1 The exemption is available only for the following requirements:

- 1.1 Section 8-5-303.1 (good operating condition requirement only), 303.2 (gas tight requirement only);
- 1.2 Sections 8-5-304.4, 304.5, 304.6, 305.5 and 305.6;
- 1.3 Section 8-5-306.2;
- 1.4 Sections 8-5-307.1 and 307.3;
- 1.5 Sections 8-5-320.3, 320.4.2, 320.4.3, 320.5.2 (gaps only), 320.5.3 and 320.6;
- 1.6 Sections 8-5-321.1, 321.3.1, 321.3.2, 321.3.3, and 321.4;
- 1.7 Sections 8-5-322.1, 322.2, 322.3, 322.4, and 322.5.

119.2 The following conditions shall be met for the exemption to be available:

- 2.1 The tank operator shall have implemented an Enhanced Monitoring Program in accordance with Section 8-5-411;
- 2.2 The tank operator shall minimize excess emissions resulting from the failure to meet the requirement as soon as possible, but no later than 8 hours after discovery;
- 2.3 The tank operator shall bring the tank into compliance with the requirement as soon as possible, but no later than 48 hours after discovery;
- 2.4 The tank operator shall not move material into or out of the tank until the tank is in compliance with all applicable requirements, except to the extent necessary to make repairs.

119.3 The tank operator shall submit a report within 60 days of any use of this exemption. The report shall include the following:

- 3.1 the affected tank and the date and duration of the exemption;
- 3.2 the repair or other activity that was performed;
- 3.3 the specific requirements of this rule for which an exemption was necessary; and
- 3.4 actions taken to minimize emissions during the exemption period.

8-5-200 DEFINITIONS

~~**8-5-201 Abatement Efficiency:** A comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without an approved emission control system, expressed as a percentage. Baseline emissions shall be calculated using the criteria in API Bulletin 2518.~~

(Amended 1/20/93; 11/27/02)

8-5-202 **Storage Tank:** Any container, reservoir, or tank used for the storage of organic liquids, excluding tanks thatwhich are permanently affixed to mobile vehicles such as railroad tank cars, tanker trucks or ocean vessels.

(Adopted 9/4/85; Amended 11/27/02)

8-5-203 **Deleted November 27, 2002**

8-5-204 **Organic Liquid:** Any organic compound that exists as a liquid at actual conditions of use or storage.

(Adopted 9/4/85; Amended 1/20/93)

8-5-205 **Gasoline:** Petroleum distillates used as motor fuel with a Reid vapor pressure greater than 4.0 psia.

(Adopted 9/4/85; Amended 5/4/88)

8-5-206 **Gas Tight:** A concentration of organic compounds, measured 1 cm or less from any source, of less than 100 ppm (expressed as methane) above background, for any point or item, except for pressure vacuum valves and atmospheric pressure relief devices; and less than 500 ppm (expressed as methane) above background, for pressure vacuum valves and atmospheric pressure relief devices only.

(Adopted 5/4/88; Amended 1/20/93; 11/27/02)

8-5-207 **Approved Emission Control System:** A system for reducing emissions to the atmosphere that consists of a collection system and an abatement device, which is approved in writing by the APCO and achieves the overall abatement efficiency specified in the applicable standards section.

(Adopted 1/20/93; Amended 11/27/02)

8-5-208 **Degassing:** The process of removing organic gases from a tank.

(Adopted January 20, 1993)

8-5-209 **External Floating Roof Tank:** An open top tank with a storage vessel cover consisting of a double deck or pontoon single deck thatwhich rests upon and is supported by the liquid being contained.

(Adopted January 20, 1993)

8-5-210 **Internal Floating Roof Tank:** A tank with a floating cover or roof thatwhich rests upon or is floated upon the liquid being contained, and thatwhich also has a fixed roof on top of the tank shell to shield the floating roof from wind, rain and other elements. An external floating roof tank that has beenwhich is retrofitted with a geodesic dome or other fixed roof shall be considered to be an internal floating roof tank for the purposes of this rule.

(Adopted 1/20/93; Amended 11/27/02)

8-5-211 **True Vapor Pressure:** The vapor pressure of a liquid at storage temperature.

(Adopted 1/20/93; Amended 11/27/02)

8-5-212 **Organic Compound:** Any compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate.

(Adopted January 20, 1993)

8-5-213 **Viewport:** An accessible opening in the fixed roof of an internal floating roof tank that measures at least 0.75 meters (30 inches) on each side or at least 0.75 meters (30 inches) in diameter.

(Adopted January 20, 1993)

8-5-214 **Gauge Float**: A device to indicate the level of liquid within a tank. The float rests on the liquid surface inside a well in the tank.

(Adopted December 15, 1999)

8-5-215 **Guidepole:** An anti-rotation device that is fixed to the top and bottom of a tank, passing through a well in a floating roof. Guidepoles may be solid or be equipped with slots or holes for gauging purposes.

(Adopted December 15, 1999)

8-5-216 **Zero Gap Pole Wiper Seal:** A seal with no gap exceeding 0.06 inches between the guidepole or gauge well and pole wiper seal.

(Adopted December 15, 1999)

8-5-217 **Decommissioning:** The removal of all organic liquid and gases from a storage tank with the intent of no longer using the tank for storage of organic liquids or gases.

(Adopted November 27, 2002)

8-5-218 **Stock Change:** The removal of organic liquids from a tank prior to refilling the tank with a different organic liquid.

(Adopted November 27, 2002)

8-5-219 **Tank Cleaning:** The process of washing or rinsing the interior of a storage tank, or removing sludge, or rinsing liquid from a storage tank.

(Adopted November 27, 2002)

8-5-220 **Temporary Removal From Service:** The removal of organic liquid from a storage tank for tank cleaning, stock change, tank repair, roof repair, or removal of contaminated stock, followed by return to service.

(Adopted November 27, 2002)

8-5-221 **Liquid Balancing:** The process of reducing the vapor pressure of the contents of a tank by adding lower-vapor pressure liquid without breaking tank vacuum, and, for floating roof tanks, without landing the floating roof on its supports.

(Adopted November 27, 2002)

8-5-222 **Pressure Relief Device:** Any device that is used to relieve either positive or negative pressure upstream of the device, or both.

8-5-223 **Pressure Vacuum Valve:** A type of pressure relief device that is used to control breathing losses from a fixed-roof tank by allowing slight positive or negative pressure variations in a tank while preventing the movement of gas into or out of the tank.

8-5-224 **Connection:** Flanged, screwed, or other joined fittings used to connect any piping or equipment.

8-5-225 **Good Operating Condition:** A tank component or related equipment is in good operating condition when it operates as designed without visible breaks, cracks or other defects that result in organic emissions.

8-5-226 **Emission Minimization:** Emission minimization required in Sections 8-5-119.2.2 means reducing excess emissions caused by violation of a rule standard to the lowest achievable level using best modern practices while maintaining the associated tank in service.

8-5-300 STANDARDS

8-5-301 **Storage Tanks Control Requirements:** A person shall not store organic liquid in any storage tank unless such tank is equipped with a vapor loss control device that is specified by the table below for the tank capacity, or for a higher capacity, and for the true vapor pressure of the tank organic liquid contents, or for a higher true vapor pressure.

Tank Capacity	True Vapor Pressure of Tank Organic Contents		
	>0.5 to ≤1.5 psia	>1.5 to <11 psia	≥ 11 psia
≥1.0 m^3 to ≤37.5 m^3 (≥264 gallons to ≤9,906 gallons)~~, aboveground only~~	Submerged fill pipe~~, internal floating roof, external floating roof, or approved emission control system~~	Submerged fill pipe (underground tank or aboveground non-gasoline tank), p~~P~~ressure vacuum valve, internal ~~floating roof~~or~~,~~ external floating roof~~, or approved emission control system~~	Pressure tank or approved emission control system

>37.5 m^3 to <75 m^3 (>9,906 gallons to <19,803 gallons)~~, abovegroundonly~~	Submerged fill pipe~~, internal floating roof, external floating roof, or approved emission control system~~	Submerged fill pipe (underground tank), p~~P~~ressure vacuum valve, internal ~~floating roof~~or~~,~~ external floating roof~~, or approved emission control system~~	Pressure tank or approved emission control system
≥75 m^3 to <150 m^3 (≥19,803 gallons to <39,626 gallons)	Submerged fill pipe~~, internal floating roof, external floating roof, or approved emission control system~~	Internal ~~floating roof~~or~~,~~ external floating roof~~, or approved emission control system~~	Pressure tank or approved emission control system
≥150 m^3 (≥39,626 gallons)	Internal ~~floating roof~~or~~,~~ external floating roof~~, or approved emission control system~~	Internal ~~floating roof~~or~~,~~ external floating roof~~, or approved emission control system~~	Pressure tank or approved emission control system

(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; 12/15/99; Amended, Renumbered 11/27/02)

8-5-302 Requirements for Submerged Fill Pipes: A submerged fill pipe required by Section 8-5-301 must meet either of the following requirements:

302.1 Where the tank is filled from the top, the end of the discharge pipe or nozzle must be totally submerged when the liquid level is 15 cm (6 in.) from the bottom of the tank.

302.2 Where the tank is filled from the side, the discharge pipe or nozzle must be totally submerged when the liquid level is 46 cm (18 in.) from the bottom of the tank.

(Adopted 9/4/85; Amended, Renumbered 11/27/02)

8-5-303 Requirements for Pressure Vacuum Valves: A pressure vacuum valve required by Section 8-5-301 must meet the following requirements:

303.1 The pressure vacuum valve must be set to either at least 90% of the tank's maximum allowable working pressure, or at least 25.8 mm Hg (0.5 psig), and the valve must be in good operating condition~~a pressure within 10% of the maximum allowable working pressure of the tank, or at least 25.8 mm Hg (0.5 psig) pressure~~.

303.2 The pressure vacuum valve ~~must be properly installed, properly maintained, and in good operating order, and~~ sealing mechanism must remain in a gas tight condition except when operating pressure exceeds the valve set pressure, or except when the sealing mechanism is vented to a vapor recovery or disposal system that has an overall abatement efficiency of at least 95% by weight.

(Amended 9/4/85; 5/4/88; 1/20/93; Amended, Renumbered, 11/27/02)

8-5-304 Requirements for External Floating Roof Tanks: An external floating roof required by Section 8-5-301 must meet the following requirements:

304.1 The floating roof fittings must meet the requirements of Section 8-5-320.

304.2 The floating roof must be equipped with a primary seal that meets the requirements of Section 8-5-321.

304.3 The floating roof must be equipped with a secondary seal that meets the requirements of Section 8-5-322.

304.4 The floating roof must rest on the surface of the liquid tank contents and~~,~~ must be ~~properly installed and maintained, and must be~~ in good operating condition. There shall be no liquid tank contents on top of either the primary or secondary seal, or on top of the floating roof (this requirement does not apply to liquid that~~which~~ clings to the inside tank walls as the tank is drained, or to liquid that~~which~~ drips from the tank walls onto the seals).

304.5 The tank shell must be in good operating condition with no liquid leakage through the shell.

304.6 An external floating roof tank shall not be operated with organic liquid tank contents in any tank pontoon unless the following conditions are met:

6.1 Within 48 hours of discovery of organic liquid in a pontoon, all lids or other openings on the affected pontoon shall be sealed and maintained in a gas tight condition; and

6.2 The next time the tank is removed from service, repairs shall be made on all pontoon leaks on that tank.

(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; Amended, Renumbered 11/27/02)

8-5-305 Requirements for Internal Floating Roof Tanks: An internal floating roof required by Section 8-5-301 must meet the following requirements:

305.1 For a tank with seals installed on or before February 1, 1993, the tank must be equipped with one of the following:

1.1 A liquid mounted primary seal, mounted in full contact with the liquid in the annular space between the tank shell and floating roof,

1.2 A metallic shoe primary seal, or

1.3 A vapor mounted primary and a secondary seal

If sections of seal with a total length equal to or greater than the diameter of the tank are replaced at one time, or if sections of seal with a total cumulative length equal to or greater than 50% of the total seal circumference are replaced over time, then the seal shall be considered to be newly installed and subject to ~~subs~~Section 8-5-305.2.

305.2 For a tank with seals installed after February 1, 1993, the tank must be equipped with a liquid mounted or metallic shoe primary seal that meets the requirements of Section 8-5-321 and a secondary seal that meets the requirements of Section 8-5-322.

305.3 Internal floating roof tanks that~~which~~ are placed into service or de-gassed after February 1, 1993 shall be equipped with at least 3 view~~ing~~ ports in the fixed roof of the tank. This requirement shall not apply to external floating roof tanks retrofitted with domes or other fixed roofs after February 1, 1993, as long as the dome consists of translucent panels through which sufficient light passes to allow inspection of the floating roof seal.

305.4 The floating roof fittings must meet the requirements of Section 8-5-320.

305.5 The floating roof must rest on the surface of the liquid tank contents and~~,~~ must be ~~properly installed and maintained, and must be~~ in good operating condition. There shall be no liquid tank contents on top of either the primary or secondary seal, or on top of the floating roof (this requirement does not apply to liquid that~~which~~ clings to the inside tank walls as the tank is drained, or to liquid that~~which~~ drips from the tank walls onto the seals).

305.6 The tank shell must be in good operating condition with no liquid leakage through the shell.

(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; Amended, Renumbered 11/27/02)

8-5-306 Requirements for Approved Emission Control Systems: An Approved Emission Control System required by Section 8-5-301 must meet the following requirements:

306.1 ~~must be gas tight.~~ It must ~~also~~ provide an abatement efficiency of at least 95% by weight, based on a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without an approved emission control system, expressed as a percentage. Baseline emissions shall be calculated using the criteria in API Bulletin 2518~~, except as allowed by subsection 8-5-328.1.2~~.

306.2 It must be gas tight.

(Amended 1/20/93; Amended, Renumbered 11/27/02)

8-5-307 Requirements for Fixed Roof Tanks, Pressure Tanks and Blanketed Tanks:

307.1 Fixed roof tank shells and pressure tank shells must be in good operating condition with no liquid leakage through the shell.

307.2 A pressure tank must ~~be maintained in a gas tight condition and must~~ maintain working pressures sufficient at all times to prevent organic vapor or gas loss to the atmosphere.

307.3 ~~Effective July 1, 2003, tanks blanketed with organic gases other than natural gas shall~~ The sealing mechanism on pressure relief devices located

on pressure tanks and on tanks blanketed with organic gases other than natural gas shall be maintained in a gas tight condition except when operating pressure exceeds the valve set pressure, or except when the sealing mechanism is vented to a vapor recovery or disposal system that has an overall abatement efficiency of at least 95% by weight.

(Adopted 9/4/85; Amended 5/4/88; 1/20/93; Amended, Renumbered 11/27/02)

8-5-310 Deleted May 4, 1988

8-5-311 Deleted November 27, 2002

8-5-312 Deleted January 20, 1993

8-5-313 Deleted January 20, 1993

8-5-314 Deleted January 20, 1993

8-5-320 Floating Roof Tank Fitting Requirements: The fittings on any floating roof storage tank subject to Section 8-5-304 or 305 shall meet the following conditions:

320.1 Deleted November 27, 2002.

320.2 All openings through the floating roof, except pressure relief devices~~pressure-vacuum valves and vacuum breaker vents~~, shall provide a projection below the liquid surface to prevent belching of liquid and reduce escaping organic vapors.

320.3 All openings through the floating roof, except floating roof legs, shall be equipped with a gasketed cover, seal or lid, which ~~shall at all times be in a closed position and~~ shall meet either of the following requirements, as applicable, except as provided in ~~subs~~Sections 8-5-320.4, 320.5 or 320.6.

3.1 The gasketed cover, seal or lid shall have no measurable gap exceeding 0.32 cm (1/8 in.), except when the opening is in use.

3.2 For inaccessible openings on internal floating roof tanks, there shall be no visible gaps as viewed from the fixed roof manway or viewports, except when the opening is in use.

320.4 Solid sampling or gauging wells, and similar fixed projections through a floating roof such as an anti-rotational pipe, shall meet the following conditions:

4.1 The well shall provide a projection below the liquid surface.

4.2 The well shall be equipped with a cover, seal or lid, which shall at all times be in a closed position with no gap exceeding 0.32 cm (1/8 in.), except when the well is in use.

4.3 The gap between the well and the roof shall be added to the gaps measured to determine compliance of the secondary seal and in no case shall exceed 1.3 cm (1/2 in.).

320.5 Slotted sampling or gauging wells, and similar fixed projections through a floating roof such as an anti-rotational pipe, shall meet the following conditions:

5.1 The well shall provide a projection below the liquid surface.

5.2 The well on an external floating roof shall be equipped with the following: a sliding cover, a cover gasket, a pole sleeve, pole wiper and an internal float and float wiper designed to minimize the gap between the float and the well, provided that the gap shall in no case exceed 1.3 cm (1/2 in.), or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface.

5.3 The gap between the well and the roof shall be added to the gaps measured to determine compliance of the secondary seal and in no case shall exceed 1.3 cm (1/2 in.).

320.6 Any emergency roof drain shall be provided with a slotted membrane fabric cover, or equivalent, that covers at least 90% of the area of the opening.

(Amended 9/4/85; 5/4/88; 1/20/93; 12/15/99; 11/27/02)

8-5-321 Primary Seal Requirements: A person shall not operate a storage tank equipped with a primary seal subject to the requirements of Section 8-5-304 or 305 unless such tank meets the following conditions:

321.1 There shall be no holes, tears, or other openings in the primary seal fabric that~~which~~ allow the emission of organic vapors.

321.2 The seal shall be either a metallic shoe or a liquid mounted type, except as provided in ~~subs~~Section 8-5-305.1.3.

321.3 Metallic-shoe-type seals shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 61 cm (24 in.) for external floating roofs and 18 inches for internal floating roofs above the stored liquid surface. Measurements of the gap between tank shell and seals shall be made around the full circumference of the tank, and measured gaps shall meet the following requirements:

3.1 The geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least 46 cm (18 in.) in the vertical plane above the liquid surface.

3.2 For welded tanks, no gap between the tank shell and the primary seal shall exceed 3.8 cm (1-1/2 in.). No continuous gap greater than 0.32 cm (1/8 in.) shall exceed 10% of the circumference of the tank. The cumulative length of all primary seal gaps exceeding 1.3 cm (1/2 in.) shall be not more than 10% of the circumference, and the cumulative length of all primary seal gaps exceeding 0.32 cm (1/8 in.) shall be not more than 40% of the circumference.

3.3 For riveted tanks, no gap between the tank shell and the primary seal shall exceed 6.4 cm (2-1/2 in.). The cumulative length of all primary seal gaps exceeding 3.8 cm (1-1/2 in.) shall be not more than 10% of the circumference.

321.4 For resilient-toroid-seal equipped tanks, no gap between the tank shell and the primary seal shall exceed 1.3 cm (1/2 in.). The cumulative length of all gaps exceeding 0.32 cm (1/8 in.) shall be not more than 5% of the circumference. Measurements of the gap shall be made around the full circumference of the tank.

(Amended 1/20/93; 12/15/99; 11/27/02)

8-5-322 Secondary Seal Requirements: A person shall not operate a storage tank equipped with a secondary seal subject to the requirements of Sections 8-5-304 or 305, unless such tank meets the following requirements~~conditions:~~. In determining compliance with seal gap requirements, measurements of the gap between tank shell and seals shall be made around the full circumference of the tank.

322.1 There shall be no holes, tears, or other openings in the secondary seal fabric that~~which~~ allow the emission of organic vapors.

322.2 The secondary seal shall allow easy insertion of probes up to 3.8 cm (1-1/2 in.) in width in order to measure gaps in the primary seal.

322.3 No gap between the tank shell and the secondary seal shall exceed 1.3 cm (1/2 in.). The cumulative length of all secondary seal gaps exceeding 0.32 cm (1/8 in.) shall be not more than 5% of the circumference of the tank.

322.4 For riveted tanks, the secondary seal shall consist of at least two sealing surfaces, such that the sealing surfaces prevent the emission of organic compounds around the rivets. Serrated sealing surfaces are allowable if the length of serration does not exceed 15.2 cm (6 in.).

322.5 For welded external floating roof tanks with seals installed after September 4, 1985 or welded internal floating roof tanks with seals installed after February 1, 1993, no gap between the tank shell and the secondary seal shall exceed 1.5 mm (0.06 in.). The cumulative length of all secondary seal gaps exceeding 0.5 mm (0.02 in.) shall be not more than 5% of the circumference of the tank excluding gaps less than 5 cm (1.79 in.) from vertical weld seams. If sections of seal with a total length equal to or greater than the diameter of the tank are replaced at one time, or if sections of seal with a total cumulative length equal to or greater than 50% of the total seal circumference are replaced over time, then the seal shall be considered to be newly installed for the purpose of this section.

322.6 The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal.

(Amended 1/20/93; 11/27/02)

8-5-323 Deleted January 20, 1993

8-5-324 Deleted January 20, 1993

8-5-325 Deleted January 20, 1993

8-5-326 Deleted May 4, 1988

8-5-327 Deleted May 4, 1988

8-5-328 Tank Degassing Requirements: A tank operator shall not open the interior vapor space of a tank subject to this rule to the atmosphere through a hatch or manway, except to connect or disconnect degassing equipment or to conduct tank contents or emissions sampling, unless such tank meets the following conditions:

328.1 For tanks larger than 75 m^3, the emissions of organic compounds resulting from degassing shall be controlled by an~~one of the following methods:~~

~~1.1 Liquid Balancing in which the resulting organic liquid has a true vapor pressure less than 0.5 psia, or~~

~~1.2 An~~ abatement device~~Approved Emission Control System~~ that~~which~~ collects and processes all organic vapors and gases and has an abatement efficiency of at least 90% by weight. The system shall be operated until the concentration of organic compounds in the tank is less than 10,000 ppm expressed as methane. In order to satisfy this requirement, effective June 1, 2007, the residual organic concentration must be measured to be less than 10,000 ppm as methane for at least four consecutive measurements performed at intervals no shorter than 15 minutes each.

328.2 For all tanks subject to this rule, tank degassing shall not commence after the District predicts an excess of the Federal or State Ambient Air Quality Standard for ozone for the following day, unless emissions resulting from degassing are controlled as required by ~~one of the methods in subs~~Section 8-5-328.1.~~1 or 328.1.2.~~

328.3 Effective June 1, 2007, the tank operator shall provide written notification that is received by the APCO at least 3 days before the start of a degassing operation that is subject to this rule. However, where degassing must be performed on an emergency basis, telephone notification shall be made to the APCO within 8 hours of commencing degassing. This notification shall identify the tanks to be degassed, including their location and the liquid stored in the tanks, the nature of the emergency, and the time and date degassing will commence.

(Adopted 1/20/93; Amended 11/27/02)

8-5-329 Deleted November 27, 2002

8-5-330 Deleted November 27, 2002

8-5-331 Tank Cleaning Requirements: Effective June 1, 2007, tank interior cleaning agents must meet the following requirements, unless all organic vapors and gases emitted during tank cleaning are collected and processed at an abatement device that has an abatement efficiency of at least 90% by weight.

331.1 Agents used to clean tank interiors shall have an initial boiling point greater than 302 degrees F, a true vapor pressure less than 0.5 psia, or a VOC content less than 50 grams per liter.

331.2 Except as allowed in Section 8-5-331.3, steam shall not be used to clean tank interiors at facilities that operate wastewater treatment facilities.

331.3 Steam may be used to remove scale or film from tank interior surfaces only after routine tank cleaning, including sludge removal, has been completed.

8-5-332 Sludge Handling Requirements: Effective June 1, 2007, the operator of a tank shall place sludge removed from that tank directly into a sludge container that meets the following requirements. This section applies to sludge removed from any tank that was subject to the requirements of this rule at any time since it was last put into service.

332.1 The sludge container shall allow no liquid leakage.

332.2 The sludge container shall have no measurable gap exceeding 1.3 cm (1/2 in.) except when the container is being loaded or unloaded, and except during sludge sampling or treatment.

8-5-400 ADMINISTRATIVE REQUIREMENTS

8-5-401 Inspection Requirements for External Floating Roof Tanks: Tanks subject to the requirements of Section 8-5-304 shall be inspected by the operator as follows:

401.1 The entire circumference of each primary and secondary seal shall be inspected for compliance with the requirements of Sections 8-5-321 and 8-5-322 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411. If a new primary or secondary seal is installed, or if a primary or secondary seal is repaired, both seals shall be inspected at the time of the seal installation or repair. Flexible wiper seals shall be inspected when the outer edge of the seal is curved upward.

401.2 Tank fittings shall be inspected for compliance with the requirements of Section 8-5-320 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411.

(Amended 1/20/93; Amended, Renumbered 11/27/02)

8-5-402 Inspection Requirements for Internal Floating Roof Tanks: Tanks subject to the requirements of Section 8-5-305 shall be inspected by the operator as follows:

402.1 The entire circumference of each primary and secondary seal shall be inspected for compliance with the requirements of Sections 8-5-321 and 8-5-322. The time between inspections shall not exceed 10 years. If a new primary or secondary seal is installed, or if a primary or secondary seal is repaired, both seals shall be inspected at the time of the seal installation or repair. Flexible wiper seals shall be inspected when the outer edge of the seal is curved upward.

402.2 The entire circumference of the outermost seal (secondary seal where so equipped, or primary seal where no secondary seal is required) shall be visually inspected for compliance with the requirements of ~~subs~~Sections 8-5-305.1, 8-5-305.2, 8-5-305.3, 8-5-321.1 and 8-5-322.1 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411. Flexible wiper seals shall be inspected when the outer edge of the seal is curved upward.

402.3 Tank fittings shall be inspected for compliance with the requirements of Section 8-5-320 twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411. Standards involving gap measurements shall be checked whenever the tank roof is accessible, but need not be checked more frequently than twice per calendar year, or 4 times per calendar year for tanks subject to enhanced monitoring pursuant to Section 8-5-411.

(Amended 1/20/93; Amended, Renumbered 11/27/02)

8-5-403 Inspection Requirements for Pressure Relief Devices~~Vacuum Valves~~: ~~Tanks subject to the requirements of Section 8-5-303 shall be inspected for compliance with the requirements of Section 8-5-303 twice per calendar year at 4 to 8 month intervals.~~Pressure relief devices, including pressure vacuum valves, shall be inspected by the tank operator for compliance with the following requirements twice per calendar year at 4 to 8 month intervals, and 4 times per calendar year at 2 to 4 month intervals for tanks subject to enhanced monitoring pursuant to Section 8-5-411:

403.1 Pressure vacuum valves: ~~setpoint and~~ gas tight standards in Section 8-5-303.

403.2 Effective June 1, 2007, for all pressure relief devices except pressure vacuum valves: gas tight standard in Section 8-5-307.3.

(Adopted November 27, 2002)

8-5-404 Inspection, Abatement Efficiency Determination and Source Test Reports~~Certification~~: Within 60 days of any inspection, abatement efficiency determination or source test required by this rule~~in Section 8-5-401, 402, 403 or 502~~,

a report shall be submitted to the APCO that~~which~~ certifies compliance with each individual requirement associated with the inspection, abatement efficiency determination or source test, and that includes data, supported by necessary calculations, to support this certification~~of these Sections~~.

(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93; 11/27/02)

~~**8-5-405 Information Required:** All reports relating to seal condition and gap measurements shall include the following information:~~

~~405.1 Date of inspection.~~

~~405.2 Actual gap measurements between the tank shell and seals, both the primary seal and the secondary seal, shall be measured around the full circumference of the tank.~~

~~405.3 Data, supported by calculations, showing whether or not the requirements of Sections 8-5-320, 321 and 322 are being met.~~

(Amended, Renumbered 9/4/85; Amended 5/4/88; 1/20/93)

8-5-410 Deleted May 4, 1988

8-5-411 Enhanced Monitoring Program: The operator of a tank that is subject to this rule may implement an Enhanced Monitoring Program by complying with all of the following:

411.1 The tank operator shall submit to the APCO a list of all tanks at a facility that are subject to this rule, and the capacity of each tank. At least 25% of these tanks, but no less than 1 tank at each facility, shall be selected by the operator for enhanced monitoring. The selected tanks shall constitute at least 20% of the total tank capacity at the facility that is subject to this rule. Only external floating roof tanks may be selected for enhanced monitoring unless there are not enough to constitute 25% of the total number of tanks. In this case, other tank types may be selected as necessary to constitute the required number. All tanks selected for enhanced monitoring must be subject to Section 8-5-401, 402 or 403.

411.2 An Enhanced Monitoring Program shall go into effect at a facility after the APCO determines that the criteria in Section 411.1 are satisfied. The specific tanks selected by the operator for enhanced monitoring may be changed at any time by the operator upon written notification to the APCO provided that the criteria in Section 8-5-411.1 continue to be satisfied. An Enhanced Monitoring Program may be discontinued at any time by the operator upon written notification to the APCO.

411.3 The operator shall perform enhanced monitoring as specified in Sections 8-5-401, 402 and 403.

8-5-412 Monitoring of Leaking Pontoons: The operator of a floating roof tank on which a leaking pontoon has been discovered shall inspect the lids and other openings on any leaking pontoon for compliance with the requirements of Section 8-5-304.6.1 once per calendar ~~month~~quarter beginning the ~~month~~quarter after the leaking pontoon is discovered until a repair of the leak is completed.

8-5-500 MONITORING AND RECORDS

8-5-501 Records:

501.1 A person who~~se~~ operates a tank~~s are~~ subject to this rule shall keep an accurate record of the type and amount of liquids stored, type of blanket gases used, ~~and~~ the true vapor pressure ranges of such liquids and gases. ~~Effective January 1, 2003, t~~These records shall be kept for at least 24 months.

501.2 For internal and external floating roof tanks, a tank operator~~person~~ who replaces all or part of a primary or secondary seal shall keep an accurate record of the length of seal replaced and the date(s) on which replacement occurred. ~~Effective January 1, 2003, t~~These records shall be kept for at least 10 years.

501.3 Unless otherwise specified, the tank operator shall retain all records required by this rule, and shall retain copies of any report, notification or other submittal required by this rule for at least 24 months.

501.4 The tank operator shall keep engineering data sheets showing setpoints for pressure vacuum valves installed after June 1, 2007.

(Amended 1/20/93; 11/27/02)

8-5-502 ~~Tank Degassing Annual~~ Source Test~~ and Abatement Efficiency Monitoring~~ Requirements: Any tank operator who uses an Approved Emission Control System or other abatement device to comply with the requirements of this rule shall perform a source test ~~or monitor abatement efficiency~~ as specified in this section. Source testing, including prior notification of the District, shall be performed in accordance with the Manual of Procedures, Volume IV. This section does not apply to any device that collects all emissions and vents them to a fuel gas collection system for combustion, or to any device that is subject to periodic source testing in accordance with a District permit to operate.

502.1 A tank operator using an Approved Emission Control System or other abatement device to comply with the requirements of Sections 8-5-303.2, 306.1 or 307.3 shall perform a source test on the system verifying operation at the required abatement efficiency at least once in any calendar year in which the system is used to comply with this rule ~~to verify operation at the required abatement efficiency~~. ~~Source testing, including prior notification of the District, shall be performed in accordance with the Manual of Procedures, Volume IV.~~

502.2 ~~Any person operating an Approved Emission Control System to comply with the requirements of subsection 8-5-328.1.2 shall test the system as prescribed in subsection 8-5-603.2.~~A tank operator using an abatement device to comply with the requirements of Sections 8-5-328.1 or 331 shall: ~~calculate the abatement efficiency of the device upon beginning use of the device and every 60 minutes thereafter as long as the device is used to comply with this rule to verify operation at the required abatement efficiency.~~

2.1 Demonstrate that a source test on the system verifying operation at the required abatement efficiency was completed within the 12 months prior to the operator's commencement of use and shall maintain a complete copy of the source test report; or

2.2 Perform such a source test during the operation in question.

(Adopted 1/20/93; Amended 11/27/02)

~~**8-5-503 Portable Hydrocarbon Detector:** Any instrument used for the measurement of organic compounds as specified by Sections 8-5-303.2, 306 and 307 shall be a combustible gas indicator that meets the specifications and performance criteria of and has been calibrated in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A).~~

(Adopted 1/20/93; Amended 11/27/02)

8-5-600 MANUAL OF PROCEDURES

8-5-601 Analysis of Samples, Reid Vapor Pressure: Samples of organic compounds as specified in this r~~R~~ule shall be analyzed for Reid v~~V~~apor p~~P~~ressure as prescribed in the Manual of Procedures, Volume III, Lab Method 13.

(Amended 9/4/85; 5/4/88)

8-5-602 Analysis of Samples, True Vapor Pressure: Samples of organic compounds not listed in Table I shall be analyzed for true v~~V~~apor p~~P~~ressure at the tank storage temperature as prescribed in the Manual of Procedures, Volume III, Lab Method 28.

(Adopted 9/4/85; Amended 5/4/88)

8-5-603 Determination of Abatement Efficiency~~Emissions~~: ~~Emissions of organic compounds~~Abatement efficency of an Approved Emission Control System or other abatement device used to comply with this rule shall be determined as follows:

~~603.1 Emissions of organic compounds as specified in Section 8-5-306 shall be measured as prescribed in the Manual of Procedures, Volume IV, ST-4.~~ Abatement efficiency of an Approved Emission Control System or other abatement device as specified in Section ~~8-5-502.1~~ 8-5-502 shall be determined as prescribed in the Manual of Procedures, Volume IV, ST-7. For Approved Emission Control Systems subject to Section 8-5-306.1 only, baseline emissions shall be determined as specified in Section 8-5-306.1.

~~603.2 Emissions of organic compounds as specified in subsection 8-5-328.1.2 shall be measured as prescribed in the Manual of Procedures, Volume IV, ST-7.~~

(Renumbered 9/4/85; Amended 1/20/93; 11/27/02)

8-5-604 Determination of Applicability Based on True Vapor Pressure: Table I shall be used to determine if a storage tank is subject to the requirements of this rule. For organic compounds not listed in Table-I, refer to Sections 8-5-601 or 602.

(Adopted 9/4/85; Amended 5/4/88; 1/20/93)

~~**8-5-605 Pressure-Vacuum Valve Gas Tight Determination:** Determination of organic compound leak concentrations as specified by Sections 8-5-303.2, 306 and 307 shall be conducted by EPA Reference Method 21 (40 CFR 60, Appendix A).~~

8-5-605 Measurement of Leak Concentrations and Residual Concentrations: Determination of organic compound concentrations shall be conducted as follows:

605.1 Any instrument used for the measurement of organic compound concentration shall be a combustible gas indicator that meets the specifications and performance criteria of and has been calibrated in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A).

605.2 Measurements of organic compound concentration, except as otherwise specified, shall be conducted in accordance with EPA Reference Method 21 (40 CFR 60, Appendix A). Measurements of residual organic concentration required by Section 8-5-328.1 shall be measured with the instrument probe inlet placed at least 12 inches above the bottom of the tank and above the surface of any sludge material on the bottom of the tank, and at least 12 inches inside the tank measured from the inner surface of the tank wall.

(Adopted 1/20/93; Amended 11/27/02)

8-5-606 Analysis of Samples, Tank Cleaning Agents

606.1 Initial boiling point shall be determined in accordance with ASTM D-1078-93, or by an alternate method approved in writing by the APCO and U.S. EPA.

606.2 True vapor pressure shall be determined in accordance with the Manual of Procedures, Volume III, Method 28, or by an alternate method approved in writing by the APCO and U.S. EPA.

606.3 VOC content shall be determined in accordance with the Manual of Procedures, Volume III, Method 31, or by an alternate method approved in writing by the APCO and U.S. EPA.

TABLE I*

STORAGE TEMPERATURE VERSUS TRUE VAPOR PRESSURE (TVP)

	Density (lb/gal)	Reference Gravity API	IBP ^{o}F	Max. Temp. ^{0}F Not to Exceed 0.5 Psia TVP	Max. Temp. ^{0}F Not to Exceed 1.5 Psia TVP
Crude Oils:*		-	-	-	-
San Joaquin Valley	-	-	390	249	-
Middle Distillates:					
Kerosene	-	42.5	350	195	250
Diesel	-	36.4	372	230	290
Gas Oil	-	26.2	390	249	310
Stove Oil	-	23	421	275	340
Jet Fuels:					
JP-1	-	43.1	330	165	230
JP-3	-	54.7	110	-	25
JP-4	-	51.5	150	20	68
JP-5	-	39.6	355	205	260
JP-7	-	44-50	360	205	260
Fuel Oil:					
No. 1	-	42.5	350	195	250
No. 2	-	36.4	372	230	290
No. 3	-	26.2	390	249	310
No. 4	-	23	421	275	340
No. 5	-	19.9	560	380	465
No. 6	-	16.2	625	450	-
Asphalts:					
60-100 pen.	-	-	-	490	550
120-150 pen.	-	-	-	450	500
200-300 pen.	-	-	-	360	420
Organic Compounds:					
Acetone	6.6	47	133	-	35
Acrylonitrile	6.8	41.8	173	30	62
Benzene	7.4	27.7	176	34	70
Carbon Disulfide	10.6	22.1	116	-	10
Carbon Tetrachloride	13.4	-	170	20	63
Chloroform	12.5	-	142	-	40
Cyclohexane	6.5	49.7	177	30	65
1,2 Dichloroethane	10.5	-	180	35	75
Ethyl Acetate	7.5	23.6	171	38	70
Ethyl Alcohol	6.6	47.0	173	55	85
Isopropyl Alcohol	6.6	47.0	181	62	95
Methyl Alcohol	6.6	47.0	148	30	62
Methyl Ethyl Ketone	6.7	44.3	175	30	70
Toluene	7.3	30	231	75	120
Vinylacetate	7.8	19.6	163	30	65

* True vapor pressure for crude oils should be determined from the specific crude slate.

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Staff Report

Proposed Amendments to BAAQMD Regulation 8, Rule 5: Storage of Organic Liquids

October, 2006

Prepared by:

J. Julian Elliot
Senior Air Quality Engineer

William H. Guy
Assistant Counsel

TABLE OF CONTENTS

1.0 Executive Summary

The proposed amendments to Bay Area Air Quality Management District ("BAAQMD" or "District") Regulation 8, Rule 5: *Storage of Organic Liquids* will implement the emission reduction measures in Control Measure SS 9 ("*Organic Liquid Storage Tanks*") in the Bay Area 2005 Ozone Strategy and make other improvements to the rule. Control Measure SS 9 proposes to reduce reactive organic gas (ROG) emissions from storage tanks by supplementing existing requirements in Rule 8-5. The major proposed amendments would:

1. Clarify Exemptions for Tanks at Gasoline Stations

The proposed amendments clarify an exemption in Rule 8-5 for gasoline dispensing tanks subject to Regulation 8, Rule 7: *Gasoline Dispensing Facilities.* Rule 8-7 subjects these tanks to equal standards.

2. Create a New, Voluntary Self-Inspection and Maintenance Program

This amendment seeks to reduce emissions, not by imposing new standards or by making existing standards more stringent, but rather by reducing excess emissions that result from the most common, minor problems found on large floating roof tanks. The program will increase the inspection frequency at floating roof tanks at a facility, thereby reducing the potential amount of time that a non-complying condition could cause excess emissions.

3. Add New Structural Integrity Requirements

The proposed amendments include a prohibition on liquid leaks through tank shells and emission control requirements on leaking flotation pontoons on floating roof tanks.

4. Add New Requirements for Tank Cleaning

The proposed amendments add new limits on the organic content of cleaning agents used on tank interiors and impose containment standards for sludge removed from tanks during cleaning.

The proposed amendments will codify best industry practices and improve rule enforceability. Because new emission controls are not being proposed, emission reductions for these amendments are difficult to quantify. However, an overall improvement in rule effectiveness, primarily related to the proposed self-inspection and maintenance program, is expected to result in an emission reduction of about 0.03 tons per day of organic compounds.

The rule development process for the proposed amendments included workgroup meetings and a public workshop in July 2006. A socioeconomic analysis of the proposed amendments concludes that the amendments would not have significant economic effects. An initial study of the proposed amendments concludes that the rule amendments would not cause significant environmental impacts, and a CEQA negative declaration is proposed for adoption.

2.0 Background

2.1 Source Description

Tanks regulated by Rule 8-5 are used for bulk storage of organic liquids or liquid mixtures containing organic compounds. Such tanks are typically found at petroleum refineries and chemical plants, as well as gasoline bulk plants and terminals. Underground gasoline tanks located at gasoline stations are regulated separately by BAAQMD Regulation 8, Rule 7. Tanks regulated by Rule 8-5 have one of four basic designs: fixed roof, pressure, external floating roof and internal floating roof.

Figure 1 shows a typical large fixed roof tank. The pressure/vacuum vent is designed to remain closed as long as the tank pressure deviates from atmospheric pressure by a small amount, such as when daytime temperatures cause the tank pressure to rise slightly, or when cooler night temperatures cause a slight tank vacuum. However, large pressure variations, such as those caused by draining a large quantity of liquid from the tank or by adding a large quantity of liquid to the tank, may cause the vent to open, thereby releasing organic vapors to the air or admitting air into the tank where it becomes saturated with organics. The pressure/vacuum vent is the only emission point on a fixed roof tank.

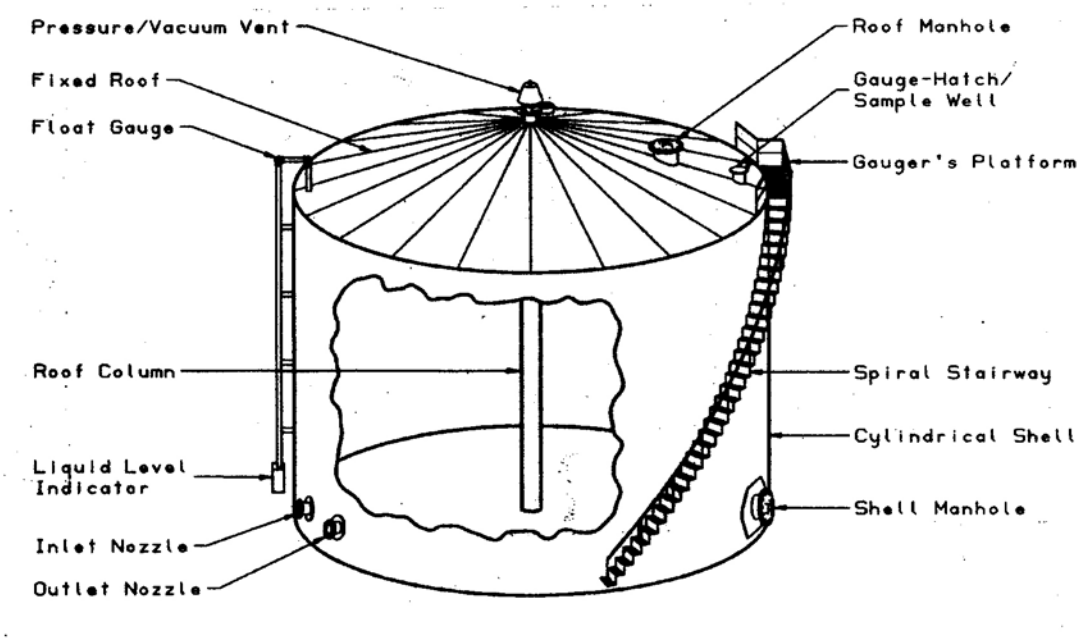


Figure 1. Fixed Roof Tank (source: U.S. EPA)

Pressure tanks operate in the same way as fixed roof tanks, but are designed to store high-pressure liquids. Pressure tanks are typically long cylinders with hemispherical ends oriented horizontally rather than vertically. Pressure tanks are sealed without emission points except for pressure relief devices and piping components, such as valves and connectors, used to transfer liquid to and from the tank.

Figure 2 shows a typical external floating roof tank (EFRT). An EFRT has a cylindrical shell with no fixed roof or cover. Instead, the roof floats on top of the liquid and moves up and down as the liquid level changes. Because there is no vapor space between the roof and the surface of the stored liquid, tank pressure does not rise when liquid is added to the tank and vapors are not expelled from the tank, as they are with a fixed roof tank. However, a floating roof design has two emission points not found on fixed roof tanks: vapor leaks from rim seals and roof fittings. Organic liquid may evaporate in the space between the outer edge of the floating roof and the inside tank wall. Although rim seals of various designs are used to reduce these emissions, some organic vapors are emitted at these rim seals. Roof fittings such as deck legs, guidepoles and sample hatches penetrate the roof and provide a potential route for evaporative emissions to occur. Although cover gaskets and other closure mechanisms may reduce these emissions, some organic vapors are emitted at roof fittings. Nonetheless, a floating roof tank typically reduces overall emissions 60% to 99% more than a fixed roof tank in the same service.

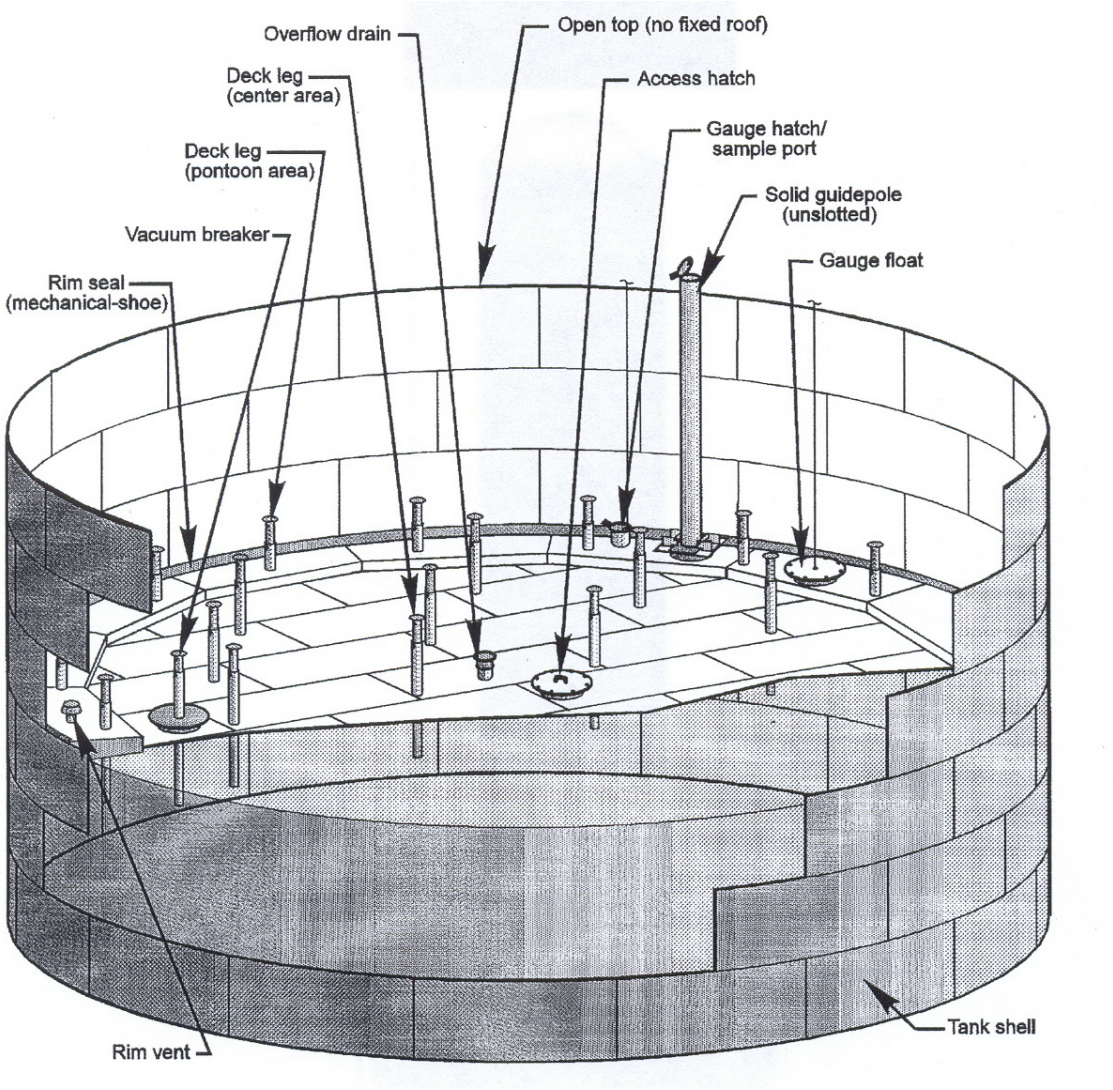


Figure 2. External Floating Roof Tank (source: U.S. EPA)

Figure 3 shows a typical internal floating roof tank (IFRT). An IFRT is basically an EFRT with an additional fixed roof on top of the tank shell. The emission mechanisms for an IFRT are the same as for an EFRT, but the fixed roof eliminates wind exposure at the floating roof rim seal and roof fittings. Because wind exposure increases the emission rate at these points, an IFRT will have a lower emission rate from the rim seal and roof fittings compared to an otherwise identical EFRT. However, because the fixed roof creates a potentially dangerous environment by allowing organic vapors to concentrate above the floating roof, IFRTs are subject to much less stringent inspection requirements than EFRTs and their floating roofs are not easily accessible for preventative maintenance.

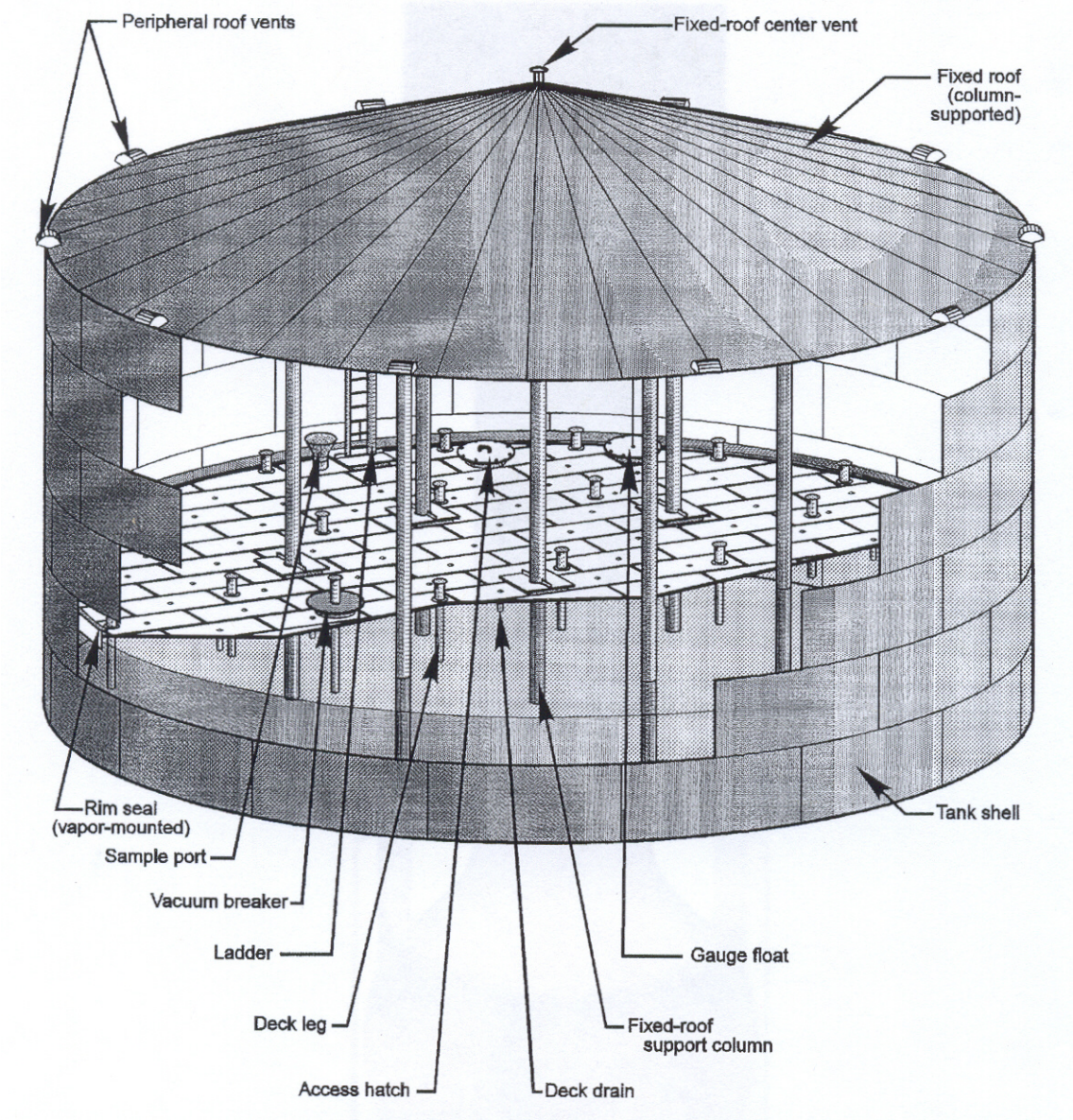


Figure 3. Internal Floating Roof Tank (source: U.S. EPA)

BAAQMD data show that there are 3,282 tank sources within the District, including both permitted tanks and tanks that are exempt from permit requirements. This total includes internal floating roof tanks (IFRTs), external floating roof tanks (EFRTs), fixed roof tanks and pressure tanks, but excludes fuel tanks at retail service stations. This total also includes tanks that primarily hold water or inorganic liquids. An estimated 499 tanks have floating roofs. Most floating roof tanks have welded shells, but an estimated 31 tanks have riveted shells. Rivets in the tank shell reduce the effectiveness of floating roof rim seals compared to a welded tank shell. Table 1 provides a summary of tanks in the Bay Area.

Table 1 - BAAQMD Tank Inventory	
Fixed Roof Tanks	2,636 (at 294 facilities)
Floating Roof Tanks	499 (at 33 facilities) 309 EFRTs (18 riveted) 190 IFRTs (13 riveted)
Pressure Tanks	147 (at 25 facilities)
Total Tank Sources	3,282 (at 301 facilities)

About 50% of the 3,282 total tank sources are classified as exempt from permit requirements, either because they are very small or because they do not store liquids that contribute significantly to air pollution. Only 47 facilities have 10 or more tanks, and these 47 facilities account for about 73% of the total tanks and about 95% of the floating roof tanks.

In the Bay Area 2005 Ozone Strategy, the BAAQMD estimates that ROG emissions from storage tanks are 5.26 ton/day in 2006, including tank cleaning emissions for tanks located at petroleum refineries.

2.2 Rule History

Regulation 8, Rule 5 limits organic emissions from liquid storage tanks. The rule primarily affects petroleum refineries, chemical plants and bulk gasoline terminal distribution facilities, but may affect other facilities that store large quantities of organic liquid. Rule 8-5 was originally adopted in 1978 and has been amended a number of times, most recently on November 27, 2002. By the time of the January 1, 1993 amendments, Rule 8-5 already included most of the current provisions including the basic emission control strategies, gap standards for floating roof rim seals, closure requirements for tank roof fittings and tank degassing requirements. Since 1993, Rule 8-5 has been the most stringent storage tank rule in California with respect to these emission sources, although emissions related to tank cleaning were not addressed. The proposed amendments will impose standards to limit emissions during tank cleaning operations, and will also create an innovative, voluntary self-inspection and repair program and make other improvements to Rule 8-5.

2.3 Control Measure SS 9

Control Measure SS 9 ("*Organic Liquid Storage Tanks*") in the Bay Area 2005 Ozone Strategy was based on the recommendations in the Technical Assessment Document (TAD) for organic liquid storage tanks that was published by the BAAQMD in January, 2004. The TAD studied the emission reduction measures suggested by Further Study Measure FS-10 in the Bay Area 2001 Ozone Attainment Plan.

Control Measure SS 9 proposes to improve standards for "degassing and cleaning tanks and for storing and transporting removed sludges", and also to implement a self-inspection and maintenance provision to provide "an incentive for more frequent tank inspections." Each of these emission reduction measures is incorporated in the proposed amendments.

3.0 Proposed Rule Amendments

This chapter describes the substantive proposed amendments to Rule 8-5. Proposed amendments that are not described here are editorial.

3.1 New Exemption for Aboveground Gasoline Storage Tanks

Amended Section 8-5-116

Exemption 8-5-116 applies to "… *any underground gasoline storage tank located at a gasoline dispensing facility subject to the requirements of Regulation 8, Rule 7.*" This exemption was added in 1993 to prevent conflicts between California Air Resources Board (CARB) requirements and standards in Regulation 8, Rule 7: *Gasoline Dispensing Facilities*. Because both Rule 8-5 and Rule 8-7 specify pressure setpoints at which pressure vacuum valves will automatically operate, and because these setpoints are different for underground tanks in the two rules, an exemption is necessary in one of the rules to prevent a conflict. This exemption is provided for underground tanks, but not for aboveground tanks, because the setpoints for aboveground tanks are the same in Rules 8-5 and 8-7. However, Rule 8-7 allows the setpoints specified in that rule to be superseded by a CARB order. If the CARB setpoints are not the same as the setpoints in Rule 8-5, then a conflict would occur. For this reason, and because Rule 8-7 already regulates both aboveground and underground gasoline tanks at gasoline dispensing facilities, it is appropriate to exempt both types of tanks from Rule 8-5. The proposed amendment of Section 8-5-116 extends this exemption to include aboveground gasoline tanks.

3.2 Voluntary Self-Inspection and Repair Program

New Sections 8-5-119, 411; modified Sections 8-5-401, 402, 403

Rule 8-5 includes the most stringent seal gap standards and fitting standards for floating roof tanks of any rule in the country. As the stringency of the rule has increased, so has the difficulty in finding opportunities for further emission reductions. One opportunity is the reduction of the number and duration of minor violations of the rule's standards by increasing the tank inspection frequency. More frequent inspections would identify damaged or worn tank components that would eventually lead to violations of rule standards and excess air emissions if they were not identified and repaired. Also, more frequent inspections would reduce the maximum amount of

time that a non-complying condition produced excess emissions. Because Rule 8-5 already imposes frequent inspections and because the number of standard violations identified on tanks is not excessive, simply increasing the inspection frequency further for all tanks would not be cost-effective. Therefore, in order to encourage tank operators to undertake additional inspections voluntarily, and to target these inspections on those tanks that are most likely to benefit from additional inspections based on operators' knowledge of tank condition, the proposed amendments include a voluntary self-inspection and maintenance program with the following elements:

- 25% of the tanks at a facility, chosen by the operator, must have double the number of operator-conducted inspections normally required by the rule;
- Minor non-complying conditions discovered by a tank operator at any facility tank are not subject to enforcement action if repairs are made within 48 hours;
- Minor non-complying conditions discovered by BAAQMD inspectors on any facility tank continue to be subject to enforcement action.

3.3 New Structural Integrity Requirements for Tank Shells, Flotation Pontoons and Pressure Relief Devices

New Sections 8-5-225, 303.1, 304.5, 304.6, 305.6, 307.1, 320.7, 412

3.3.1 Good Operating Condition

Rule 8-5 currently requires that floating tank roofs and certain tank fittings be in "good operating condition", although this term is not defined. In order to clarify the meaning of this standard, the proposed amendments include a definition of "good operating condition". Also, the proposed amendments extend this standard to all tank roofs and also to tank shells and to pressure relief devices.

3.3.2 Floating Roof Flotation Pontoons

The roofs on floating roof tanks are made buoyant by pontoons that are part of the roof structure and that are typically arranged along the outer circumference of the roof. These pontoons are formed from welded steel sheets that are divided into individual compartments and are typically provided with loose-fitting covers that are accessible from the roof deck. Occasionally, a pontoon weld will crack at a point that is below the stored liquid level, allowing organic liquid to seep into the pontoon compartment. Evaporation of this liquid creates an organic vapor space inside the pontoon and results in organic emissions at the pontoon cover.

Currently Rule 8-5 does not explicitly address leaking pontoons, although the BAAQMD has considered such leaks to be a violation of the "good operating condition" requirement for floating roofs when they have occurred in the past. The proposed amendments make explicit the prohibition against uncontrolled, leaking pontoons, and specify required emission controls for leaking pontoons. Leaking pontoons, once discovered, must have their covers and any other openings sealed to a "gas tight" standard, must be inspected on a quarterly basis once sealed, and must be permanently repaired at the next tank overhaul.

3.4 Monitoring of Emission Controls During Tank Degassing

New Sections 328.3, 605.2; Modified Sections 8-5-328.1, 502.2, 603.2

Tank degassing is the process of removing organic vapors from the interior of a tank that has been drained of organic liquid prior to opening the tank to the atmosphere. Degassing is the first step in making the tank interior safe for workers. Rule 8-5 currently requires that organic gas emissions from degassing be reduced by at least 90% and that emission control continue until the residual organic concentration in the tank falls below 10,000 ppm. At refineries, where waste gases are routinely collected for use as fuel, the organic gases may be vented to a fuel gas collection system. Residual gases may also be converted to a liquid form with a condenser and re-used, captured with a carbon adsorbent, or destroyed with an internal combustion engine or an oxidizer. Rule 8-5 currently requires that an abatement device used to control degassing emissions must undergo an annual source test.

Although the standards for tank degassing in Rule 8-5 are at least equivalent to the strictest in the state, the monitoring associated with these standards could be strengthened. First, although tank degassing is required to adhere to the standards in the rule, the rule does not require notification to the District so that District staff can observe the operations. Also, Rule 8-5 does not include a requirement that a tank operator measure or record the residual organic concentration in a tank to allow verification that the 10,000 ppm target concentration was reached and maintained.

In order to address these issues, the proposed amendments add a 3-day prior notification requirement for degassing operations and a monitoring requirement for the 10,000 ppm residual concentration using a hand-held analyzer.

3.5 New Tank Cleaning and Sludge Handling Standards

New Sections 8-5-331, 332, 606

After a tank has been degassed, the interior is vented of residual organic gases prior to being cleaned internally. Cleaning removes accumulated sludge from the tank and allows the tank interior to be inspected and repaired. Sludge may adversely affect the quality of material stored in the tank and may accumulate to the point that the working capacity of the tank is significantly reduced. Rule 8-5 does not currently address emissions from tank cleaning operations and no other BAAQMD rule regulates the cleaning of tank interiors. Other California air districts, including the San Joaquin Valley Unified APCD (Rule 4623), the South Coast AQMD (Rule 1149) and the Ventura County APCD (Rule 74.26) do address these potential emissions. In general, these rules require that the residual organic concentration or vapor pressure in the tank must be reduced to some target level through degassing, with this concentration or vapor pressure maintained during subsequent cleaning operations, or that the emissions during cleaning be abated.

Because Rule 8-5 does not require emission controls during cleaning, as it does during degassing, the use of cleaning agents that contain significant levels of organic compounds could negate the benefits of controlling degassing emissions. Also, the use of steam as a cleaning agent tends to heat and vaporize organic liquids that might otherwise be removed from the tank as a liquid or semi-solid sludge, thus increasing the level of emissions during cleaning. The proposed amendments impose limitations on the organic content of cleaning agents and the use

of steam cleaning. The limitations are based on new standards in the May 2005 amendments to San Joaquin Valley Unified APCD Rule 4623. The proposed amendments also add containment standards for sludge removed from tanks during cleaning.

3.6 Other Amendments

3.6.1 New Sections 8-5-111.6, 112.5

New notification requirements are proposed to be added to limited exemptions in Sections 8-5-111 and 112. These requirements apply only in the event the tank operator discovers a condition that violates a standard of Rule 8-5. Such a notification is important because both of these limited exemptions require a tank to be in compliance with the rule when they are invoked.

3.6.2 New Section 8-5-112.6

At the request of U.S. EPA, a report requirement is proposed to be added to the limited exemption in Section 112.

3.6.3 New Section 8-5-118

This section clarifies the applicability of Rule 8-5 relative to Regulation 8, Rule 18: *Equipment Leaks*. Both rules include standards that limit equipment leaks.

3.6.4 Amended Section 8-5-206

The current definition of "gas tight" in Rule 8-5 allows concentrations of organic gases at leaking equipment to be measured as much as 1 centimeter from the leak. However, Rule 8-5 also requires that leak concentrations be quantified using U.S. EPA Reference method 21, which does not allow a 1 cm gap. In order to correct this inconsistency, the 1 centimeter allowance is deleted in the proposed amendment.

3.6.5 Amended Table in Section 301

The deletions in the second and third rows of this table are editorial. Section 301 specifies that a tank of a particular size that stores a liquid in a particular vapor pressure range may use the emission control measures specified for that tank and liquid, or may use measures specified for larger tanks or for tanks storing liquids in a higher vapor pressure range. Because of this, the deleted text in the second and thirds rows is duplicative. This is an editorial change.

The deleted text in the first row and the added text in the third row is a correction to the rule amendment adopted in November 2002. In that amendment, rule standards were put into the tabular format that is currently used. However, when this format change occurred, a compliance option for the two smallest tank size categories was inadvertently deleted. Tanks in these two size categories that store liquid with a true vapor pressure greater than 1.5 psia and less than 11 psia were allowed, prior to the 2002 amendment, to use a submerged fill pipe as a minimum emission control technology, if they were in the service specified. This change was inadvertent and was not discussed in the staff report for the 2002 amendment. No tank operators submitted permit applications to retrofit affected tanks with more effective emission control technology, and BAAQMD staff are unaware of any tanks that were subsequently retrofitted. Therefore, reversing this error will not allow any tank to revert to a lower level of emission control and this change is editorial.

3.6.6 Amended Section 8-5-303.2, 304.4, 305.5

The proposed amendments delete the requirement that pressure vacuum valves and floating roofs be "properly installed and properly maintained". Rule 8-5 includes adequate monitoring to ensure compliance with all rule standards. The requirement for proper installation and maintenance is unnecessary.

3.6.7 New Sections 307.3, 320.7; Amended Section 8-5-303.2

Pressure vacuum valves and other pressure relief devices are required to have a sealing mechanism that is "gas tight" and are required to be monitored for compliance with this standard. However, when a sealing mechanism is vented to a fuel gas collection system or other control device that maintains a high emission control efficiency it may be impossible to verify compliance with this standard, and compliance becomes much less important than if the sealing mechanism is vented to the atmosphere. Therefore, the proposed amendments exempt pressure relief devices from the "gas tight" requirement when any leaks would be vented to a system that proves at least 95% abatement efficiency.

3.6.8 Amended Section 8-5-320.5.2

This proposed amendment is a correction to the rule amendment adopted in November 2002. Prior to that amendment, this section was applicable only to external floating roof tanks. In 2002 this section was amended to delete the qualifier "on an external floating roof". This change was inadvertent and was not discussed in the staff report for the 2002 amendment. No tank operators submitted permit applications to retrofit internal floating roof tanks, and BAAQMD staff are unaware of any tanks that were subsequently retrofitted. Therefore, reversing this error will not allow any tank to revert to a lower level of emission control and this change is editorial.

3.6.9 Amended Section 8-5-328.1

The proposed amendments delete the reference to liquid balancing as a control option for tank degassing. As defined in the rule, liquid balancing is a method of making a tank exempt from the requirements of the rule by reducing the true vapor pressure of the stored liquid to less than 0.5 psia. As such, liquid balancing is not a control option for degassing; it is a way to make the tank exempt from the degassing control requirements, as well as the rest of the rule. This proposed deletion will not disallow liquid balancing; it will simply delete this inappropriate reference. This change is editorial.

3.6.10 Amended Section 8-5-603.1

The proposed amendments replace test method ST-4 with ST-7. Method ST-4 has been superseded by ST-7 in the BAAQMD Manual of Procedures.

4.0 Emissions and Emissions Reductions

4.1 Introduction

Control Measure SS 9 ("*Organic Liquid Storage Tanks*") in the Bay Area 2005 Ozone Strategy estimates 5.08 tons per day of total organic compound emissions from tanks in 2003, with a forecast of 5.26 tons per day in 2006, with 70% of these emissions occurring at the five Bay Area refineries. These emissions do not include emissions from tank degassing or cleaning or emissions related to putting tanks into service or removing them from service.

Tanks subject to Rule 8-5 may be categorized as either fixed roof or floating roof tanks. (Although there are also a significant number of pressurized tanks in the District, these represent a small fraction of the total emissions from tank sources.) The design of fixed and floating roof tanks is described in Section 2.1. Fixed roof tank emissions - which occur when organic vapor is forced out of the tank as liquid is added to the tank or the tank internal pressure otherwise increases - are controlled with pressure vacuum valves. These devices allow a small amount of vacuum or positive pressure to develop in the tank before they open to the atmosphere to relieve the pressure differential. Fixed roof tanks should be operated so that the pressure vacuum valve does not actuate under normal operating conditions - tank pressure increases as the tank heats up or is filled, and decreases as the tank cools or is drained - with the pressure vacuum valve keeping the tank sealed from the atmosphere under these minor pressure variations. However, a fixed roof with a pressure vacuum valve does not prevent emissions during operations that cause large pressure variations in the tank. Therefore, any tank subject to Rule 8-5 is required to use a more effective level of control than a pressure vacuum valve - either a floating roof design or vapor recovery of emissions from a fixed roof tank - if the tank capacity is 39,626 gallons or more, or if the tank capacity is 19,803 gallons or more and the true vapor pressure of the tank product exceeds 1.5 psia.

Floating roof tanks provide a higher level of control than fixed roof tanks because they do not allow a vapor space to form below the tank roof. Even if a floating roof tank undergoes large swings in stored liquid volume, the tank does not expel large volumes of gas as it fills and does not draw in large volumes of air (which would become saturated with organic gases and later expelled) as it empties. The floating roof is a safe, passive, emission-prevention technology and therefore has significant cost advantages over vapor recovery systems which are mechanically complex and require fuel or electrical power. In addition, floating roofs create no secondary emissions, as do combustion-based and adsorbent-based control technologies. Floating roofs do have unique emission mechanisms, such as those resulting from roof fittings used only on floating roofs, as well as withdrawal losses (evaporation of liquid from the inside tank walls as the roof level drops). Nonetheless, floating roofs reduce emissions compared to a fixed roof in the same service by a factor of 60% to 99%, according to U.S. EPA's Compilation of Air Pollutant Emission Factors, AP-42, Volume I: *Stationary Point and Area Sources*. Tanks subject to Rule 8-5 would be expected to be at the higher end of this range because of the stringent fitting closure requirements and seal gap standards in this rule.

Because of the high level of control required by Rule 8-5, additional cost-effective emission reductions at storage tanks have become increasingly difficult to achieve. The 1993 amendments to the rule achieved an estimated emission reduction of organic compounds between 2 and 3 ton/day by imposing standards for tank degassing and more stringent seal gap and fitting closure standards for floating roof tanks. The 1999 amendments achieved an estimated emission

reduction of 0.87 ton/day, primarily by imposing closure standards for slotted guidepoles on floating roof tanks. The 2002 amendments achieved an estimated emission reduction of 0.13 ton/day, primarily by doubling the required inspection frequency for external floating roof tanks.

Because it is sometimes difficult to forecast emission reductions in a control measure description in cases where adequate data may be available only during later rule development, the 2005 Ozone Strategy does not include an estimate of potential emission reductions from Control Measure SS 9.

4.2 Emission Reductions from Proposed Amendments

4.2.1 Voluntary Self-Inspection and Repair Program

As discussed in Section 3.2, this proposed, new program will double the inspection frequency at 25% of the tanks at a facility that uses this program, while requiring that non-complying conditions that are discovered be repaired within 48 hours. The tanks that will undergo additional inspections are chosen by the facility operator, but all of the external floating roof tanks at a facility must be included in the program before any other tank type is selected. This requirement is proposed because external floating roof tanks have the largest number of components that may potentially violate a rule standard, and therefore are the tank type most likely to benefit from additional inspections. (Although internal floating roof tanks also have a large number of components that are subject to rule standards, most of these are located under the tank's fixed roof (see Figure 3) and therefore are not normally accessible for close inspection, and probably could not be repaired within 48 hours.) Because self-discovered minor violations of rule standards are not subject to enforcement action by the BAAQMD under the proposed program, tank operators are expected to perform additional inspections on those tanks that are most likely to have compliance issues. Because tank operators would be allowed to change the specific tanks that are subject to additional inspections, they are also expected to adjust their tank selection so that inspection resources are always directed at those tanks that are most likely to benefit from additional inspections.

As discussed in Section 3.2, these additional, targeted inspections are expected to reduce emissions in two ways: by identifying and repairing or replacing damaged or worn tank components that would eventually lead to violations of rule standards and excess air emissions, and also by reducing by half the maximum amount of time that a non-complying condition produces excess emissions. A properly designed and executed program that stresses preventative maintenance could greatly reduce excess emissions, and attendant violation notices, for the tank operator.

The BAAQMD has estimated 1.36 tons per day of organic emissions from external floating roof tanks. The expected reduction in the incidence of non-complying conditions and of the duration of non-complying conditions is expected to result in a minor reduction in emissions at external floating roof tanks. An emission reduction of about 2% would be equivalent to a reduction of 0.03 ton/day of organics.

4.2.2 New Structural Integrity Requirements

The proposed prohibitions on tank shell integrity are not expected to result in significant emission reductions because tank shell leaks are very uncommon. Leaks on floating roof flotation pontoons are less uncommon, and such leaks have previously been prohibited as a

violation of the "good operating condition" requirement for floating tank roofs. As discussed in Section 3.3.2, the proposed amendments will make explicit the prohibition against uncontrolled, leaking pontoons, and specify required emission controls for leaking pontoons. Because uncontrolled, leaking pontoons have been prohibited in the past by the BAAQMD, no emission reduction estimate is provided for this proposed amendment.

4.2.3 New Tank Cleaning and Sludge Handling Standards

As discussed in Section 3.5, the proposed amendments impose limitations on the organic content of cleaning agents and the use of steam cleaning, and also add containment standards for sludge removed from tanks during cleaning. Based on discussions with representatives of the five Bay Area refineries, it appears that tank cleaning operations already generally comply with these requirements. Also, state and federal hazardous waste regulations already impose handling requirements on most sludge removed from tanks. Sludge that is recycled on the site where it is generated may be exempt from these hazardous waste regulations, and only this small fraction of produced sludge will be affected by the proposed handling requirements.

The BAAQMD emission inventory estimates only 0.05 tons per day of ROG emissions (at petroleum refineries only). Because the emission inventory amount for tank cleaning is quite small and because only a fraction of removed sludge will be subject to new requirements because of the proposed amendments, no emission reduction estimate is provided for these amendments.

4.2.4 Other Amendments

Because the other proposed amendments do not impose new emission control standards, no emission reduction estimate is provided for these amendments.

5.0 Economic Impacts

5.1 Socioeconomic Impacts

Section 40728.5 of the California Health and Safety Code requires an air district to assess the socioeconomic impacts of the adoption, amendment or repeal of a rule if the rule is one that "will significantly affect air quality or emissions limitations". Applied Economic Development of Walnut Creek, California has prepared a socioeconomic analysis of the proposed amendments to Rule 8-5. The analysis concludes that the affected refineries should be able to absorb the costs of compliance with the proposed rule without significant economic dislocation or loss of jobs.

5.2 Incremental Costs

Under Health and Safety Code § 40920.6, an air district is required to perform an incremental cost analysis for any proposed best available retrofit control technology rule or feasible measure. The air district must: (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the air district must "calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option." These provisions were intended to

encourage air districts to consider whether less stringent controls that come at vastly reduced cost may be a better policy choice if they achieve much of the emission reduction sought.

In this case, the BAAQMD is proposing the adoption of controls included as feasible measures in the Bay Area 2005 Ozone Strategy. These controls are not emissions standards but instead involve incentives for more frequent inspections, structural integrity requirements, and work practice requirements related to tank cleaning and degassing. Because the proposed controls are not emission standards that can be achieved by a variety of control options, the BAAQMD is unable to identify any alternative that "achieves the emission reduction objectives for the regulation." As a result, the BAAQMD cannot calculate an incremental cost effectiveness for the proposed controls. There are no alternatives available that achieve the emission reduction objectives for the regulation.

5.3 Implementation Costs

This section describes costs, both to affected tank operators and to the BAAQMD, for each proposed amendment.

5.3.1 Voluntary Self-Inspection and Repair Program

There are approximately 500 floating roof tanks in the District. If these tanks were all included in the proposed Self-Inspection and Repair Program, an additional 250 inspections would be required each year (2 inspections per year at 25% of the total number of tanks) in addition to the inspections already mandated by the rule. An inspector would require about an hour and a half for each tank inspection, including set up time if incorporated into an existing inspection program. At a cost of $65,000 per employee, and assuming 2,000 working hours per year, the cost of these extra inspections would be about $50 each ($65,000/2000 * 1.5 = $48.75), or approximately $12,200 per year at all affected facilities for 250 inspections.

If tank operators are able to repair self-discovered conditions that do not comply with Rule 8-5 standards without being subject to enforcement action, this could reduce the amount of fines associated with tanks subject to Rule 8-5. However, since the proposed program only allows minor violations to be repaired without enforcement action, and since the number of these violations has historically not been excessive, the loss of revenue from fines is expected to be more than offset by the reduced costs to the BAAQMD for discovering and documenting violations and processing resulting violation notices.

5.3.2 Structural Integrity Requirements for Tank Shells and Flotation Pontoons

No additional costs to tank operators are projected for the proposed tank shell integrity requirements since tank shell leaks are very uncommon and since an operator probably would have initiated a tank repair on a leaking shell even in the absence of the proposed requirements in order to minimize product loss.

Also, no additional costs to tank operators are projected for the proposed leaking pontoon emission control requirements since the BAAQMD has historically prohibited leaking pontoons.

5.3.3 Tank Cleaning and Sludge Handling Requirements

No additional costs to tank operators are projected for the proposed tank cleaning and sludge handling requirements since tank cleaning operations in the Bay Area already generally comply with these requirements.

5.3.4 Tank Degassing Notification Requirement and Residual Organic Monitoring

No additional costs to tank operators are projected for the proposed notification of tank degassing operations or monitoring of the residual organic concentration in a tank.

6.0 Environmental Impacts

Pursuant to the California Environmental Quality Act, the BAAQMD has had an initial study for the proposed amendments prepared by Environmental Audit, Inc. The initial study concludes that there are no potential significant adverse environmental impacts associated with the proposed amendments. A negative declaration is proposed for adoption by the BAAQMD Board of Directors. The initial study and negative declaration is to be circulated for public comment during the period from September 18, 2006 to October 10, 2006.

7.0 Regulatory Impacts

Section 40727.2 of the Health and Safety Code requires an air district, in adopting, amending, or repealing an air district regulation, to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in air district rules. The air district must then note any differences between these existing requirements and the requirements imposed by the proposed change.

7.1 BAAQMD Regulation 8, Rule 7

Aboveground and underground gasoline storage tanks at gasoline dispensing facilities are regulated by BAAQMD Regulation 8, Rule 7: *Gasoline Dispensing Facilities*. Rule 8-5 currently includes an exemption for underground storage tanks at such facilities, and the proposed amendments would extend this exemption to also apply to aboveground tanks. This amendment is discussed in Section 3.1 of this report. The basic tank size exemption in Rule 8-5 is for tanks with a capacity less than 264 gallons. In Rule 8-7, the exemption is for tanks with a capacity less than 250 gallons. Therefore, the proposed extension of the Rule 8-5 exemption to aboveground gasoline tanks subject to Rule 8-7 is not expected to relieve any tanks of regulation based on tank capacity.

7.2 BAAQMD Regulation 8, Rule 18

Emissions of organic compounds from leaking equipment at petroleum refineries, chemical plants, bulk plants and bulk terminals are regulated by BAAQMD Regulation 8, Rule 18: *Equipment Leaks*. Rule 8-5 also imposes some leak standards on equipment associated with organic liquid storage tanks. To prevent a conflict between these rules, Rule 8-18 includes an

exemption for "appurtenances on storage tanks including pressure relief devices, which are subject to requirements contained in Regulation 8, Rule 5." The proposed amendments include several changes to clarify which appurtenances have leak standards in Rule 8-5. One change, to Section 8-5-118, is discussed in Section 3.6.3.

7.3 Federal Leak Detection Method, 40 CFR Part 60, Appendix A, Method 21

Leaks of organic materials are required to be quantified in Rule 8-5 using EPA Reference Method 21. This method involves placing an instrument probe at the leak interface of a potentially leaking component. Rule 8-5 currently defines "gas tight" as a concentration less than 100 ppm, "measured 1 cm or less from any source". This 1 cm allowance does not conform to Method 21, and is proposed to be deleted. This proposed change is discussed in Section 3.6.4 of this report.

7.4 Federal NSPS 40 CFR Part 60, Subparts Ka and Kb

Some tanks that are subject to Rule 8-5 are also subject to New Source Performance Standards (NSPS) Ka or Kb, which provide construction requirements for new tanks. NSPS Ka applies to storage tanks for petroleum liquids, excluding fuel oils, with a capacity greater than 40,000 gallons for which construction commenced after May 18, 1978. NSPS Kb applies to storage tanks for organic liquids with a capacity greater than 19,803 gallons for which construction commenced after July 23, 1984. The general design requirements of both NSPS Ka and Kb are incorporated into Rule 8-5. However, the NSPS do not address most of the conditions and operations addressed by the proposed amendments, including tank shell and flotation pontoon integrity or tank degassing and cleaning. Subpart Kb allows a 45-day period to repair self-discovered violations of design standards, seal integrity standards and seal gap standards which exceeds the proposed limit in Rule 8-5 of 48 hours. Subpart Ka does not specify a repair period for standard violations, but allows up to 60 days for an operator to report the self-discovered violation and describe actions necessary to correct the violation.

8.0 Rule Development Process

The BAAQMD convened a technical workgroup of interested stakeholders to participate in the development of the proposed amendments. Workgroup meetings were held on April 23, 2003 and May 9, 2005. Based on the input received at these meetings, and additional meetings with stakeholders in 2006, a draft rule was presented at a public workshop that was held on July 19, 2006 in Martinez, CA. Following this workshop, BAAQMD staff considered written comments received from stakeholders, including the Western States Petroleum Association and U.S. EPA, in the preparation of the proposed amendments.

9.0 Conclusion

Pursuant to Section 40727 of the California Health and Safety Code, the proposed rule must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. The proposed amendments to Regulation 8, Rule 5 are:

- Necessary to limit emissions of volatile organic compounds, a primary precursor to ground-level ozone formation, and to meet the requirements of the Bay Area 2005 Ozone Strategy;
- Authorized under Sections 40000, 40001, 40702, and 40725 through 40728 of the California Health and Safety Code;
- Written or displayed so that its meaning can be easily understood by the persons directly affected by it;
- Consistent with other BAAQMD rules, and not in conflict with state or federal law;
- Non-duplicative of other statutes, rules or regulations; and
- Implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 40000 and 40702.

The proposed new rule has met all legal noticing requirements, has been discussed with the regulated community, and it reflects the input and comments of many affected and interested parties. BAAQMD staff recommends adoption of proposed amendments to Regulation 8, Rule 5: *Storage of Organic Liquids*.

10.0 References

Bay Area Air Quality Management: *Bay Area 2005 Ozone Strategy*; January 2006

Bay Area Air Quality Management: *Bay Area 2001 Ozone Attainment Plan*; October 2001

Bay Area Air Quality Management District: *Technical Assessment Document for Further Study Measure FS 10 from Bay Area 2001 Ozone Attainment Plan*; January 2004

Ventura County Air Pollution Control District: Rule 74-26: *Crude Oil Storage Tank Degassing Operations*; November 8, 1994.

Ventura County Air Pollution Control District: Rule 74-26: *Gasoline and ROC Liquid Storage Tank Degassing Operations*; November 8, 1994.

U. S. Environmental Protection Agency: AP-42, 5th Edition: *Compilation of Air Pollutant Emission Factors*, Volume 1, Chapter 7.1: *Organic Liquid Storage Tanks*; September, 1997.

Appendix I Comments and Responses

Written comments were received from the Western States Petroleum Association (WSPA) on behalf of several Bay Area refinery operators on October 10, 2006 and from Steve Sellinger of Envent Corporation on October 3, 2006. These comments and staff responses are as follows:

A. WSPA comments

1. Revise Section 8-5-112 to cite Section 8-5-307.2

WSPA recommended that Section 8-5-307.3 be cited in Section 8-5-112 as a potentially exempt provision of the rule under the limited exemption in Section 8-5-112 in order to retain the substance of this section.

Response: This comment was incorporated into Section 8-5-112. This change merely maintains the exemptions currently allowed in Section 8-5-112 and does not reflect a substantive change to Section 112; it merely reflects the fact that Section 307 has been restructured into 3 sections and re-numbered.

2. Revise Section 8-5-112.3 to allow product movement, if roof level does not change.

WSPA recommended that Section 8-5-112.3 be revised so that, instead of prohibiting product movement during use of this limited exemption, it would instead prohibit roof movement.

Response: The limited exemption in Section 8-5-112 allows tank emission control systems to be removed from service so that preventative maintenance and inspections can be performed. The prohibition of product movement is intended to minimize excess emissions during this activity. Preventative maintenance and inspections can be scheduled well in advance, so that operational impacts resulting from tank inactivity can be minimized. And even if a tank roof can be held relatively still while product moves through the tank, product movement will increase emissions compared to a tank with no flow. This comment was not incorporated.

3. Revise Section 8-5-112.5 to exempt Title V facilities from telephone notification, as is the case in Section 8-5-111.6.

Response: This comment proposes to make Section 8-5-112.5 consistent with Section 8-5-111.6 regarding notification requirements for facilities subject to Title V reporting. Title V facilities are already subject to deviation reporting requirements that render the reporting requirements in Section 8-5-112.5 duplicative. This comment was incorporated in Section 8-5-112.5.

4. Clarify in the staff report what equipment is subject to “gas tight” requirements in Rule 8-5.

Response: At facilities subject to Regulation 8, Rule 18, tanks are potentially subject to gas tight requirements for pressure vacuum valves (Section 8-5-303.2), leaking pontoons (8-5-304.6.1) and on pressure relief devices on pressure tanks and blanketed tanks (8-5-307.3). No change to the rule is required. New Section 8-5-118 exempts Approved Emission Control Systems from a gas tight requirement in Rule 8-5 at facilities subject to Rule 18.

5. Revise Section 8-2-206 to specify that a gas tight standard for leaking pontoons on floating roof tanks (Section 8-5-304.6.1) requires a leak concentration less than 500 ppm, rather than 100 ppm.

Response: Although WSPA suggests that the seals on pontoon access hatches are similar to those for pressure relief devices and ought to be subject to the same 500 ppm gas tight standard, the existing 100 ppm standard has been applied to other access hatches on tanks, and this standard, rather than the existing 500 ppm standard for pressure relief devices, is the appropriate standard. Staff has determined that a 100 ppm standard is achievable. This comment was not incorporated.

6. The new inspection requirement for pressure vacuum (PV) valve setpoints in Section 8-5-403.1 is not appropriate.

WSPA noted that PV valve setpoints are not normally field-adjustable; they are set at the factory. Therefore, monitoring a PV valve setpoint would require removal of the valve and the performance of a bench-test.

Response: As noted, the setpoint for a PV valve cannot be inspected. This comment was incorporated by deleting the language requiring that the PV valve setpoint be inspected and substituting a record keeping requirement in Section 8-5-501.4.

7. Monitoring frequency for leaking pontoons

WSPA proposed to change the monthly monitoring frequency for leaking pontoons on floating roof tanks to correspond to the frequency required for normal tank inspections.

Response: Staff reviewed the proposed monthly inspection frequency for consistency with other inspection requirements in the rule. Because potential emissions from leaking pontoons are no greater than for many other components and because other components are required to be inspected no more frequently than quarterly, staff has changed the proposed monitoring frequency for leaking pontoons from monthly to quarterly in Section 8-5-412.

8. New Abatement Efficiency Monitoring Requirements

WSPA raised several technical issues regarding the proposal to replace the current annual source test requirement for degassing abatement devices in Section 8-5-502 with abatement efficiency monitoring during each degassing event. As alternatives to this monitoring, WSPA proposed retaining the annual source test and also allowing alternative compliance monitoring.

Response: Staff has determined that the proposed monitoring procedure cannot address certain situations sometimes encountered during degassing operations with portable abatement devices. Staff has retained the annual source test requirement in Section 8-5-502.2. Some minor changes are proposed to make this requirement more enforceable.

B. Envent Corporation Comments

Envent conducts tank degassing services under contract to Bay Area tank operators. Mr. Sellinger raised several technical issues regarding the proposal to replace the current annual source test requirement for degassing abatement devices in Section 8-5-502 with abatement

efficiency monitoring during each degassing event.

Response: Mr. Sellinger's comment was incorporated by retaining the annual source test requirement.

SOCIOECONOMIC
ANALYSIS
PROPOSED RULE

REGULATION 8, RULE 5:
STORAGE OF ORGANIC LIQUIDS

September 15, 2006

Prepared for

Bay Area Air Quality
Management District

Prepared by

Applied Development Economics
100 Pringle Avenue, Suite 560 • Walnut Creek, California 94596 • (925) 934-8712
2151 River Plaza Drive, Suite 150 • Sacramento, California 95833 • (916) 923-1562
www.adeusa.com

CONTENTS

1. EXECUTIVE SUMMARY

INTRODUCTION

This report describes the socioeconomic impacts of proposed amendments to Regulation 8, Rule 5 that, if implemented, will help the Bay Area Air Quality Management District (District) to achieve and maintain state ambient air quality standards for ozone. Following this summary, the report summarizes the proposed rule requirements and describes the methodology for the socioeconomic analysis. The report also describes the economic characteristics of sites affected by the proposed rule amendments along with the socioeconomic impacts of the proposed amendments.

SUMMARY

The proposed rule amendments affect Bay Area businesses engaged in petroleum refining, petroleum bulk storage and terminal facilities, chemical manufacturing, and other chemicals and allied products wholesaling. Five oil refineries, six terminal facilities, 125 chemical manufacturing businesses, and 38 other chemicals and allied products wholesaling businesses will experience the greatest proportion of the impact resulting from the proposed rule amendments. The refineries are estimated to generate sales of $4.9 billion per year and to realize net income of about 7 percent of sales, or $344.7 million per year. Total annual sales at the six petroleum bulk storage and terminal facilities is estimated at $547 million, of which, 2.7 percent ($14.8 million) is estimated to be profit. Annual revenue at the impacted chemical manufacturing firms is estimated at nearly $2 billion with 3 percent ($59.6 million) profit. Finally, the other chemicals and allied products wholesalers are expected to generate $204.3 million in revenue with $5.5 million (2.7 percent) profit.

The compliance with the proposed amendments is expected to cost a total of $12,187 per year. This represents less than one percent of profits for each of the impacted industries. Plus, this assumes that each individual industry bears the full

annual compliance cost. It is more likely that the total annual cost will be spread among all 174 impacted sites, not just five or six of them. Therefore, it is believed that the above percent of profits estimates are conservatively high.

The analysis concludes that the costs associated with compliance will not result in significant economic dislocation or job losses. For each of the impacted industries, the total annual cost of compliance is far below the 10 percent of profits threshold for significant impact. Additionally, small businesses will not be disproportionately impacted by the proposed amendments. In each of the impacted industries, the share of annual compliance cost borne by small business is far below small businesses' total share of those industries.

2. DESCRIPTION OF THE PROPOSED RULE

CURRENT STATUS OF THE RULE

Regulation 8, Rule 5 was adopted in 1978. It has undergone a number of revisions, most recently on November 27, 2002. The rule limits the organic emissions from liquid storage tanks. Most of the rule's current provisions were in place by the time of the January 1, 1993 amendments, however. Since, 1993, this rule has been the most stringent storage tank rule in California in the areas of:

- Basic emission control strategies,
- Gap standards for floating roof fittings,
- Closure requirements for floating roof fittings, and
- Tank degassing

This current revision proposes to set standards for limiting emissions during tank cleaning operations and create an innovative, voluntary self-inspection and repair program, while making other improvements to the rule.

The Bay Area 2005 Ozone Strategy includes a Control Measure, SS 9, for organic liquid storage tanks. The proposed amendments to Regulation 8, Rule 5 (discussed in the next section), incorporate the emission reduction measures in SS 9. Control Measure SS 9 proposes to improve standards for degassing and cleaning tanks and for storing removed sludges, and also to implement a self-inspection and maintenance provision to provide an incentive for more frequent tank inspections.

PROPOSED RULE AMENDMENTS

Pursuant to Control Measure SS 9, the District is proposing the following amendments to Regulation 8 Rule 5:

1) **New Exemption for Aboveground Gasoline Storage Tanks**: With the 1993 amendments, underground storage tanks subject to Regulation 8, Rule 7 were exempted from Rule 5. Because

both Rule 8-5 and Rule 8-7 specify pressure setpoints at which pressure vacuum valves will automatically operate, and because these setpoints are different for underground tanks in the two rules, this exemption was necessary to prevent a conflict. This exemption is provided for underground tanks, but not for aboveground tanks, because the setpoints for aboveground tanks are the same in Rules 8-5 and 8-7. However, Rule 8-7 allows the setpoints specified in that rule to be superseded by a CARB order. If the CARB setpoints are not the same as the setpoints in Rule 8-5, then a conflict would occur. For this reason, and because Rule 8-7 already regulates both aboveground and underground gasoline tanks at gasoline dispensing facilities, it is appropriate to exempt both types of tanks from Rule 8-5. The proposed amendment of Section 8-5-116 extends this exemption to include aboveground gasoline tanks.

2) **Voluntary Self-Inspection and Repair Program**: To encourage tank operators to undertake more frequent inspections of floating roof tanks, and to target their inspections on those tanks that are most likely to benefit from additional inspections based on their knowledge of tank conditions, a voluntary self-inspection and repair program is proposed with the following elements:

    i. 25% of the tanks at a facility, chosen by the operator, must have double the number of inspections normally required by the rule;

    ii. Minor non-complying conditions discovered by a tank operator at any facility tank are not subject to enforcement action if repairs are made within 48 hours;

    iii. Minor non-complying conditions discovered by District inspectors on any

facility tank continue to be subject to enforcement action.

3) **New Structural Integrity Requirements for Tank Shells, Flotation Pontoons, and Pressure Relief Devices**: Rule 5 currently requires that floating tank roofs and certain tank fittings be in "good operating condition," but does not provide a definition of such condition. The proposed amendments provide a definition, as well as extending the standard to all tank roofs, to tank shells, and to pressure relief devices. Also, the proposed amendments make the prohibition against uncontrolled, leaking pontoons explicit and specify required emission controls for leaking pontoons.[1]

4) **New Tank Cleaning and Sludge Handling Standards**: The proposed rule amendments provide limitations on the VOC content of cleaning agents, the use of steam cleaning, and also provide closure requirements for sludge containers. Rule 5 currently requires emissions controls when tanks are degassed prior to cleaning; however, since this rule does not currently require controls during the actual cleaning, the use of either cleaning agents with significant levels of organic compounds or steam as a cleaning agent may negate the benefits of controlling degassing emissions.

5) **Monitoring of Emission Controls During Tank Degassing**: To improve the Rule 5 standards associated with monitoring the emission controls required during tank degassing, this rule amendment proposes the following:

[1] Though Rule 5 does not currently address leaking pontoons, BAAQMD has considered such leaks to be a violation of the "good operating condition" requirement for floating roofs when they have occurred in the past.

i. Addition of a 3-day prior notification requirement for degassing operations;

ii. A monitoring requirement for the 10,000 ppm residual concentration using a hand-held analyzer; and,

iii. Replacement of the annual source test requirement with a requirement to monitor actual emission control effectiveness periodically during degassing operations.

6) **Other Amendments**: Other amendments are proposed, which do not impose new emission control standards. Descriptions of these amendments are provided in Appendix A to this report.

EMISSIONS REDUCTIONS

Due to the high level of control already required by Rule 5, cost-effective emission reductions at storage tanks have become increasingly difficult to achieve. The amendments made in 1993 resulted in an estimated emission reduction between 2 ton/day and 3 ton/day by imposing tank degassing standards and more stringent seal gap and fitting closure standards for floating roof tanks. Primarily through the imposition of closure standards for slotted guide poles on floating roof tanks, amendments in 1999 achieved an estimated 0.87 ton/day reduction in volatile organic compound emissions. Furthermore, the 2002 amendments reduced volatile organic compound emissions by an estimated 0.13 ton/day, primarily by doubling the required inspection frequency for external floating roof tanks.

The remainder of this section details the emissions reductions expected to result from the proposed amendments.

VOLUNTARY SELF-INSPECTION AND REPAIR PROGRAM

This proposed amendment is expected to reduce emissions in two ways: 1) by identifying and repairing or replacing

damaged or worn tank components that would eventually lead to violations of rule standards and excess air emissions and 2) by reducing the maximum amount of time that a non-complying condition produces excess emissions by half.

The BAAQMD emission inventory for external floating roof tanks estimates 1.36 tons per day of organic emissions. The expected reduction in the incidence of non-complying conditions and of the duration of non-complying conditions is expected to result in a minor reduction in emissions at external floating roof tanks. An emission reduction of about 2% would result be equivalent to a reduction of 0.03 ton/day of organics.

New Structural Integrity Requirements

Because tank shell leaks are very uncommon, that portion of the proposed amendment is not expected to result in significant emission reductions. Leaks on floating roof pontoons are less uncommon, though, and such leaks have previously been prohibited as a violation of the "good operating condition" requirement for floating tank roofs. The proposed amendments will make explicit the prohibition against uncontrolled, leaking pontoons, and specify required emission controls for leaking pontoons. Because uncontrolled, leaking pontoons have been prohibited in the past by the BAAQMD, no emission reduction estimate is provided for this proposed amendment.

New Tank Cleaning and Sludge Handling Standards

Based upon conversations with Bay Area refineries, it appears that tank cleaning operations already generally comply with the requirements proposed in this amendment. Also, state and federal hazardous waste regulations already impose handling requirements on most sludge removed from tanks. Sludge that is recycled on the site where it is generated may be exempt from these hazardous waste regulations, and only this small fraction of produced sludge will be affected by the requirements proposed in this amendment. Because only a limited amount of sludge will be subject to new requirements

due to the proposed amendments, no emission reduction estimate is provided for these amendments.

Monitoring of Emission Controls During Tank Degassing

Because the proposed amendments related to tank degassing do not impose new emission control standards, no emission reduction estimate is provided for these amendments.

Other Amendments

Because the other proposed amendments do not impose new emission control standards, no emission reduction estimate is provided for these amendments.

3. IMPACT OF PROPOSED RULE AMENDMENTS

This section of the socioeconomic analysis describes demographic and economic trends in the San Francisco Bay Area (Bay Area) region. Following an overview of the methodology for the socioeconomic analysis, the first part of this section compares the Bay Area against California and provides a context for understanding demographic and economic changes that have occurred within the Bay Area between 1995 and 2005. After an overview of Bay Area industries, we focus on the following industries:

- NAICS 32411, Petroleum Refineries
- NAICS 325, Chemical Manufacturing[2]
- NAICS 42471, Petroleum Bulk Stations and Terminals
- NAICS 42469, Other Chemical and Allied Products Merchant Wholesalers

Then the impacts on businesses within these industries of the proposed changes to Regulation 8, Rule 5 concerning storage of organic liquids are analyzed. For the purposes of this report, the Bay Area region is defined as Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

3.1 METHODOLOGY

The socioeconomic analysis of the proposed rule amendments concerning storage of organic liquids involves the use of information provided directly by BAAQMD, as well as secondary data used to describe the industries affected by the proposed rule amendments.

Based on information provided by BAAQMD staff, ADE determined that the impacts would affect oil refineries, certain chemical manufacturers, wholesalers of certain chemicals and allied products, and petroleum bulk stations and terminals. In relation to the refineries, we further focused

[2] Excluding NAICS 32518, Other Inorganic Chemical Manufacturing

attention on Chevron, Shell, Conoco Phillips, Valero, and Tesoro refineries. The numbers of impacted chemical manufacturers and other chemical and allied products wholesalers was determined based upon BAAQMD estimates of the number of tanks and number of facilities with tanks in its jurisdiction.

With this information we began to prepare an economic description of the industry groups of which the impacted sites are a part, as well as to analyze data on the number of jobs, sales levels, the typical profit ratios and other economic indicators for the Bay Area businesses. ADE also reviewed and summarized documents available to the public such as annual reports for publicly traded companies.

With the annual reports and data from the US Economic Census, ADE was able to estimate revenues and profit ratios for many of the sites impacted by the proposed organic liquid storage rule amendments. In calculating aggregate revenues generated by Bay Area refineries, terminals, and chemical manufacturers and wholesalers, ADE first estimated annual revenue based upon available data. Using annual reports and publicly available data, ADE calculated ratios of profit per dollar of sales for the businesses on which the analysis focused. To estimate employment, ADE used employment data from 2002 Economic Census data and Dun & Bradstreet.

The result of the socioeconomic analysis shows what proportion of profit the compliance costs represent. Based on a given threshold of significance, ADE discusses in the report whether the affected sites are likely to reduce jobs as a means of recouping the cost of compliance or as a result of reducing business operations. To the extent that such job losses appear likely, the indirect multiplier effects of the job losses area estimated using a regional IMPLAN input-output model.

3.2 REGIONAL DEMOGRAPHIC TRENDS

The Bay Area experienced moderate population growth from 1995 to 2005. Between 1995 and 2000, the nine-county region increased by nearly 6.7 percent, from 6.3 million in

1995 to almost 6.8 million in 2000. From 1995 to 2005, the population increase was from 6.3 million to close to 7.1 million for an increase of approximately 10.4 percent. At the same time, California had population growth of almost 14 percent.

Within the Bay Area, the greatest percentage increase occurred in Contra Costa County. From 1995 to 2005 Contra Costa increased its population by nearly 15 percent. All other Bay Area counties had population increases slower than the State. The smallest percentage increase occurred in Marin County where population grew less than 5.5 percent from 1995 to 2005. Table 1 shows the population changes that have occurred in the Bay Area and California from 1995 to 2005.

Table 1
Population Growth: San Francisco Bay Area

	Population			Percent Change		
	1995	2000	2005	95-00	00-05	95-00
California	31,617,000	33,871,648	36,728,196	6.66%	7.78%	13.92%
Bay Area	6,329,800	6,783,760	7,067,403	6.69%	4.01%	10.44%
Alameda County	1,332,900	1,443,741	1,500,228	7.68%	3.77%	11.15%
Contra Costa County	869,200	948,816	1,019,101	8.39%	6.90%	14.71%
Marin County	238,100	247,289	251,820	3.72%	1.80%	5.45%
Napa County	116,800	124,279	132,990	6.02%	6.55%	12.17%
San Francisco County	741,600	776,733	792,952	4.52%	2.05%	6.48%
San Mateo County	673,300	707,161	719,655	4.79%	1.74%	6.44%
Santa Clara County	1,568,200	1,682,585	1,752,653	6.80%	4.00%	10.52%
Solano County	368,000	394,542	420,307	6.73%	6.13%	12.44%
Sonoma County	421,700	458,614	477,697	8.05%	3.99%	11.72%

Source: Applied Development Economics, based on household population estimates from The California Department of Finance

3.3 REGIONAL ECONOMIC TRENDS

The Bay Area is one of the world's greatest regional economies. It benefits from pre-eminent knowledge-based industries, with competitive strength flowing from an unmatched culture of entrepreneurship, world-leading research institutions, and some of the nation's best educated and most highly skilled workforce. With these remarkable advantages, it has led through innovation in a wide range of research and industrial fields.

Many of the Bay Area's most prominent industries are manufacturing related. From Intel to PowerBar, Bay Area

manufacturers are often high profile companies with world-renowned recognition. From small to large, Bay Area industry has been dynamic, creating wealth and jobs in both the export sector and local serving industries.

The economic base is typically comprised of export industries within the manufacturing, minerals-resource extraction, and agricultural sectors. There are also the "local support industries" such as retail or service sectors, the progress of which is a function of the economic base and demographic changes, and more so the latter than the former. As population increases in a given area, demand for services – such as realtors, teachers, healthcare – increases, as does demand for basic retail items like groceries, gas for commuting, or clothing at the local apparel shops.

The industries affected by the proposed rule amendments are a prominent part of the region's economic base. Mainly engaged in export related business, the oil refineries are classified as manufacturers with the firms engaged in chemical manufacturing. In the Bay Area, manufacturing jobs have decreased over the last decade. In 1995, manufacturing accounted for 14.5 percent of all Bay Area employment. By 2005, manufacturing declined 3.5 percent to account for 11 percent of all Bay Area employment.

As of 2005, the professional and business services sector was the largest employer in the region, at 529,100 jobs or 17 percent of all private and public sector jobs. This is a change from 1995 when professional and business services accounted for 16 percent of all Bay Area employment. During the same period, professional and business services increased 14 percent. The next largest industry in the Bay Area is public service, or government, with 468,100 jobs. In 2005, government accounted for 15 percent of all Bay Area employment. From 1995 to 2005, government had one of the lowest growth rates of all industries at less than 6 percent. Two other industries came close to manufacturing in total employment. Retail trade and education & health care both made up 11 percent of total employment and had only a few thousand jobs less than manufacturing. Unlike manufacturing, both retail trade and education & health care had significant job gains from 1995 to 2005. All other

industries made up less than manufacturing in total employment in 2005. Table 2 shows Bay Area industry sectors and their trends from 1995 to 2005.

Table 2
Employment Profile of the San Francisco Bay Area, 1995-2005

Industry	1995	2000	2005	% of Total Employment in 2004
Farm	21,100	25,800	20,000	1%
Natural Resources & Mining	2,920	4,600	4,560	0%
Construction	105,200	165,700	164,100	5%
Manufacturing	428,800	484,500	351,300	11%
Wholesale Trade	121,700	138,800	122,900	4%
Retail Trade	304,900	350,600	336,600	11%
Transportation, Warehousing and Utilities	116,600	125,600	100,400	3%
Information	92,100	151,600	112,300	4%
Financial Activities	189,300	198,500	213,000	7%
Professional and Business Services	464,400	670,300	529,100	17%
Educational and Health Services	299,300	334,300	361,600	11%
Leisure and Hospitality	260,400	297,700	311,000	10%
Other Services	100,700	110,800	109,900	3%
Government	442,100	465,200	468,100	15%
Total	2,949,520	3,524,000	3,204,860	100%

Source: Applied Development Economics from data supplied by the Labor Market Information Division of the California Employment Development Department

3.4 DESCRIPTION OF AFFECTED INDUSTRIES

The proposed storage of organic liquids rule amendments affect industries in the following NAICS codes:

- NAICS 32411, Petroleum Refineries
- NAICS 325, Chemical Manufacturing[3]
- NAICS 42471, Petroleum Bulk Stations and Terminals
- NAICS 42469, Other Chemical and Allied Products Merchant Wholesalers

What follows is a description of these industries, along with their economic trends in the Bay Area, and it provides a comparison between 2001 and 2005. Data in Table 3 are for all sources, not just the major sites that have been focused on in the Bay Area. As shown in Table 3, employment in petroleum refineries decreased by 7 percent in the five years from 2001 to 2005. Though employment in this industry decreased during this period, it fared much better than the overall manufacturing sector. Between 1995 and 2005, Bay Area manufacturing lost almost 110,000 jobs, a 31 percent decline. In California, petroleum refinery jobs declined 8 percent during the same period and manufacturing jobs declined 19 percent.

[3] Excluding NAICS 32518, Other Inorganic Chemical Manufacturing

Table 3
Employment Trends: Industries Affected by Proposed Amendments, 2001 - 2004

	2001	2005	Change from 2001 to 2005	% Change from 2002 to 2005
San Francisco Bay Area				
MANUFACTURING	460,992	351,005	(109,987)	-31%
Petroleum Refineries	6,424	6,031	(393)	-7%
Chemical Manufacturing	19,262	20,301	1,039	5%
WHOLESALE TRADE	135,225	124,558	(10,667)	-9%
Other Chemical and Allied Products	2,396	2,229	(167)	-7%
Petroleum Bulk Stations and Terminals	175	137	(38)	-28%
California				
MANUFACTURING	1,780,544	1,498,373	(282,171)	-19%
Petroleum Refineries	13,447	12,498	(949)	-8%
Chemical Manufacturing	78,565	79,312	747	1%
WHOLESALE TRADE	652,986	671,015	18,029	3%
Other Chemical and Allied Products	9,010	8,547	(463)	-5%
Petroleum Bulk Stations and Terminals	1,589	1,835	246	13%

Source: California Employment Development Department, Quarterly Census of Employment and Wages; calculations by Applied Development Economics

According to the data in Table 3, employment at Bay Area petroleum bulk stations and terminal facilities (also in the Manufacturing sector) declined 28 percent between 2001 and 2005. This particular data set reports Bay Area petroleum bulk stations and terminal facilities employed only 137 workers in 2005. A separate data set (Dun and Bradstreet's "Zapdata.com"), used later in this report to estimate employment at the specific sites on which this analysis focuses, indicates that employment at these sites alone totals 263. During the same period (2001 – 2005), statewide employment in the Petroleum Bulk Stations and Terminal Facilities industry grew by 13 percent.

The data from the Quarterly Census of Employment and Wages indicates that the Chemical Manufacturing industry in the Bay Area outperformed the state in terms of employment growth during the period 2001 – 2005. In 2001, 19,262 people were employed in this industry in the Bay Area. By

2005, it had expanded by 5 percent to over 20,000. Statewide however, this industry grew only 1 percent, adding 747 jobs between 2001 and 2005.

Bay Area firms engaged in wholesaling other "chemicals and allied products" performed comparably to their statewide counterparts in terms of employment. Statewide, firms in this industry decreased employment by 5 percent. In the Bay Area, employment declined 7 percent, from 2,396 employees in 2001 to 2,229 in 2005.

Table 4 identifies the economic characteristics of the specific sites affected by the proposed storage of organic liquids rule amendments.[4] This table shows that the refineries, chemical manufacturers, terminal facilities, and chemical and allied products wholesalers are estimated to employ 1,712 workers, 6,996 workers, 753 workers, and 758 workers respectively. These sites have an estimated aggregate payroll of $1.4 billion, and estimated revenues of $10.6 billion. In calculating aggregate revenues generated by impacted businesses, the consultant estimated an average revenue figure per business in each industry based on data from the 2002 Economic Census. Then, the consultant summed the businesses' estimated revenue to arrive at the aggregate amount of $10.6 billion.

[4] BAAQMD estimates that there are 301 facilities with organic liquid storage tanks; and, that approximately half of the tanks are exempt from Rule 5. Additionally, BAAQMD estimates that 47 of the facilities account for 73 percent of the tanks. Using these estimates, the consultant estimated the weighted number of tanks per facility and, assuming that the 47 facilities that account for 73 percent of the tanks do not have any exempt tanks, estimated the number of chemical manufacturers and other chemical and allied products wholesalers that would be impacted by the proposed rule amendments.

Table 4
Economic Characteristics of Impacted Businesses in the San Francisco Bay Area

	No. of Businesses	Estimated Sales	Estimated Employment	Estimated Payroll
Petroleum Refineries	5	$4,924,891,104	1,712	$203,809,402
Chemical Manufacturing	112	$1,779,127,768	6,996	$1,035,661,305
Petroleum Bulk Stations and Terminal Facilities	23	$3,682,600,000	753	$49,612,026
Other Chemicals and Allied Products	34	$182,812,020	758	$71,329,728
Total	**174**	**$10,569,430,892**	**10,219**	**$1,360,412,461**

Source: U.S. Economic Census 2002; California Employment Development Department Quarterly Census of Employment and Wages; Dunn and Bradsteet; Calculations by Applied Development Economics

As Table 5 shows, the impacted refinery sites represent 28 percent of all employment within their respective industry in the Bay Area. Overall, there are an estimated 6,031 petroleum refining employees in the Bay Area. Of the 6,031 workers, 1,712 work in the impacted refineries, or 28 percent. In all of California, there were 12,498 workers in NAICS 32411, meaning that the affected Bay Area refineries equal 14 percent of the state oil refinery workforce.

Table 5
Employment at Impacted Sites Relative to Bay Area and California

	No. of Businesses	Estimated Employment	Impacted Sites as a % of Bay Area Total	Impacted Sites as a % of California Total
Petroleum Refineries	5	1,712	28%	14%
Chemical Manufacturing	112	6,996	34%	9%
Petroleum Bulk Stations and Terminal Facilities	23	753	100%	41%
Other Chemicals and Allied Products	34	758	34%	9%
Total	**174**	**10,219**	**35%**	**10%**

Source: U.S. Economic Census 2002; California Employment Development Department Quarterly Census of Employment and Wages; Dunn and Bradstreet Calculations by Applied Development Economics

Within the Bay Area, the impacted chemical manufacturing firms account for 34 percent of the total employment in their industry. This is the largest proportion of all of the affected groups within their respective industries. Statewide, however, the impacted chemical manufacturers account for only 9 percent of the total employment in their industry. The same is true for the other chemical and allied products wholesalers at both the Bay Area and statewide levels.

Based upon the Dun and Bradstreet data used in Table 4, Bay Area petroleum bulk stations and terminal facilities employ approximately 753 people. It is expected that all 23 of these establishments will be impacted by the proposed rule amendments. Bay Area employment accounts for 41 percent of this sector's statewide employment.

3.5 COMPLIANCE COSTS

For the most part, the proposed amendments to Regulation 8, Rule 5 are not expected to result in increased compliance costs. Most of the amendments are either editorial or address activities that are already conducted or would be expected to be performed by tank operators under current conditions. The voluntary self-inspection and repair program, however, is expected to result in a slight increase in compliance costs for those that choose to participate.

The District estimates that there are approximately 500 floating roof tanks in its jurisdiction. With two inspections per year on 25% of the tanks, there would be 250 additional inspections per year assuming all 500 tanks are included in the program. A tank inspector would need about an hour and a half to inspect a tank. Assuming an annual cost of $65,000 per inspector and 2000 working hours per year, each inspection would cost approximately $48.75, with a $12,187 total annual cost for the additional inspections. Table 6 below details the methodology for this cost estimate.

Table 6
Estimated Cost of Compliance

No. of tanks in District	Cost per Inspector ($ per year)	Working hours per year	Inspection Time (Hours)	No. of Inspections/Year (500 tanks*25%*2)	Cost per Inspection [($65,000/2000)*1.5]	Est. Annual Compliance Cost ($48.75*250)
500	$ 65,000	2000	1.5	250	$ 48.75	$ 12,187.50

Source: BAAQMD Staff Report titled, "District Regulation 8, Rule 5: Storage of Organic Liquids" (September 8, 2006)

[This section intentionally left blank.]

3.6 BUSINESS RESPONSE TO COMPLIANCE COSTS

Sites impacted by the proposed storage of organic liquids rule amendments may respond in a variety of ways when faced with new regulatory costs. These responses may range from simply absorbing the costs and accepting a lower rate of return to shutting down the business operation all together. Businesses may also seek to pass the costs on to their customers in the form of higher prices, although, at least in the oil industry, prices are set in global markets and individual producers or refineries are not in a position to affect prices. More likely, they may renew efforts to increase productivity and reduce costs elsewhere in their operation in order to recoup the regulatory costs and maintain profit levels.

3.7 IMPACT ANALYSIS

The businesses' responses to increased compliance costs hinge on the effect of the costs on the profits generated at the affected sites. An impact on estimated profits greater than 10 percent implies that the source would experience serious economic effects because of the compliance cost. When compliance costs are greater than 10 percent of estimated profits, companies typically respond to the impact by laying off some workers, closing parts of manufacturing facilities or, in the most drastic case, possibly closing the manufacturing facility.

Using the compliance cost estimates developed for the proposed storage of organic liquids rule amendments ADE calculated the socioeconomic impacts of the proposed actions. In calculating impacts on profits, ADE used return on sales ratios identified by media reports and in annual reports of companies directly affected by the proposal. Based on this information, we estimate that the impacted businesses generated a combined profit of $502.5 million on $10.6 billion in revenues.

Table 7 details the projected impacts of compliance with the proposed voluntary self-inspection and repair program on

affected site profits. The estimated annual compliance cost of $12,187.50 represents less than one percent of profits for the impacted businesses in each of the impacted industries. The greatest impact on profits is expected to be experienced by the impacted other chemical and allied products wholesalers. However, even this impact is only expected to be 0.247 percent of profits.

Table 7
Impact of Estimated Compliance Cost on Estimated Profits at Bay Area Businesses

	No. of Businesses	Estimated Profits	Annual Compliance Cost	Cost as % or Profits
Petroleum Refineries	5	$344,742,377	12,188	0.004%
Chemical Manufacturing	112	$53,373,833	12,188	0.023%
Petroleum Bulk Stations and Terminal Facilities	23	$99,430,200	12,188	0.012%
Other Chemicals and Allied Products	34	$4,935,925	12,188	0.247%
Total	**174**	**$502,482,335**	**12,188**	**0.002%**

Source: Calculations by Applied Development Economics, based on a 7 percent profit margin for Petroleum Refineries, 2.7 percent of Petroleum Bulk Stations and Terminal Facilities, 3 percent for Chemical Manufacturing, and 2.7 percent for Other Chemicals and Allied Products

It is believed that the profit impacts shown in Table 7 are conservative (i.e. higher than will actually be realized). The estimates of profit impacts assume that each industry bears the full cost of compliance. It is more likely that the total $12,187 annual compliance cost will be spread between sites in all four impacted industries. Therefore, it is most likely that no one set of affected sites will carry the full cost of compliance with this proposed amendment.

3.8 IMPACT ON SMALL BUSINESS

In addition to analyzing the employment impacts of the proposed storage of organic liquids rule amendments, state legislation requires that the socioeconomic analysis assess whether small businesses are disproportionately affected by air quality rules. First, this section begins with a definition of small business per California Statute. It then analyzes the proportion of small to large petroleum refinery businesses. The per employee cost of compliance with the proposed voluntary self-inspection and repair program for these facilities is calculated and used to estimate the proportion of

the total annual compliance cost that will be incurred by small businesses in this sector. The analysis shows that small businesses are not disproportionately affected by this proposed amendment. This section then proceeds to do the same for the Petroleum Bulk Storage and Terminal Facilities, Chemical Manufacturing, and Other Chemicals and Allied Products (Wholesale Trade) industries.

Definition of Small Business Per California Statute

For purposes of qualifying small businesses for bid preferences on state contracts and other benefits, the State of California defines small businesses in the following manner:

- Must be independently owned and operated;
- Cannot be dominant in its field of operation;
- Must have its principal office located in California
- Must have its owners (or officers in the case of a corporation) domiciled in California; and,
- Together with its affiliates, be either:
  - A business with 100 or fewer employees, and an average gross receipts of $10 million or less over the previous tax years, or
  - A manufacturer with 100 or fewer employees

Petroleum Refineries

According to Dun and Bradstreet, there are 33 Bay Area businesses operating in the Petroleum Refineries industry[5]. Combined these firms employ 5,170 people. Twenty-three (70 percent) of the 43 firms employ less than 100 workers

[5] Dunn and Bradstreet data is collected through business surveys. The data for each industry includes all businesses that both operate in that industry and that responded to the survey. A business reported as operating in a particular industry is not necessarily primarily engaged in that industry; it's primary business may be in a separate, but related industry.

and have gross receipts (sales) of less than $10 million annually. These 23 firms qualify as small businesses and employ a combined 106 workers. Table 8 illustrates the expected distribution of the annual cost to comply with the proposed voluntary self-inspection and repair program between small and medium-large businesses in this sector.

Table 8
Share of Annual Cost to Comply with Voluntary Self-Inspection and Repair Program, by Business Size Category

Business Size Category	No. of Businesses	% of Total Businesses	No. of Employees	Per Employee Compliance Cost	Annual Compliance Cost	% of Total Compliance Cost
Small Businesses	23	70%	106	$2.36	$249.88	2%
Mid - Large Businesses	10	30%	5,064	$2.36	$11,937.62	98%
Total	**33**	**100%**	**5,170**	**$2.36**	**$12,187.50**	**100%**

Source: Dun and Bradstreet's "Zapdata.com;" calculations by Applied Development Economics

Since all 33 petroleum operations in the Bay Area employ a combined 5,170 workers, compliance with the proposed expansion of rule requirements to other materials, with a total annual cost of $12,187.50, is expected to cost Bay Area firms in this sector $2.36 per employee on an annual basis. On a per employee basis, compliance will cost small businesses in this sector, which employ 106 people, a combined $249.88 annually. Since small businesses account for 70 percent of the Bay Area firms in this sector and are only expected to incur 2 percent of the total estimated annual compliance cost, it is determined that small businesses will not be disproportionately affected by this proposed amendment.

Petroleum Bulk Storage and Terminal Facilities

According to Dun and Bradstreet, there are 23 Bay Area businesses operating in the Petroleum Bulk Stations and Terminal Facilities industry. Combined these firms employ 753 people. Eighteen (78 percent) of the 23 firms employ less than 100 workers and have gross receipts (sales) of less than $10 million annually. These eighteen firms qualify as small businesses and employ a combined 118 workers. Table 9 illustrates the expected distribution of the annual cost to comply with the proposed voluntary self-inspection and

repair program between small and medium-large businesses in this sector.

Table 9
Share of Annual Cost to Comply with Voluntary Self-Inspection and Repair Program, by Business Size Category

Business Size Category	No. of Businesses	% of Total Businesses	No. of Employees	Per Employee Compliance Cost	Annual Compliance Cost	% of Total Compliance Cost
Small Businesses	18	78%	118	$16.17	$1,908.45	16%
Mid - Large Businesses	5	22%	635	$16.17	$10,270.05	84%
Total	**23**	**100%**	**753**	**$16.17**	**$12,187.50**	**100%**

Source: Dun and Bradstreet's "Zapdata.com;" calculations by Applied Development Economics

Since all 23 terminal facilities in the Bay Area employ a combined 753 workers, compliance with the proposed expansion of rule requirements to other materials, with a total annual cost of $12,187.50, is expected to cost Bay Area firms in this sector $16.17 per employee on an annual basis. On a per employee basis, compliance will cost small businesses in this sector, which employ 118 people, a combined $1,908.45 annually. Since small businesses account for 78 percent of the Bay Area firms in this sector and are only expected to incur 16 percent of the total estimated annual compliance cost, it is determined that small businesses will not be disproportionately affected by this proposed amendment.

CHEMICAL MANUFACTURERS

Utilizing the same Dun and Bradstreet, there are 817 Bay Area businesses operating in the Chemical Manufacturing industry. Combined these firms employ 29,588 people. Over 600 (78 percent) of the firms employ less than 100 workers and have gross receipts (sales) of less than $10 million annually. These 629 firms qualify as small businesses and employ a combined 3,401 workers. Table 10 illustrates the expected distribution of the annual cost to comply with the proposed voluntary self-inspection and repair program between small and medium-large businesses in this sector.

Table 10
Share of Annual Cost to Comply with Voluntary Self-Inspection and Repair Program, by Business Size Category

Business Size Category	No. of Businesses	% of Total Businesses	No. of Employees	Per Employee Compliance Cost	Annual Compliance Cost	% of Total Compliance Cost
Small Businesses	629	77%	3,401	$0.41	$1,400.90	11%
Mid - Large Businesses	188	23%	26,187	$0.41	$10,786.60	89%
Total	**817**	**100%**	**29,588**	**$0.41**	**$12,187.50**	**100%**

Source: Dun and Bradstreet's "Zapdata.com;" calculations by Applied Development Economics

Since all 817 chemical manufacturers in the Bay Area employ a combined 29,588 workers, compliance with the proposed expansion of rule requirements to other materials, with a total annual cost of $12,187.50, is expected to cost Bay Area firms in this sector $0.41 per employee on an annual basis. On a per employee basis, compliance will cost small businesses in this sector, which employ 3,401 people, a combined $1,400.90 annually. Since small businesses account for 77 percent of the Bay Area firms in this sector and are only expected to incur 11 percent of the total estimated annual compliance cost, it is determined that small businesses will not be disproportionately affected by this proposed amendment.

Other Chemicals and Allied Products Wholesalers

Utilizing the same Dun and Bradstreet, there are 301 Bay Area businesses operating in the Other Chemicals and Allied Products wholesale industry. Combined these firms employ 3,155 people. Almost all (96 percent) of the firms employ less than 100 workers and have gross receipts (sales) of less than $10 million annually. These 289 firms qualify as small businesses and employ a combined 1,700 workers. Table 10 illustrates the expected distribution of the annual cost to comply with the proposed voluntary self-inspection and repair program between small and medium-large businesses in this sector.

Table 11
Share of Annual Cost to Comply with Voluntary Self-Inspection and Repair Program, by Business Size Category

Business Size Category	No. of Businesses	% of Total Businesses	No. of Employees	Per Employee Compliance Cost	Annual Compliance Cost	% of Total Compliance Cost
Small Businesses	289	96%	1,700	$3.86	$6,566.96	54%
Mid - Large Businesses	12	4%	1,455	$3.86	$5,620.54	46%
Total	**301**	**100%**	**3,155**	**$3.86**	**$12,187.50**	**100%**

Source: Dun and Bradstreet's "Zapdata.com;" calculations by Applied Development Economics

Since all 301 other chemicals and allied products wholesalers in the Bay Area employ a combined 3,155 workers, compliance with the proposed expansion of rule requirements to other materials, with a total annual cost of $12,187.50, is expected to cost Bay Area firms in this sector $3.86 per employee on an annual basis. On a per employee basis, compliance will cost small businesses in this sector, which employ 1,700 people, a combined $6,566.96 annually. Since small businesses account for 96 percent of the Bay Area firms in this sector and are only expected to incur slightly more than half (54 percent) of the total estimated annual compliance cost, it is determined that small businesses will not be disproportionately affected by this proposed amendment.

APPENDIX A: OTHER PROPOSED AMENDMENTS

3.6.1 NEW SECTIONS 8-5-111.6, 112.5

New notification requirements are proposed to be added to limited exemptions in Sections 8-5-111 and 112. These requirements apply only in the event the tank operator discovers a condition that violates a standard of Rule 5. Such a notification is important because both of these limited exemptions require a tank to be in compliance with the rule when they are invoked.

3.6.2 NEW SECTION 8-5-112.6

At the request of U.S. EPA, a report requirement is proposed to be added to the limited exemption in Section 112.

3.6.3 NEW SECTION 8-5-118

This section clarifies the applicability of Rule 5 relative to Regulation 8, Rule 18: *Equipment Leaks*. Both rules include standards that limit equipment leaks.

3.6.4 AMENDED SECTION 8-5-206

The current definition of "gas tight" allows concentrations of organic gases at leaking equipment to be measured as much as 1 centimeter from the leak. Because federal guidelines require leak concentrations to be measured as closely as possible to the leak, the 1 centimeter allowance is deleted in the proposed amendment.

3.6.5 AMENDED TABLE IN SECTION 301

The deletions in the second and third rows of this table are editorial. Section 301 specifies that a tank in a particular size that stores a liquid in a particular vapor pressure range may use the emission control measures specified for that tank and liquid, or may use measures specified for larger tanks or for tanks storing liquids in a higher vapor pressure range. Because of this, the deleted text in the second and thirds rows is duplicative. This is an editorial change.

The deleted text in the first row and the added text in the third row is a correction to the rule amendment adopted in November 2002. In that amendment, rule standards were put into the tabular format that is currently used. However, when this format change occurred, a compliance option for the two smallest tank size categories was inadvertently deleted. Tanks in these two size categories that store liquid with a true vapor pressure greater than 1.5 psia and less than 11 psia were allowed, prior to the 2002 amendment, to use a submerged fill pipe as a minimum emission control technology, if they were in the service specified. This change was inadvertent and was not discussed in the staff report for the 2002 amendment. No tank operators submitted permit applications to retrofit affected tanks with more effective emission control technology, and BAAQMD staff is unaware of any tanks that were subsequently retrofitted. Therefore, reversing this error will not allow any tank to revert to a lower level of emission control and this change is editorial.

3.6.6 AMENDED SECTION 8-5-303.2, 304.4, 305.5

The proposed amendments deleted the requirement that pressure vacuum valves and floating roofs be "properly installed and properly maintained". Rule 5 includes adequate monitoring to ensure compliance with all rule standards. The requirement for proper installation and maintenance is unnecessary.

3.6.7 NEW SECTIONS 307.3, 320.7; AMENDED SECTION 8-5-303.2

Pressure vacuum valves and other pressure relief devices are required to have a sealing mechanism that is "gas tight" and are required to be monitored for compliance with this standard. However, when a sealing mechanism is vented to a fuel gas collection system or other control device that maintains a high emission control efficiency it may be impossible to verify compliance with this standard, and compliance becomes much less important than if the sealing mechanism is vented to the atmosphere. Therefore, the proposed amendments exempt pressure relief devices from

the "gas tight" requirement when any leaks would be vented to a system that proves at least 95% abatement efficiency.

3.6.8 AMENDED SECTION 8-5-320.5.2

This proposed amendment is a correction to the rule amendment adopted in November 2002. Prior to that amendment, this amendment was applicable only to external floating roof tanks. In 2002 this section was amended to delete the qualifier "on an external floating roof". This change was inadvertent and was not discussed in the staff report for the 2002 amendment. No tank operators submitted permit applications to retrofit internal floating roof tanks, and BAAQMD staff is unaware of any tanks that were subsequently retrofitted. Therefore, reversing this error will not allow any tank to revert to a lower level of emission control and this change is editorial.

3.6.9 AMENDED SECTION 8-5-328.1

The proposed amendments delete the reference to liquid balancing as a control option for tank degassing. As defined in the rule, liquid balancing is a method of making a tank exempt from the requirements of the rule by reducing the true vapor pressure of the stored liquid to less than 0.5 psia. As such, liquid balancing is not a control option for degassing; it is a way to make the tank exempt from the degassing control requirements, as well as the rest of the rule. This proposed deletion will not disallow liquid balancing; it will simply delete this inappropriate reference. This change is editorial.

3.6.10 AMENDED SECTION 8-5-603.1

The proposed amendments replace test method ST-4 with ST-7. Method ST-4 has been superseded by ST-7 in the BAAQMD Manual of Procedures.

Initial Study/Negative Declaration for the Amendments to Bay Area Air Quality Management District Regulation 8, Rule 5

Prepared for:

Bay Area Air Quality Management Distict
939 Ellis Street
San Francisco, CA 94109
Contact: Julian Elliot
(415) 749-4705

Prepared By:

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92870
Contact: Debra Bright Stevens
(714) 632-8521

September 2006

Chapter 1

Chapter 2

Chapter 3

FIGURES:

TABLES:

M:\DBS\2487-BAAQMD-\3333-R8TOC.doc

Chapter 1

Introduction

Purpose of this Document

This Initial Study/Negative Declaration (IS/ND) assesses the environmental impacts of the proposed adoption of amendments to Regulation 8, Rule 5, by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and is carried out in compliance with the state CEQA Guidelines (Title 14 California Code of Regulations §1400 et seq.). An IS/ND serves as an informational document to be used in the decision-making process for a public agency that intends to carry out a project; it does not recommend approval or denial of the project analyzed in the document. The BAAQMD is the lead agency under CEQA and must consider the impacts of the proposed rule amendments when determining whether to adopt them. The BAAQMD has prepared this IS/ND because no significant adverse impacts would result from the proposed rule amendments.

Scope of this Document

This document evaluates the potential impacts of the proposed amendments on the following resource areas:

- aesthetics,
- agricultural resources,
- air quality,
- biological resources,
- cultural resources,
- geology and soils,
- hazards and hazardous materials,
- hydrology and water quality,
- land use planning,
- mineral resources,
- noise,

- population and housing,
- public services,
- recreation,
- transportation and traffic, and
- utilities and service systems.

Impact Terminology

The following terminology is used in this IS/ND to describe the levels of significance of impacts that would result from the proposed rule amendments:

- An impact is considered *beneficial* when the analysis concludes that the project would have a positive effect on a particular resource.
- A conclusion of *no impact* is appropriate when the analysis concludes that there would be no impact on a particular resource from the proposed project.
- An impact is considered *less than significant* if the analysis concludes that an impact on a particular resource topic would not be significant (i.e., would not exceed certain criteria or guidelines established by BAAQMD). Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that an impact on a particular resource topic would be significant (i.e., would exceed certain criteria or guidelines established by BAAQMD), but would be reduced to a less than significant level through the implementation of mitigation measures.

Organization of This Document

The content and format of this document, described below, are designed to meet the requirements of CEQA.

- Chapter 1, "Introduction," identifies the purpose, scope, and terminology of the document.
- Chapter 2, "Description of the Proposed Rule," provides background information for Regulation 8, Rule 5, describes the proposed rule amendments, and describes the area and facilities that would be affected by the amendments.
- Chapter 3, "Environmental Checklist," presents the checklist responses for each resource topic. This chapter includes a brief setting description for each resource

area and identifies the impact of the proposed rule amendments on the resources topics listed in the checklist.

- Chapter 4, "References Cited," identifies all printed references and personal communications cited in this report.

HLH\3333-BAAQMD\3333R8.Ch1NegDect..doc

Chapter 2

Description of the Proposed Rule

Background

Bay Area 2005 Ozone Strategy Control Measure SS-9 proposes amendments to Bay Area Air Quality Management District Regulation 8, Rule 5: Storage of Organic Liquids. The proposed amendments would implement the control measure by supplementing existing requirements in Rule 8-5.

Tanks regulated under Rule 8-5 are used for bulk storage of organic liquids or liquid mixtures containing organic compounds. Such tanks are typically found at petroleum refineries and chemical plants, as well as gasoline bulk plants and terminals. Underground gasoline storage tanks located at gasoline stations are regulated under District Regulation 8, Rule 7, and are not addressed in Rule 8-5.

Tanks subject to Rule 8-5 have one of four basic designs: fixed roof, pressure, external floating roof tank (EFRT), or internal floating roof tank (IFRT). Emission points on the tanks vary by design. The pressure/vacuum vent is the only emission point on a fixed roof or pressure tank. An EFRT has two emission points: (1) vapor leaks from rim seals; and (2) roof fittings. The IFRT is basically an EFRT with an additional fixed roof on top of the shell.

BAAQMD data show there are 3,282 tank sources within the District. An estimated 499 have floating roofs. Most floating roof tanks have welded shells, but an estimated 31 tanks have riveted shells, which reduce the effectiveness of floating rim seals compared to a welded tank shell. About 50 percent of the 3,282 total tank sources are classified as exempt from permit requirements, either because they are very small or because they do not store liquids that contribute significantly to air pollution. Only 47 facilities have 10 or more tanks, and these 47 facilities account for about 73 percent of the total tanks and about 95 percent of the floating roof tanks.

In the Bay Area 2005 Ozone Strategy, the District estimates that ROG emissions from storage tanks are 5.26 tons/day in 2006. Most of these tanks are subject to Rule 8-5. This emission inventory includes tank cleaning emissions for tanks located at petroleum refineries.

The BAAQMD has regulated emissions from tanks storing organic liquids for almost 40 years, first under former Regulation 3, which was adopted in 1967, and later under Regulation 8, Rule 5. Regulation 8, Rule 5 was originally adopted in 1978 and has been amended a number of times. By 1993, this rule included most of the control strategies found in the current rule, including gap standards for floating roof rim seals, pressure vacuum valve setpoint requirements for fixed roof tanks, closure requirements for tank roof fittings, and tank degassing requirements. For over a decade, Rule 8-5 has been the most stringent storage tank rule in California with

regard to normal tank operations. However, opportunities to improve the rule exist, primarily in the area of non-routine operations, such as tank degassing and cleaning.

Objectives

The objectives of the proposed rule amendments are to implement the recommendations from Control Measure SS-9, in order to help reduce emissions of ozone forming compounds, and make Regulation 8, Rule 5 more easily enforceable. The U.S. Environmental Protection Agency (U.S. EPA) has set primary national ambient air quality standards for ozone and other air pollutants to define the levels considered safe for human health. The California Air Resources Board (CARB) has also set a California ozone standard. The Bay Area is a non-attainment area for the state 1-hour standard and federal 8-hour standard. Under State law, non-attainment areas must prepare plans showing how they will attain the state standard. The 2005 Ozone Strategy is the most recent planning document for the State one-hour ozone standard. Because the Bay Area is a marginal non-attainment area for the national 1 hour standard, the least severe non-attainment classification, the BAAQMD is not required to prepare an attainment plan for the national standard.

The 2005 Ozone Strategy include measures to reduce emissions of the pollutants that form ozone, i.e., nitrogen oxides and volatile organic compounds. These measures may be proposals to adopt new regulations or amendments to existing regulations.

Proposed Amendments

The proposed amendments will improve monitoring for all standards in the rule and especially for tank degassing operations used to prepare a tank for internal cleaning. New standards are proposed to reduce emissions related to tank cleaning operations. Also, a new self-inspection and repair program is proposed to encourage frequent self-inspections and timely preventative maintenance by tank operators. Other minor and editorial amendments are also proposed.

Tank Degassing: Tank degassing is the process of removing organic vapors from the interior of a tank that has been drained of organic liquid prior to opening the tank to the atmosphere. Degassing is the first step in making the tank interior safe for workers prior to maintenance. Regulation 8-5-328.1, requires that organic gas emissions from degassing be reduced by at least 90 percent and that abatement continue until the residual organic concentration in the tank falls below 10,000 ppm. At refineries, where waste gases are routinely collected for use as fuel, the organic gases may be vented to a fuel gas collection system. Residual gases may also be converted to a liquid form with a condenser and re-used, captured with a carbon adsorbent, or destroyed with an internal combustion engine or an oxidizer.

Several amendments are proposed to improve and clarify rule requirements for degassing. Section 8-5-502 currently requires that abatement devices used to during tank degassing undergo an annual source test, and Section 8-5-404 requires that a report be submitted to the District describing the results of the source test. The proposed amendments include a measurement requirement that would ensure that the residual organic concentration in a tank is reduced to less

than 10,000 ppm before degassing ceases. Also, the annual source test requirement is replaced with a requirement to monitor actual emission control effectiveness periodically during degassing operations. This monitoring provision is based on a similar provision that appears in Ventura County APCD Rules 24-6 and 24-7.

Tank Cleaning: After a tank has been degassed, the interior is vented of residual gases prior to being cleaned internally. Cleaning removes accumulated sludge from the tank and allows the tank interior to be inspected and repaired. Sludge may adversely affect the quality of material stored in the tank and may accumulate to the point that the working capacity of the tank is significantly reduced. Rule 8-5 does not currently address emissions from tank cleaning operations and no other District rule regulates the cleaning of tank interiors.

Because the use of cleaning agents that contain significant levels of organic compounds or the use of steam, which tends to heat and vaporize organic liquids that might otherwise be removed from a tank as sludge, may increase emissions from cleaning, proposed Section 8-5-331 would impose limitations on the VOC content of cleaning agents and the use of steam cleaning. Proposed Section 8-5-332 would impose minimum containment standards for sludge removed from tanks during cleaning. In addition, proposed Section 8-5-606 would add appropriate test methods to allow enforcement of the proposed limitations. The use of an abatement device would be allowed as an alternative to these cleaning agent limitations.

Seal and Fitting Inspection: The proposed Self-Inspection and Maintenance Program is intended to reduce the number of minor violations of the rule's standards. Given the stringency of the current seal and fitting standards, it is not uncommon for tank operators or District inspectors to find minor violations of rim seal gap standards in a small circumferential area of a rim seal, or minor wear damage in a required secondary rim seal or fitting cover. In most cases, these violations may be repaired soon after discovery.

The proposed program, found in new Sections 8-5-119 and 411, would require increased inspection frequencies for a prescribed fraction of the tank population at a facility, while allowing self-discovered minor violations of certain standards at all tanks to be repaired without constituting a rule violation. The proposed program excludes violations of standards related to internal floating roof tanks because these tanks are subject to less stringent and less frequent inspections than fixed roof, external floating roof, or pressure tanks. The proposed program also excludes violations of design standards that would result in significant emissions or that would require a significant tank modification for correction. Violations of any standards discovered by the District would continue to be subject to enforcement action. This enhanced inspection program would allow operators to devote resources to inspections and preventative maintenance, and would not relax any rule standards. These additional, targeted inspections are expected to reduce emissions in two ways: by identifying and repairing or replacing damaged or worn tank components that would eventually lead to violations of rule standards and excess air emissions, and also by reducing by half the maximum amount of time that a non-complying condition produces excess emissions.

Tank Integrity: A standard for tank shell integrity is also proposed to be added for fixed and floating roof tanks in Sections 8-5-304.5, 305.6 and 307.1. It should be noted that tank shell

leaks are not common on most tanks, since over 94 percent of the floating roof tanks in the District have welded steel shells. However, minor leaks sometimes occur on older tanks with riveted shells.

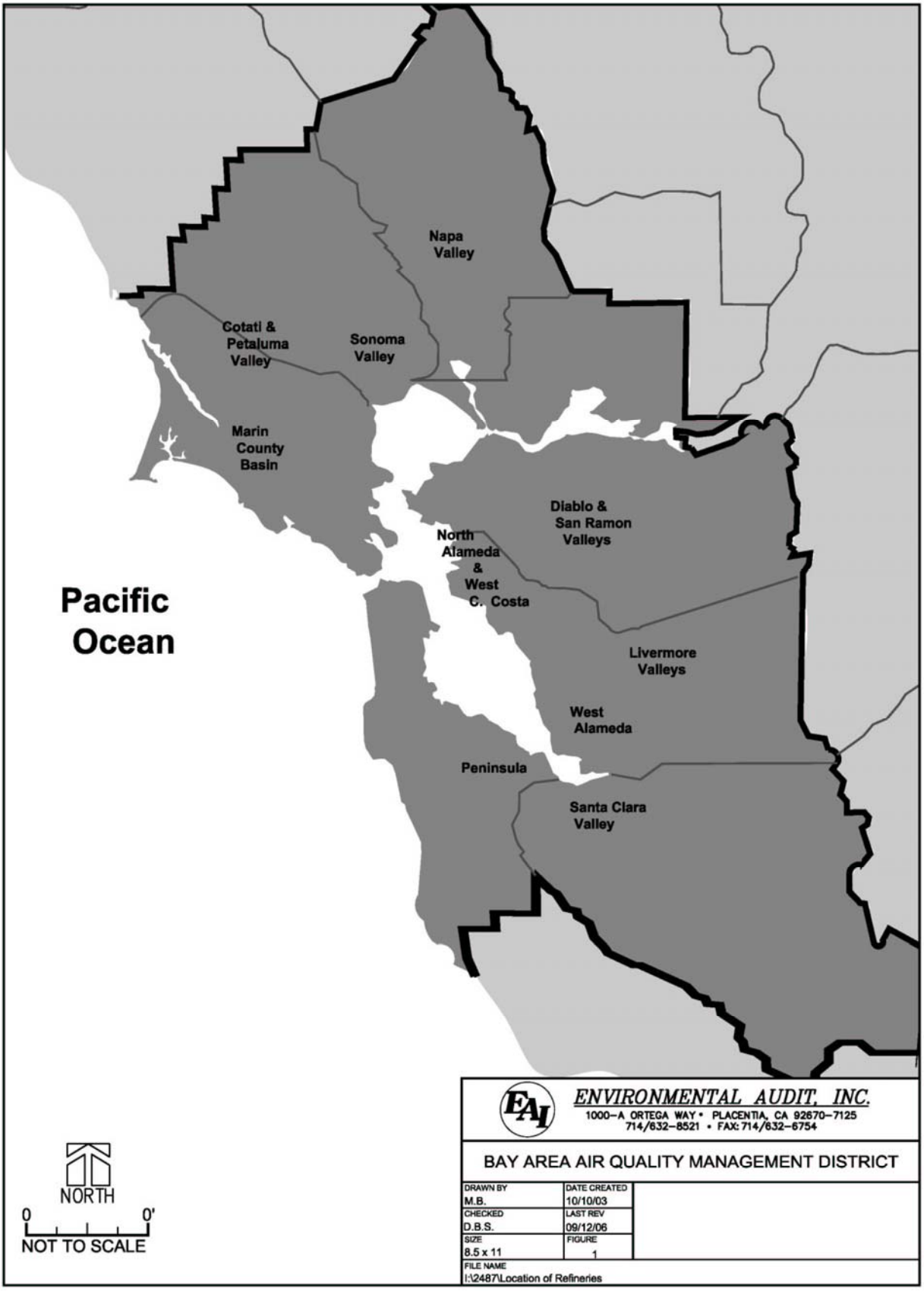
Many floating roofs are made buoyant by pontoons that are arranged along the outer circumference of the roof. These pontoons are formed from welded steel sheets and are typically provided with loose-fitting covers that are accessible from the roof deck. Occasionally, a pontoon weld will crack, allowing liquid to collect in the bottom of the pontoon. Evaporation of this liquid creates an organic vapor space inside the pontoon and results in organic emissions at the pontoon cover. Section 8-5-304.4 is proposed to be amended to clarify that such leaks are prohibited on external floating roof tanks. In some cases, pontoon leaks may be temporarily repaired with the tank in service by applying a sealer to the inside of the leaking pontoon.

Pressure Relied Devices: Regulation 8-5-307 imposes a "leak tight" standard on PRDs that are vented to the atmosphere. In order to ensure compliance with this standard, a semi-annual inspection requirement is proposed in 8-5-403. This requirement and inspection frequency is consistent with other leak tight standards in Rule 8-5.

Affected Area

The proposed rule amendments would apply primarily to refineries, chemical plants, gasoline bulk plants and terminals under BAAQMD jurisdiction. The proposed amendments also apply to manufacturing facilities that use large quantities of organic liquids. The BAAQMD jurisdiction includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma counties (approximately 5,600 square miles). The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys, and bays.

The facilities affected by the proposed rule amendments are located within the jurisdiction of the Bay Area Air Quality Management District (see Figure 1). Most of the storage tanks affected by the rule amendments are located in heavily industrialized areas in Contra Costa and Solano County.


Napa Valley
Cotati & Petaluma Valley
Sonoma Valley
Marin County Basin
Diablo & San Ramon Valleys
North Alameda & West C. Costa
Pacific Ocean
Livermore Valleys
West Alameda
Peninsula
Santa Clara Valley
NORTH
0 0'
NOT TO SCALE
ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
DRAWN BY M.B.
DATE CREATED 10/10/03
CHECKED D.B.S.
LAST REV 09/12/06
SIZE 8.5 x 11
FIGURE 1
FILE NAME I:\2487\Location of Refineries

M:\HLH\2487-BAAQMD\2487-R8Ch2-ProjDesc.doc

Chapter 3

Environmental Checklist

ENVIRONMENTAL CHECKLIST FORM

1. Project Title:	Bay Area Air Quality Management District (BAAQMD) Proposed Amendments to Regulation 8, Rule 5.
2. Lead Agency Name and Address:	Bay Area Air Quality Management District 939 Ellis Street San Francisco, California 94109
3. Contact Person and Phone Number:	Julian Elliot, Planning and Research Division 415/749-4705 or jelliot@baaqmd.gov
4. Project Location:	This rule amendment applies to the area within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties.
5. Project Sponsor's Name and Address:	Bay Area Air Quality Management District 939 Ellis Street San Francisco, California 94109
6. General Plan Designation:	The rule amendments apply to refineries, chemical plants, gasoline bulk plants and terminals that are usually located in heavy manufacturing or industrial areas.
7. Zoning	The rule amendments apply to refineries, chemical plants gasoline bulk plants and terminals that are usually located in heavy manufacturing or industrial areas.
8. Description of Project	See "Background" in Chapter 2.
9. Surrounding Land Uses and Setting	See "Affected Area" in Chapter 2.
10. Other Public Agencies Whose Approval Is Required	None

Environmental Factors Potentially Affected:

The environmental factors checked below would potentially be affected by this Project (i.e., the project would involve one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

Determination:

On the basis of this initial evaluation:

☑ I find the proposed project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be significant effects in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

_____ _____

Printed Name For

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
I.	**AESTHETICS.**				
	Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☐	☑
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☑
d)	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses

Many of the refineries, chemical plants, gasoline bulk plants and terminals affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties. Other facilities are located in industrial areas throughout the Bay Area. Scenic highways or corridors are generally not located in the vicinity of industrial areas.

Regulatory Background

Visual resources are generally protected by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

I a-d. The proposed amendments to Regulation 8, Rule 5 would improve monitoring requirements for all standards in the rule and especially for tank degassing operations used to prepare a tank for internal cleaning. New standards also are proposed to reduce emissions related to tank cleaning operations. Also, a new self-inspection and repair program is proposed

to encourage frequent self-inspections and timely preventative maintenance by tank operators. The rule amendments would impose limitations on the VOC content of cleaning agents used to clean tanks, or allow the use of an air control abatement device as an alternative to cleaning agent VOC limitations. The construction of new abatement devices is not expected as the abatement devices are usually portable and facilities are expected to comply using lower VOC cleaning agents. The proposed amendments are not expected to require the construction of any new structures that would be visible to areas outside of the affected facilities and are not expected to result in any adverse aesthetic impacts.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II.	**AGRICULTURE RESOURCES.**				
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b)	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☑
c)	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Some of these agricultural lands are under Williamson Act contracts.

Many of the refineries, chemical plants, gasoline bulk plants and terminals affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano

Counties. Other facilities are located in industrial areas throughout the Bay Area. Agricultural resources are generally not located in the vicinity of heavy industrial areas.

Regulatory Background

Agricultural resources are generally protected by the City and/or County General Plans, Community Plans through land use and zoning requirements, as well as any applicable specific plans, ordinances, local coastal plans, and redevelopment plans.

Discussion of Impacts

II a-c. The proposed amendments to Regulation 8, Rule 5 would improve monitoring requirements for all standards in the rule and especially for tank degassing operations used to prepare a tank for internal cleaning. New requirements are proposed to reduce emissions related to tank cleaning operations. Also, a new self-inspection and repair program is proposed to encourage frequent self-inspections and timely preventative maintenance by tank operators. The amendments would not require construction or impacts outside of the boundaries of existing industrial facilities. The affected facilities are located within industrial areas. Therefore, no significant adverse impacts on agricultural resources are expected.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY				
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☐	☑
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☑
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☑

e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☑
f)	Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	☐	☐	☐	☑

Setting

Meteorological Conditions

The summer climate of the West Coast is dominated by a semi-permanent high centered over the northeastern Pacific Ocean. Because this high pressure cell is quite persistent, storms rarely affect the California coast during the summer. Thus the conditions that persist along the coast of California during summer are a northwest air flow and negligible precipitation. A thermal low pressure area from the Sonoran-Mojave Desert also causes air to flow onshore over the San Francisco Bay Area much of the summer.

In winter, the Pacific High weakens and shifts southward, upwelling ceases, and winter storms become frequent. Almost all of the Bay Area's annual precipitation takes place in the November through April period. During the winter rainy periods, inversions are weak or nonexistent, winds are often moderate and air pollution potential is very low. During winter periods when the Pacific high becomes dominant, inversions become strong and often are surface based; winds are light and pollution potential is high. These periods are characterized by winds that flow out of the Central Valley into the Bay Area and often include tule fog.

Topography

The San Francisco Bay Area is characterized by complex terrain consisting of coastal mountain ranges, inland valleys and bays. Elevations of 1,500 feet are common in the higher terrain of this area. Normal wind flow over the area becomes distorted in the lower elevations, especially when the wind velocity is not strong. This distortion is reduced when stronger winds and unstable air masses move over the areas. The distortion is greatest when low level inversions are present with the surface air, beneath the inversion, flowing independently of the air above the inversion.

Winds

In summer, the northwest winds to the west of the Pacific coastline are drawn into the interior through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately to the south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more nearly from the west as they stream through the Golden Gate. This channeling of the flow through the Golden Gate produces a jet that sweeps eastward but widens downstream producing southwest winds at Berkeley and northwest winds at San Jose; a branch curves eastward through the Carquinez Straits and into the Central Valley. Wind speeds may be locally strong in regions where air is channeled through a narrow opening such as the Carquinez Strait, the Golden Gate, or San Bruno Gap.

In winter, the Bay Area experiences periods of storminess and moderate-to-strong winds and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the Central Valley, nighttime drainage flows in coastal valleys, week onshore flows in the afternoon and otherwise light and variable winds.

Temperature

In summer, the distribution of temperature near the surface over the Bay Area is determined in large part by the effect of the differential heating between land and water surfaces. This process produces a large-scale gradient between the coast and the Central Valley as well as small-scale local gradients along the shorelines of the ocean and bays. The winter mean temperature high and lows reverse the summer relationship; daytime variations are small while mean minimum nighttime temperatures show large differences and strong gradients. The moderating effect of the ocean influences warmer minimums along the coast and penetrating the Bay. The coldest temperatures are in the sheltered valleys, implying strong radiation inversions and very limited vertical diffusion.

Inversions

A primary factor in air quality is the mixing depth, i.e., the vertical dimension available for dilution of contaminant sources near the ground. Over the Bay Area the frequent occurrence of temperature inversions limits this mixing depth and consequently limits the availability of air for dilution. A temperature inversion may be described as a layer or layers of warmer air over cooler air.

Precipitation

The San Francisco Bay Area climate is characterized by moderately wet winters and dry summers. Winter rains (December through March) account for about 75 percent of the average annual rainfall; about 90 percent of the annual total rainfall is received in November to April period; and between June and September, normal rainfall is typically less than 0.10 inches. Annual precipitation amounts show greater differences in short distances. Annual totals exceed 40 inches in the mountains and are less than 15 inches in the sheltered valleys.

Pollution Potential

The Bay Area is subject to a combination of physiographic and climatic factors which result in a low potential for pollutant buildups near the coast and a high potential in sheltered inland valleys. In summer, areas with high average maximum temperatures tend to be sheltered inland valleys with abundant sunshine and light winds. Areas with low average maximum temperatures are exposed to the prevailing ocean breeze and experience frequent fog or stratus. Locations with warm summer days have a higher pollution potential than the cooler locations along the coast and bays.

In winter, pollution potential is related to the nighttime minimum temperature. Low minimum temperatures are associated with strong radiation inversions in inland valleys that are protected from the moderating influences of the ocean and bays. Conversely, coastal locations experience higher average nighttime temperatures, weaker inversions, stronger breezes and consequently less air pollution potential.

Air Quality

Criteria Pollutants

It is the responsibility of the BAAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), sulfur dioxide (SO_2) and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride.

The state and national ambient air quality standards for each of these pollutants and their effects on health are summarized in Table 3-1. The BAAQMD monitors levels of various criteria pollutants at 26 monitoring stations. The 2004 air quality data from the BAAQMD's monitoring stations are presented in Table 3-2.

Air quality conditions in the San Francisco Bay Area have improved since the Air District was created in 1955. Ambient concentrations of air pollutants and the number of days on which the region exceeds air quality standards have fallen dramatically (see Table 3-3). The Air District is in attainment of the State and federal ambient air quality standards for CO, nitrogen oxides (NOx), and sulfur dioxides (SO_2). The Air District is not considered to be in attainment with the State PM10 and PM2.5 standards.

The 2004 air quality data from the BAAQMD monitoring stations are presented in Table 3-2. All monitoring stations were below the standard and federal ambient air quality standards for CO, NO_2, and SO_2. The federal 1-hour ozone standard was not exceeded in 2004. The federal 8-hour standard was not exceeded in the District in 2004. The Bay Area is designated as a non-attainment area for the California 1-hour ozone standard. The State 1-hour ozone standard was exceeded on 7 days in 2004 in the District, most frequently in the Eastern District (Livermore) (see Table 3-2).

All monitoring stations were in compliance with the federal PM10 standards. The California PM10 standards were exceeded on seven days in 2004, most frequently in San Jose. The Air District exceeded the federal PM2.5 standard on one day (at Concord) in 2004 (see Table 3-2).

TABLE 3-1

FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
AIR POLLUTANT	CONCENTRATION/ AVERAGING TIME	CONCENTRATION/ AVERAGING TIME	
Ozone	0.09 ppm, 1-hr. avg. > 0.070 ppm, 8-hr	0.08 ppm, 8-hr avg. >	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg. >	0.053 ppm, ann. avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.>	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM10)	20 $\mu g/m^3$, annarithmetic mean > 50 $\mu g/m^3$, 24-hr average>	50 $\mu g/m^3$, annual arithmetic mean > 150 $\mu g/m^3$, 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Suspended Particulate Matter (PM2.5)	12 $\mu g/m^3$, annual arithmetic mean>	15 $\mu g/m^3$, annual arithmetic mean> 65 $\mu g/m^3$, 24-hour average>	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 $\mu g/m^3$, 24-hr avg. >=		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 $\mu g/m^3$, 30-day avg. >=	1.5 $\mu g/m^3$, calendar quarter>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient >0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm PST)		Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent

TABLE 3-2
BAY AREA AIR POLLUTION SUMMARY 2004

MONITORING STATIONS	Ozone							CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM10				PM2.5				
	Max 1-Hr	Nat Days	Cal Days	3-Yr Avg	Max 8-Hr	Nat Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/ Cal Days	Max 1-Hr	Ann Avg	Nat/ Cal Days	Max 24-Hr	Ann Avg	Nat/ Cal Days	Ann Avg	Max 24-Hr	Nat Day	Cal Days	Max 24-Hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg
NORTH COUNTIES	(pphm)							(ppm)			(pphm)			(ppb)			($\mu g/m^3$)				($\mu g/m^3$)			($\mu g/m^3$)	
Napa	9	0	0	0.0	7	0	6.6	3.7	2.0	0	6	1.1	0	--	--	--	20.7	60	0	1	--	--	--	--	--
San Rafael	9	0	0	0.0	6	0	4.9	3.2	2.0	0	6	1.5	0	--	--	--	17.9	52	0	1	--	--	--	--	--
Santa Rosa	8	0	0	0.0	6	0	5.1	2.7	1.6	0	5	1.1	0	--	--	--	18.0	48	0	0	27	0	32	8.3	9
Vallejo	10	0	1	0.0	7	0	6.5	4.0	3.4	0	5	1.2	0	5	1.3	0	19.6	51	0	1	40	0	39	11.1	11
COAST & CENTRAL BAY																									
Oakland	8	0	0	0.0	6	0	4.0	3.5	2.6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Richmond	--	--	--	--	--	--	--	--	--	--	--	--	--	5	1.6	0	--	--	--	--	--	--	--	--	--
San Francisco	9	0	0	0.0	6	0	4.7	2.9	2.2	0	6	1.7	0	8	1.4	0	22.5	52	0	1	46	0	41	9.9	11
San Pablo	11	0	1	0.0	7	0	5.2	3.2	1.8	0	6	1.3	0	5	1.6	0	21.2	64	0	1	--	--	--	--	--
EASTERN DISTRICT																									
Bethel Island	10	0	1	0.0	8	0	7.5	1.2	0.9	0	3	0.8	0	6	1.6	0	19.5	42	0	0	--	--	--	--	--
Concord	10	0	1	0.0	8	0	7.9	2.7	2.0	0	7	1.2	0	10	1.0	0	18.6	51	0	1	74	1	40*	10.7 *	11*
Crockett	--	--	--	--	--	--	--	--	--	--	--	--	--	7	1.7	0	--	--	--	--	--	--	--	--	--
Fairfield	10	0	1	0.0	8	0	7.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Livermore	11	0	5	1.0	8	0	8.3	3.5	1.8	0	6	1.4	0	--	--	--	20.0	49	0	0	41	0	37	10.3	11
Martinez	--	--	--	--	--	--	--	--	--	--	--	--	--	7	1.5	0	--	--	--	--	--	--	--	--	--
Pittsburg	9	0	0	0.0	8	0	7.3	4.1	1.9	0	5	1.1	0	7	2.0	0	21.7	64	0	1	--	--	--	--	--
SOUTH CENTRAL BAY																									
Fremont	9	0	0	0.0	7	0	6.4	3.0	1.7	0	6	1.5	0	--	--	--	18.6	49	0	0	40	0	32	9.4	10
Hayward	9	0	0	0.0	7	0	6.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood City	10	0	1	0.0	7	0	6.0	4.8	2.1	0	6	1.5	0	--	--	--	20.5	65	0	1	36	0	32	9.3	9
San Leandro	10	0	1	0.0	7	0	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SANTA CLARA VALLEY																									
Gilroy	9	0	0	0.0	8	0	7.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Los Gatos	9	0	0	0.0	8	0	7.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Central*	9	0	0	*	7	0	*	4.4	3.0	0	7	1.9	0	--	--	--	23.1	58	0	4	52	0	*	11.6	*
San Jose East	9	0	0	0.0	7	0	6.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose, Tully Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26.0	65	0	3	45	0	35	10.4	10
San Martin	9	0	0	0.0	8	0	8.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sunnyvale	10	0	1	0.0	8	0	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Bay Area Days over Standard		**0**	**7**			**0**				**0**			**0**			**0**			**0**	**7**		**1**			

(ppm) = parts per million, (pphm) = parts per hundred million, (ppb) = parts per billion

TABLE 3-3

TEN-YEAR BAY AREA AIR QUALITY SUMMARY

Days over standards

YEAR	OZONE			CARBON MONOXIDE				NO_X	SULFUR DIOXIDE		PM10		PM2.5
	1-Hr		8-Hr	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr*		24-Hr**
	Nat	Cal	Nat	Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat	Cal	Nat
1995	11	28	-	0	0	0	0	0	0	0	0	7	-
1996	8	34	-	0	0	0	0	0	0	0	0	3	-
1997	0	8	-	0	0	0	0	0	0	0	0	4	-
1998	8	29	16	0	0	0	0	0	0	0	0	5	-
1999	3	2	9	0	0	0	0	0	0	0	0	12	-
2000	3	12	4	0	0	0	0	0	0	0	0	7	1
2001	1	15	7	0	0	0	0	0	0	0	0	10	5
2002	2	16	7	0	0	0	0	0	0	0	0	6	5
2003	1	19	7	0	0	0	0	0	0	0	0	6	0
2004	0	7	0	0	0	0	0	0	0	0	0	7	1
2005	0	9	1	0	0	0	0	0	0	0	0	6	0

* PM10 is sampled every sixth day – actual days over standard can be estimated to be six times the numbers listed.
** 2000 is the first full year for which the Air District measured PM2.5 levels.

Toxic Air Pollutants

The precursor chemicals that form ozone are VOCs and NOx. Some of these VOCs are toxic air contaminants (TACs) and some are known carcinogens. The BAAQMD maintains a network of monitoring stations to monitor certain TACs in ambient air. In addition, the California Air Resources Board (CARB) maintains several monitoring stations in the Bay Area as part of a statewide toxics monitoring effort. The mean ambient concentrations of monitored TACs are listed in Table 3-4 based on monitoring conducted during 2002 for the monitoring stations closest to the refineries. The Richmond station is located at 7th Street downwind from the ChevronTexaco refinery and the Richmond parkway. The Crockett station is located at the end of Kendall Avenue generally downwind of the ConocoPhillips refinery. There are two Concord stations.

TABLE 3-4

CONCENTRATIONS OF TOXIC AIR CONTAMINANTS IN THE BAY AREA[(1)]

CHEMICAL	MONITORING STATION (mean ppb)					
	Crockett	Concord (Treat Blvd)	Richmond	Bethel Island	Concord (Arnold)	Bay Area Mean
Benzene	0.24	0.51	0.44	0.33	0.53	0.47
Carbon Tetrachloride (CCl4)	0.11	0.13	0.11	0.11	0.11	0.11
Chloroform (CHCl3)	0.02	0.03	0.02	0.01	0.02	0.02
Methylene Chloride (DCM)	0.56	0.29	0.27	0.26	0.28	0.38
Ethylene Dibromide	0.01	0.01	0.01	0.01	0.01	0.01
Ethylene Dichloride	0.05	0.05	0.05	0.05	0.05	0.05
MTBE	0.40	0.71	0.61	0.45	0.86	0.75
Perchloroethylene	0.02	0.03	0.06	0.02	0.07	0.05
1,1,1-Trichloroethane (TCA)	0.07	0.05	0.03	0.03	0.12	0.11
Trichloroethylene	0.04	0.04	0.04	0.04	0.04	0.04
Toluene	0.45	1.85	1.16	0.71	1.05	1.48
Vinyl Chloride	0.15	0.15	0.15	0.15	0.15	0.15

(1) BAAQMD, Toxic Air Contaminant, 2002 Annual Report, June 2004.

Regulatory Background

Criteria Pollutants

At the federal level, the Clean Air Act (CAA) Amendments of 1990 give the U.S. EPA additional authority to require states to reduce emissions of ozone precursors and particulate matter in non-attainment areas. The amendments set attainment deadlines based on the severity of problems. At the state level, CARB has traditionally established state ambient air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California's air districts, including the BAAQMD, are responsible for overseeing stationary source emissions, approving permits, maintaining emission inventories, maintaining air quality stations,

overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The BAAQMD is governed by a 21-member Board of Directors composed of publicly-elected officials apportioned according to the population of the represented counties. The Board has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction. The BAAQMD is responsible for implementing emissions standards and other requirements of federal and state laws. It is also responsible for developing air quality planning documents required by both federal and state laws.

Toxic Air Contaminants

TACs are regulated in the District through federal, state, and local programs. At the federal level, TACs are regulated primarily under the authority of the CAA. Prior to the amendment of the CAA in 1990, source-specific National Emission Standards for Hazardous Air Pollutants (NESHAPs) were promulgated under Section 112 of the CAA for certain sources of radionuclides and Hazardous Air Pollutants (HAPs).

Title III of the 1990 CAA amendments requires U.S. EPA to promulgate NESHAPs on a specified schedule for certain categories of sources identified by U.S. EPA as emitting one or more of the 189 listed HAPs. Emission standards for major sources must require the maximum achievable control technology (MACT). MACT is defined as the maximum degree of emission reduction achievable considering cost and non-air quality health and environmental impacts and energy requirements. All NESHAPs were to be promulgated by the year 2000. Specific incremental progress in establishing standards must be made by the years 1992 (at least 40 source categories), 1994 (25 percent of the listed categories), 1997 (50 percent of remaining listed categories), and 2000 (remaining balance). The 1992 requirement was met; however, many of the four-year standards were not promulgated as scheduled. Promulgation of those standards has been rescheduled based on court ordered deadlines, or the aim to satisfy all Section 112 requirements in a timely manner.

Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. CARB developed three regulatory programs for the control of TACs. Each of the programs is discussed in the following subsections.

Control of TACs Under the TAC Identification and Control Program: California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), is a two-step program in which substances are identified as TACs, and airborne toxic control measures (ATCMs) are adopted to control emissions from specific sources. Since adoption of the program, CARB has identified 18 TACs, and CARB adopted a regulation designating all 189 federal HAPs as TACs.

Control of TACs Under the Air Toxics "Hot Spots" Act: The Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656) establishes a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions. Inventory reports must be updated every four years under current state law. The BAAQMD uses a maximum individual cancer risk of 10 in one million, or an ambient concentration above a non-cancer reference exposure level, as the threshold for notification.

Senate Bill (SB) 1731, enacted in 1992 (California Health and Safety Code §44390 et seq.), amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction

plan which will reduce the risk below a defined significant risk level within specified time limits. At a minimum, such facilities must, as quickly as feasible, reduce cancer risk levels that exceed 100 per one million. The BAAQMD adopted risk reduction requirements for perchloroethylene dry cleaners to fulfill the requirements of SB 1731.

Discussion of Impacts

III a. The objectives of the proposed rule amendments are to implement Control Measure SS-9 from the Bay Area 2005 Ozone Strategy in order to help reduce emissions of ozone forming compounds (e.g., VOCs), and make Regulation 8, Rule 5 more stringent. Because the proposed amendments directly implement the control measure, the proposed amendments are in compliance with the local air quality plan.

III b, c, d, and f. The proposed methods of control in Control Measure SS-9 in the Bay Area 2005 Ozone Strategy are based on the recommendations in the District's Technical Assessment Document that was published in January 2004. The Control Measure proposes improved standards for tank degassing and cleaning, and for handling sludge removed from tanks during cleaning; and implementation of a voluntary self-inspection and maintenance (I&M) program to encourage more frequent inspections and timely preventative maintenance.

Tank Degassing - Several amendments are proposed to improve and clarify rule requirements for degassing. The proposed amendments include a measurement requirement that would ensure that the residual organic concentration in a tank is reduced to less than 10,000 ppm before degassing ceases. Also, the annual source test requirement is replaced with a requirement to monitor actual emission control effectiveness periodically during degassing operations. This monitoring provision is based on a similar provision that appears in Ventura County APCD Rules 24-6 and 24-7. The proposed rule amendments with respect to tank degassing may require that emission control devices (e.g., fuel gas collection systems, condensers, carbon adsorption, or combustion devices) be used for a longer period of time to ensure that the emissions are controlled to less than 10,000 ppm. The proposed rule amendments are expected to reduce VOC emissions associated with tank degassing by better monitoring of VOC concentrations, providing an air quality benefit. The proposed rule amendments are not expected to require the installation of new control devices, but would require better monitoring of existing control devices during the degassing process.

Tank Cleaning - Because the use of cleaning agents that contain significant levels of organic compounds or the use of steam, which tends to heat and vaporize organic liquids that might otherwise be removed as sludge, may increase emissions from cleaning, Section 8-5-331 would impose limitations on the VOC content of cleaning agents and the use of steam cleaning. The use of an abatement device would be allowed as an alternative to these cleaning agent limitations. The proposed rule amendments are expected to reduce VOC emissions associated with tank cleaning by limiting the VOC content of cleaning agents or requiring the use of emission control devices. Most affected facilities are expected to comply by using lower VOC cleaning materials, providing an air quality benefit. The proposed rule amendments are not expected to require the installation of new control devices, but allows the use of control devices to comply with the requirements. The installation of any new control devices would require a permit from the BAAQMD and appropriate evaluation to assure that use of the control device will help reduce emissions during tank cleaning.

Self-Inspection and Maintenance Program - The proposed amendments include a voluntary self-inspection and repair program in new Sections 8-5-119 and 411. The proposed program would require increased inspection frequencies for a prescribed fraction of the tank population at a facility, while allowing self-discovered violations of certain standards at all tanks to be repaired without constituting a rule violation. Violations of any standards discovered by the District would continue to be subject to enforcement action. This enhanced inspection program would allow operators to devote resources to inspections and preventative maintenance, and would not relax any rule standards. These additional, targeted inspections are expected to reduce emissions in two ways: by identifying and repairing or replacing damaged or worn tank components that would eventually lead to violations of rule standards and excess air emissions, and also by reducing by half the maximum amount of time that a non-complying condition produces excess emissions.

Standards for Tank Shells and Pontoons - Rule 8-5 currently requires that floating tank roofs and certain tank fittings be in "good operating condition". In order to promote consistent application of "good operating conditions," a definition for this standard is proposed to be added in Section 8-5-225. A standard for tank shell integrity is also proposed to be added for fixed and floating roof tanks in Sections 8-5-304.5, 305.6 and 307.1. Section 8-5-304.4 is proposed to be amended to prohibit leaks from pontoon weld cracks on external floating roof tanks. In some cases, pontoon leaks may be temporarily repaired with the tank in service by applying a sealer to the inside of the leaking pontoon. The better definition and the direct prohibition of leaks is expected to result in emission reductions, providing an air quality benefit.

Inspection Requirements for Pressure Relief Devices (PRDs) - Regulation 8-5-307 imposes a "leak tight" standard on PRDs that are vented to the atmosphere. In order to ensure compliance with this standard, a semi-annual inspection requirement is proposed in 8-5-403. The increased monitoring of PRDs is expected to minimize leaks and result in emission reductions, providing an air quality benefit.

Based on the above air quality analysis, the proposed amendments to Regulation 8, Rule 5 are expected to result in reductions in VOC emissions and, thus, provide air quality benefits. No significant adverse impacts to air quality are expected.

III e. The amendments to Regulation 8, Rule 5 propose improved monitoring standards for all standards in the rule and especially for tank degassing operations used to prepare a tank for internal cleaning. New standards are proposed to reduce emissions related to tank cleaning operations. Also, a new self-inspection and repair program is proposed to encourage frequent self-inspections and timely preventative maintenance by tank operators. The amendments would not require construction or impacts outside of the boundaries of existing industrial facilities. The rule amendments are not expected to generate any additional odors at the affected facilities but would reduce the potential for odor impacts by reducing emissions from tank cleaning and degassing activities

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES.** Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e)	Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f)	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. A wide variety of biological resources are located within the Bay Area.

The facilities affected by the proposed rule amendments are located in the Bay Area-Delta Bioregion (as defined by the State's Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodland. Many of the facilities affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties. Other facilities are located in industrial areas througout the Bay Area. The affected facilities have been graded to develop the various industrial structures and are typically, surrounded by other commercial and industrial facilities. Native vegetation, other than landscape vegetation, has generally been removed from operating portions of the industrial facilities to minimize safety and fire hazards.

Regulatory Background

Biological resources are generally protected by the City and/or County General Plans through land use and zoning requirements which minimize or prohibit development in biologically sensitive areas. Biological resources are also protected by the California Department of Fish and Game, and the U.S. Fish and Wildlife Service. The U.S Fish and Wildlife Service and National Marine Fisheries Service oversee the federal Endangered Species Act. Development permits may be required from one or both of these agencies if development would impact rare or endangered species. The California Department of Fish and Game administers the California Endangered Species Act which prohibits impacting endangered and threatened species. The U.S. Army Corps of Engineers and the U.S. EPA regulate the discharge of dredge or fill material into waters of the United States, including wetlands.

Discussion of Impacts

IV a – f. No impacts on biological resources are anticipated from the proposed rule amendments which would apply to existing facilities, including refineries, chemical plants, gasoline bulk plants and terminal operations. The tanks already exist and are located within the confines of existing industrial facilities. The proposed rule amendments neither require, nor are likely to result in, activities, e.g., construction activities, which would affect sensitive biological resources. Activities related to the proposed rule amendment would be limited to the confines of the existing facilities. Construction activities are not expected to be required within or outside of the confines of the existing facilities. Therefore, no significant adverse impacts on biological resources are expected.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☑
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☑
d)	Disturb any human remains, including those interred outside a formal cemeteries?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural and open space uses. Cultural resources are defined as buildings, sites, structures, or objects which might have historical architectural, archaeological, cultural, or scientific importance.

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given their abundant combination of littoral and oak woodland resources.

Most of the refineries, chemical plants, gasoline bulk plants and terminals affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties. Other affected facilities are located in industrial areas throughout the Bay Area. The sites have been graded to develop the various industrial structures and are typically surrounded by other commercial and industrial facilities. Cultural resources are generally not located within the operating portions of industrial facilities.

Regulatory Background

The State CEQA Guidelines define a significant cultural resources as a "resource listed or eligible for listing on the California Register of Historical Resources" (Public Resources Code Section 5024.1). A project would have a significant impact if it would cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines Section 15064.5(b)). A substantial adverse change in the significance of a historical resource would result from an action that would demolish or adversely alter the physical characteristics of the historical resource that convey its historical significance and that qualify the resource for inclusion in the California Register of Historical Resources or a local register or survey that meets the requirements of Public Resources Code Sections 50020.1(k) and 5024.1(g).

Discussion of Impacts

V a – d. No impacts on cultural resources are anticipated from the proposed rule amendments that would apply to existing facilities, including refinery, chemical plant, gasoline bulk plant and terminal operations. The tanks already exist and are located within the confines of existing facilities. The proposed rule amendments neither require nor are likely to result in activities that would affect sensitive cultural resources. No major construction activities are expected and no structures are expected to be removed due to implementation of the proposed rule amendments. Therefore, no significant adverse impacts on cultural resources are expected.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS.				
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☑
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
• Strong seismic groundshaking?	☐	☐	☐	☑
• Seismic–related ground failure, including liquefaction?	☐	☐	☐	☑
• Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑

c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Many of the facilities affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties.

The affected facilities, including refineries, chemical plants, gasoline bulk plants and terminals are located in the natural region of California known as the Coast Ranges geomorphic province. The province is characterized by a series of northwest trending ridges and valleys controlled by tectonic folding and faulting, examples of which include the Suisun Bay, East Bay Hills, Briones Hills, Vaca Mountains, Napa Valley, and Diablo Ranges.

Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of sandstone interfingered with siltstone and shale. Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay. The estuarine sediments found along the shorelines of Solano County are soft, water-saturated mud, peat and loose sands. The organic, soft, clay-rich sediments along the San Francisco and San Pablo Bays are referred to locally as Bay Mud and can present a variety of engineering challenges due to inherent low strength, compressibility and saturated conditions. Landslides in the region occur in weak, easily weathered bedrock on relatively steep slopes.

The San Francisco Bay Area is a seismically active region, which is situated on a plate boundary marked by the San Andreas Fault System. Several northwest trending active and potentially active faults are included with this fault system. Under the Alquist-Priolo Earthquake Fault Zoning Act, Earthquake Fault Zones were established by the California Division of Mines and Geology along “active” faults, or faults along which surface rupture occurred in Holocene time (the last 11,000 years). In the Bay area, these faults include the San Andreas, Hayward, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Seal

Cove/San Gregorio and West Napa faults. Other smaller faults in the region classified as potentially active include the Southampton and Franklin faults.

Ground movement intensity during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geological material. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill. Earthquake ground shaking may have secondary effects on certain foundation materials, including liquefaction, seismically induced settlement, and lateral spreading.

Regulatory Background

Construction is regulated by the local City or County building codes that provide requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc. which are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are generally required.

The City or County General Plan includes the Seismic Safety Element. The Element serves primarily to identify seismic hazards and their location in order that they may be taken into account in the planning of future development. The Uniform Building Code is the principle mechanism for protection against and relief from the danger of earthquakes and related events.

In addition, the Seismic Hazard Zone Mapping Act (Public Resources Code §§2690 – 2699.6) was passed by the California legislature in 1990 following the Loma Prieta earthquake. The Act required that the California Division of Mines and Geology (DMG) develop maps that identify the areas of the state that require site specific investigation for earthquake-triggered landslides and/or potential liquefaction prior to permitting most urban developments. The act directs cities, counties and state agencies to use the maps in their land use planning and permitting processes.

Local governments are responsible for implementing the requirements of the Seismic Hazards Mapping Act. The maps and guidelines are tools for local governments to use in establishing their land use management policies and in developing ordinances and review procedures that will reduce losses from ground failure during future earthquakes.

Discussion of Impacts

VI a – e. No impacts on geology and soils are anticipated from the proposed rule amendments that would apply to existing operations at affected facilities, including refineries, chemical plants, gasoline bulk plants and terminals. The tanks already exist and are located within the confines of existing facilities. The amendments to Regulation 8, Rule 5 propose improved monitoring standards for all standards in the rule and especially for tank degassing operations used to prepare a tank for internal cleaning. New standards are proposed to reduce emissions related to tank cleaning operations. The rule amendments impose limitations on the VOC content of cleaning agents used to clean tanks, or allow the use of an air control abatement device as an alternative to cleaning agent VOC limitations. The construction of new abatement devices is not expected as the abatement devices are usually portable and facilities are expected to comply using the lower VOC cleaning agents. The storage tanks affected by Regulation 8, Rule 5 already exist so that no

major construction activities are expected from the proposed rule amendments and no new structures would be required. Therefore, no significant adverse impacts on geology and soils are expected.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☑
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☑
c)	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d)	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e)	Be located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f)	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑

Setting

Many of the affected facilities, including petroleum refineries, chemical plants, gasoline bulk plants and terminals, handle and process large quantities of flammable, hazardous, and acutely hazardous materials. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances.

The potential hazards associated with industrial activities are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facility. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events.

- **Toxic gas clouds:** Toxic gas clouds are releases of volatile chemicals (e.g., anhydrous ammonia, chlorine, and hydrogen sulfide) that could form a cloud and migrate off-site, thus exposing individuals. "Worst-case" conditions tend to arise when very low wind speeds coincide with an accidental release, which can allow the chemicals to accumulate rather than disperse.

- **Torch fires (gas and liquefied gas releases), flash fires (liquefied gas releases), pool fires, and vapor cloud explosions (gas and liquefied gas releases):** The rupture of a storage tank containing a flammable gaseous material (like propane), without immediate ignition, can result in a vapor cloud explosion. The "worst-case" upset would be a release that produces a large aerosol cloud with flammable properties. If the flammable cloud does not ignite after dispersion, the cloud would simply dissipate. If the flammable cloud were to ignite during the release, a flash fire or vapor cloud explosion could occur. If the flammable cloud were to ignite immediately upon release, a torch fire would ensue.

- **Thermal Radiation:** Thermal radiation is the heat generated by a fire and the potential impacts associated with exposure. Exposure to thermal radiation would result in burns, the severity of which would depend on the intensity of the fire, the duration of exposure, and the distance of an individual to the fire.

- **Explosion/Overpressure:** Process vessels containing flammable explosive vapors and potential ignition sources are present at refineries, terminals, and chemical plants. Explosions may occur if the flammable/explosive vapors came into contact with an ignition source. An explosion could cause impacts to individuals and structures in the area due to overpressure.

For all affected facilities, risks to the public are reduced if there is a buffer zone between industrial processes and residences or other sensitive land uses, or the prevailing wind blows away from residential areas and other sensitive land uses. The risks posed by operations at each facility are unique and determined by a variety of factors. The facilities affected by the proposed amendments, including refineries, chemical plants, gasoline bulk plants and terminals, tend to be located in industrial areas which helps minimize public exposure in the event of a release.

Regulatory Background

There are many federal and state rules and regulations that affected facilities must comply with which serve to minimize the potential impacts associated with hazards at these facilities.

Under the Occupational Safety and Health Administration (OSHA) regulations [29 Code of Federal Regulations (CFR) Part 1910], facilities which use, store, manufacture, handle, process, or move highly hazardous materials must prepare a fire prevention plan. In addition, 29 CFR Part 1910.119, Process Safety Management (PSM) of Highly Hazardous Chemicals, and Title 8 of the California Code of Regulations, General Industry Safety Order §5189, specify required prevention program elements to protect workers at facilities that handle toxic, flammable, reactive, or explosive materials. Prevention program elements are aimed at preventing or minimizing the consequences of catastrophic releases of the chemicals and include process hazard analyses, formal training programs for employees and contractors, investigation of equipment mechanical integrity, and an emergency response plan.

Section 112 (r) of the Clean Air Act Amendments of 1990 [42 U.S.C. 7401 et. Seq.] and Article 2, Chapter 6.95 of the California Health and Safety Code require facilities that handle listed regulated substances to develop Risk Management Programs (RMPs) to prevent accidental releases of these substances, U.S. EPA regulations are set forth in 40 CFR Part 68. In California, the California Accidental Release Prevention (CalARP) Program regulation (CCR Title 19, Division 2, Chapter 4.5) was issued by the Governor's Office of Emergency Services (OES). RMPs consist of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history, a prevention program, and an emergency response program. Refineries are also required to comply with the U.S. EPA's Emergency Planning and Community Right-to-Know Act (EPCRA).

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 40 Code of Federal Regulations, Section 112. The SPCC is designed to prevent spills from on-site facilities and includes requirements for secondary containment, provides emergency response procedures, establishes training requirements, and so forth.

The Hazardous Materials Transportation (HMT) Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Railroad Administration. The HMT Act requires that carriers report accidental releases of hazardous materials to the Department of Transportation at the earliest practical moment (49 CFR Subchapter C). The California Department of Transportation (Caltrans) sets standards for trucks in California. The regulations are enforced by the California Highway Patrol.

California Assembly Bill 2185 requires local agencies to regulate the storage and handling of hazardous materials and requires development of a plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The business plans must provide a description of the types of hazardous materials/waste on-site and the location of these materials. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

Contra Costa County has adopted an industrial safety ordinance that addresses the human factors that lead to accidents. The ordinance requires stationary sources to develop a written human factors program that includes the following:

- Consideration of human factors in the process hazards analysis process;
- Consideration of human systems as causal factors in the incident investigation process for major accidents or releases or for incidents that could have led to a major accident or release;
- Training of employees in the human factors program;
- Operating procedures;
- Management of changes in staffing, staffing levels, or organization in operations or emergency response;
- Participation of employees and their representatives in the development of the written human factors program;
- Development of a program that includes issues such as staffing, shiftwork, and overtime; and
- Incorporation of the human factors program description in the facility safety plan.

Discussion of Impacts

VII a. The proposed rule amendments do not affect in any way the storage, use or transport of hazardous material into, out of, or within any of the refineries, chemical plants, gasoline bulk plants or terminals, or other affected facilities. The rule amendment will not require or change the use or storage of any hazardous material. It is expected that the rule will lead to a reduction in VOC emissions and potentially reduce the hazards associated with exposure to released material. A reduction in VOC emissions would also reduce the potential fire hazards associated with the material. Therefore, no significant adverse impacts on storage, use or transport of hazardous materials are expected.

VII b – c. The proposed rule amendments are expected to reduce emissions from existing tanks affected facilities thus reducing VOC emissions and releases of potentially toxic air contaminants. A reduction in VOC emissions would also reduce the potential fire hazards associated with the material. The rule will not require or change the use or storage of any hazardous material. Therefore, no significant adverse impacts on releases of hazardous materials into the environment are expected.

VII d. No impacts on hazardous material sites are anticipated from the proposed rule amendments that would apply to existing operations. Some of the affected facilities may be located on the hazardous materials sites list pursuant to Government Code Section 65962.5. However, the proposed rule amendments would have no affect on hazardous materials nor would the amendment create a significant hazard to the public or environment. The tanks already exist and are located within the confines of existing industrial

facilities. The proposed rule amendments neither require, nor are likely to result in, activities that would affect hazardous materials or existing site contamination. Therefore, no significant adverse impacts on hazards are expected.

VII e – f. No impacts on airports or airport land use plans are anticipated from the proposed rule amendments, which would apply to operations at existing refineries, chemical plants, gasoline bulk plants and terminals, and other facilities. The tanks already exist and are located within the confines of existing industrial facilities. The proposed rule amendments neither require nor are likely to result in activities which would affect the environment outside of affected facilities. No major construction activities are expected from the proposed rule amendments. Therefore, no significant adverse impacts on hazards at airports are expected.

VII g. No impacts on emergency response plans are anticipated from the proposed rule amendments that would apply to existing facility operations. Each affected facility has prepared an emergency response plan; however, the tanks already exist and are located within the confines of existing facilities. The proposed rule amendments neither require, nor are likely to result in, activities that would impact the emergency response plan. No major construction activities are expected from the proposed rule amendments. Therefore, no significant adverse impacts on emergency response plans is expected.

VII h. No increase in hazards related to wildfires are anticipated from the proposed rule amendments. The tanks affected by the proposed amendments already exist and are located within the confines of existing facilities. No major construction activities are expected from the proposed rule amendments and no activities would occur outside the confines of existing refineries, chemical plants, gasoline bulk plants and terminals, and other facilities. Vegetation surrounding the operating portions of industrial facilities has generally been removed to reduce the potential fire hazards. Therefore, no significant adverse impacts on fire hazards are expected.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☑
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☑

c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?	☐	☐	☐	☑
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	☐	☐	☐	☑
e)	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☑
f)	Otherwise substantially degrade water quality?	☐	☐	☐	☑
g)	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☑
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☑
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and affected environment vary substantially throughout the area and include commercial, industrial, residential, agricultural, and open space uses.

Many of the refineries, chemical plants, gasoline bulk plants and terminals affected by the proposed rule amendments are generally located in the industrial portions of Contra Costa and Solano Counties. Other facilities are located in industrial areas throughout the Bay Area. Affected facilities are generally surrounded by other commercial and industrial facilities. The refineries are located within rolling, low elevation hills along the shores of the San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay. ChevronTexaco is bordered by the San Francisco and San Pablo Bays on the western border of the refinery.

The ConocoPhillips refinery is bounded on the north and west by San Pablo Bay. The Valero, Shell, and Tesoro refineries are located adjacent to Suisun Bay along the Carquinez Straits.

Reservoirs and drainage streams are located throughout the area and discharge into the Bays. Marshlands incised with numerous winding tidal channels containing brackish water are located throughout the Bay Area.

The affected facilities are located within the San Francisco Bay Area Hydrologic Basin. The primary regional groundwater water-bearing formations include the recent and Pleistocene (up to two million years old) alluvial deposits and the Pleistocene Huichica formation. Salinity within the unconfined alluvium appears to increase with depth to at least 300 feet. Water of the Huichica formation tends to be soft and relatively high in bicarbonate, although usable for domestic and irrigation needs.

Regulatory Background

The Federal Clean Water Act of 1972 primarily establishes regulations for pollutant discharges into surface waters in order to protect and maintain the quality and integrity of the nation's waters. This Act requires industries that discharge wastewater to municipal sewer systems to meet pretreatment standards. The regulations authorize the U.S. EPA to set the pretreatment standards. The regulations also allow the local treatment plants to set more stringent wastewater discharge requirements, if necessary, to meet local conditions.

The 1987 amendments to the Clean Water Act enabled the U.S. EPA to regulate, under the National Pollutant Discharge Elimination System (NPDES) program, discharges from industries and large municipal sewer systems. The U.S. EPA set initial permit application requirements in 1990. The State of California, through the State Water Resources Control Board, has authority to issue NPDES permits, which meet U.S. EPA requirements, to specified industries.

The Porter-Cologne Water Quality Act is California's primary water quality control law. It implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The RWQCB administers the state requirements as specified under the Porter-Cologne Water Quality Act, which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

In response to the Federal Act, the State Water Resources Control Board prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan. Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. San Francisco Bay, and its constituents parts, including Carquinez Strait and Suisun Bay, fall under this category.

The San Francisco Bay Basin Plan identifies the: (1) beneficial water uses that need to be protected; (2) the water quality objectives needed to protect the designated beneficial water uses; and (3) strategies and time schedules for achieving the water quality objectives. The beneficial uses of the Carquinez Strait that must be protected which include water contact and non-contact recreation, navigation, ocean commercial and sport fishing, wildlife habitat, estuarine habitat, fish spawning and migration, industrial process and service supply, and preservation of rare and endangered species. The Carquinez Strait and Suisun Bay are included

on the 1998 California list as impaired water bodies due to the presence of chlordane, copper, DDT, diazinon, dieldrin, dioxin and furan compounds, mercury, nickel, PCBs, and selenium.

Discussion of Impacts

VIII a – j. No significant adverse impacts on hydrology/water quality resources are anticipated from the proposed rule amendments, which would apply to existing industrial facilities. The refineries, chemical plants, gasoline bulk plants and terminals, and other facilities affected by the proposed rule amendments are required to treat and monitor wastewater discharges, as applicable, from their facilities. The increase in monitoring and control of VOC emissions from tanks has no impact on water use, wastewater discharges or drainage patterns. The limitations on steam cleaning that would be imposed by the proposed rule amendments could result in a decrease in water use and subsequent decrease in wastewater generated. The proposed amendments are not expected to require new construction, create additional water runoff, place any additional structures within 100-year flood zones or other areas subject to flooding, or contribute to inundation by seiche, tsunami or mudflow. No major construction activities are expected from the proposed rule amendments and no new structures are required. Therefore, no significant adverse impacts on hydrology/water quality are expected.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX.	**LAND USE AND PLANNING.** Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☑
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to a general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses.

Many of the refineries, chemical plants, gasoline bulk plants and terminals affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties. Other affected facilities are located in industrial areas throughout the Bay Area. Most affected facilities are adjacent to industrial and commercial land uses.

Regulatory Background

Land uses are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

IX a-c. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities within heavy industrial areas. The proposed rule amendments neither require, nor are likely to result in, construction inside or outside of those facilities. The rule amendments impose limitations on the VOC content of cleaning agents used to clean tanks, or allow the use of an abatement device as an alternative to cleaning agent VOC limitations. The construction of new abatement devices is not expected as the abatement devices are usually portable and facilities are expected to comply using the lower VOC cleaning agents. Therefore, no land use impacts are expected.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**MINERAL RESOURCES.** Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the

area. Many of the facilities affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties.

Regulatory Background

Mineral resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

X a-b. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities such as refineries, chemical plants, gasoline bulk plants and terminals within industrial areas. The proposed rule amendments neither require, nor are likely to result in, construction inside or outside of those facilities. The proposed rule amendments are not associated with any action that would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, no impacts on mineral resources are expected.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**NOISE.** Would the project:				
a)	Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☑
b)	Expose persons to or generate of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☑
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
e)	Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

f)	Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. Many of the refineries and chemical plants affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties. Other affected facilities are located in industrial areas throughout the Bay Area. Most affected facilities are surrounded by other commercial and industrial facilities.

Regulatory Background

Noise issues related to construction and operation activities are addressed in local General Plan policies and local noise ordinance standards. The General Plan and noise ordinances generally establish allowable noise limits within different land uses including residential areas, other sensitive use areas (e.g., schools, churches, hospitals, and libraries), commercial areas, and industrial areas.

Discussion of Impacts

XI a-f. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities within industrial areas. The rule amendments impose limitations on the VOC content of cleaning agents used to clean tanks, or allow the use of an air control abatement device as an alternative to cleaning agent VOC limitations. The construction of new abatement devices is not expected as the abatement devices are usually portable, are used on a temporary basis during tank degassing, and facilities are expected to comply using the lower VOC cleaning agents. Increased maintenance will not create noise nor generate additional noise sources. The proposed amendments to the rule will not require the installation of monitoring equipment or generate any additional noise. No new equipment which would generate noise is required as part of the proposed rule amendments. Therefore, no noise impacts are expected.

		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII.	**POPULATION AND HOUSING.** Would the project:				
a)	Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☐	☑
b)	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c)	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. Many of the refineries and chemical plants affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties.

Regulatory Background

Population and housing growth and resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

XII a. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities within industrial areas. The proposed rule amendments neither require nor are likely to result in, construction inside or outside of those facilities. Additional monitoring and inspection activities are expected to be completed by existing workers or contractors. No additional workers are expected to be required at the affected facilities; therefore, no increase in population is expected.

XII b-c. The tanks already exist and are located within the confines of existing refineries, chemical plants, gasoline bulk plants and terminals within industrial areas. No housing would be impacted or removed by the proposed rule amendments and no displacement of housing would occur. Therefore, no significant adverse impacts on population/housing are expected.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES. Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
Fire protection?	☐	☐	☐	☑
Police protection?	☐	☐	☐	☑
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. Many of the facilities affected by the proposed rule amendments are located in the industrial portions of Contra Costa and Solano Counties.

Given the large area covered by the BAAQMD, public services are provided by a wide variety of local agencies. Fire protection and police protection/law enforcement services within the BAAQMD are provided by various districts, organizations, and agencies. There are several school districts, private schools, and park departments within the BAAQMD. Public facilities within the BAAQMD are managed by different county, city, and special-use districts.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate public services are maintained within the local jurisdiction.

Discussion of Impacts

XIII a. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities within industrial areas. The proposed rule amendments do not require the installation of new equipment or require new public services. A reduction in the releases from tank degassing and cleaning should result in a subsequent reduction in hazards associated with those releases. No impacts on the need for fire or police protection are expected. The proposed rule amendments are not expected to require additional workers at the refinery or result in population growth so no impacts on schools or parks are expected. Therefore, no significant adverse impacts on public services are expected.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.?	☐	☐	☐	☑
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that there are numerous areas for recreational activities. The facilities affected by the proposed rule amendments are located in industrial areas throughout the Bay Area. Public recreational land uses are generally not located within the confines of industrial facilities.

Regulatory Background

Recreational areas are generally protected and regulated by the City and/or County General Plans at the local level through land use and zoning requirements. Some parks and recreation areas are designated and protected by state and federal regulations.

Discussion of Impacts

XIV a-b. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities within industrial areas. The proposed rule amendments neither require, nor are likely to result in, construction inside or outside of those facilities. No additional workers are expected to be required at the affected facilities, no increase in population is expected and, therefore, no significant adverse impacts on recreation are expected.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV.	**TRANSPORTATION/TRAFFIC.** Would the project:				
a)	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☑
b)	Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d)	Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☑
e)	Result in inadequate emergency access?	☐	☐	☐	☑
f)	Result in inadequate parking capacity?	☐	☐	☐	☑
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles). Transportation systems located within the Bay Area include railroads, airports, waterways, and highways. The Port of Oakland and three international airports in the area serve as hubs for commerce and transportation. The transportation infrastructure for vehicles and trucks in the Bay Area ranges from single lane roadways to multilane interstate highways. The Bay Area contains over 19,600 miles of local streets and roads, and over 1,400 miles of state highways. In addition, there are over 9,040 transit route miles of services including rapid rail, light rail, commuter, diesel and electric buses, cable cars, and ferries. The Bay Area also has an extensive local system of bicycle routes and pedestrian paths and sidewalks. At a regional level, the share of workers driving alone was about 68 percent in 2000. The portion of commuters that carpool was about 12.9 percent in 2000. About 3.2 percent of commuters walked to work in 2000. In addition, other modes of travel (bicycle, motorcycle, and other) account for 2.2 percent of commuters in 2000 (MTC, 2004).

Cars, buses, and commercial vehicles travel about 143 million miles a day (2000) on the Bay Area Freeways and local roads. Transit serves about 1.7 million riders on the average weekday (MTC, 2004).

The region is served by numerous interstate and U.S. freeways. On the west side of San Francisco Bay, Interstate 280 and U.S. 101 run north-south. U.S. 101 continues north of San Francisco into Marin County. Interstates 880 and 660 run north-south on the east side of the Bay. Interstate 80 starts in San Francisco, crosses the Bay Bridge, and runs northeast toward Sacramento. Interstate 80 is a six-lane north-south freeway which connects Contra Costa County to Solano County via the Carquinez Bridge. State Routes 29 and 84, both highways that allow at-grade crossings in certain parts of the region, become freeways that run east-west and cross the Bay. Interstate 580 starts in San Rafael, crosses the Richmond-San Rafael Bridge, joins with Interstate 80, runs through Oakland, and then runs eastward toward Livermore. From the Benicia-Martinez Bridge, Interstate 680 extends north to Interstate 80 in Cordelia. Caltrans constructed a second freeway bridge adjacent and east of the existing Benicia-Martinez Bridge. The new bridge consists of five northbound traffic lanes. The existing bridge was re-striped to accommodate four lanes for southbound traffic. Interstate 780 is a four lane, east-west freeway extending from the Benicia-Martinez Bridge west to I-80 in Vallejo.

Regulatory Background

Transportation planning is usually conducted at the county level. Many of the industrial facilities affected by the proposed rule amendments are located in Contra Costa and Solano Counties. The County of Contra Costa and the Contra Costa Transportation Authority share the duties of transportation planning and administration of improvement projects in the County of Contra Costa. The Contra Costa County Community Development Department conducts and oversees the transportation and planning for new development projects. The Contra Costa Transportation Agency implements the transportation programs and projects created by the County's Measure C, the Transportation Improvement and Growth Management Program, and also serves as the County's Congestion Management Agency.

The Solano Transportation Authority is the designated Congestion Management Agency for Solano County and develops the Congestion Management Plan (CMP) for Solano County. The CMP identifies a system of state highways and regionally significant principal arterials and specifies level of service standards for those roadways.

Other facilities affected by the proposed amendments are scattered throughout the Bay Area, and in each county, the local transportation and congestion management authorities address transportation planning for the county.

Discussion of Impacts

XV a-b. The tanks affected by the proposed rule amendments already exist and are located within the confines of existing facilities within industrial areas. The proposed rule amendments are not expected to require construction activities or the installation of new equipment. Additional inspection and monitoring is expected to be conducted by existing workers or existing contractors so that no additional vehicle trips are expected to be required. No changes to traffic patterns or levels of service at local intersections are expected. Therefore, no adverse significant impacts to traffic are expected.

XV c. The proposed rule amendments include minor modifications to the operation of existing facilities. The project will not involve the delivery of materials via air so no increase and no adverse impacts in air traffic are expected.

XV d - e. The proposed rule amendments are not expected to increase traffic hazards or create incompatible uses at or adjacent to the site. Emergency access provided at the most industrial facilities, will continue to be maintained and will not be impacted by the proposed rule amendments.

XV f. No construction activities are expected, so no parking is required for construction workers. No increase in permanent workers is expected. Therefore, the proposed rule amendments will not result in significant adverse impacts on parking.

XV g. The proposed rule amendments involve better enforcement of Rule 8-5 for affected facilities. The proposed rule amendments are not expected to conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks).

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑

b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	☐	☐	☐	☑
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☑
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☑
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area.

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. The refineries, chemical plants, gasoline bulk plants and terminals, and other affected facilities have wastewater and storm water treatment facilities and discharge treated wastewater under the requirements of NPDES permits.

Water is supplied to affected facilities by several water purveyors in the Bay Area. Solid waste is handled through a variety of municipalities, through recycling activities and at disposal sites.

There are no hazardous waste disposal sites within the jurisdiction of the BAAQMD. Hazardous waste generated at area facilities, which is not reused on-site, or recycled off-site, is disposed of at a licensed in-state hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow (Kern

County). Hazardous waste can also be transported to permitted facilities outside of California. The nearest out-of-state landfills are U.S. Ecology, Inc., located in Beatty, Nevada; USPCI, Inc., in Murray, Utah; and Envirosafe Services of Idaho, Inc., in Mountain Home, Idaho. Incineration is provided at the following out-of-state facilities: Aptus, located in Aragonite, Utah and Coffeyville, Kansas; Rollins Environmental Services, Inc., located in Deer Park, Texas and Baton Rouge, Louisiana; Chemical Waste Management, Inc., in Port Arthur, Texas; and Waste Research & Reclamation Co., Eau Claire, Wisconsin.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate utilities and service systems are maintain within the local jurisdiction.

Discussion of Impacts

XVI a, b, d and e. No significant adverse impacts on utilities and service systems are anticipated from the proposed rule amendments that would apply to existing refinery, chemical plant, gasoline bulk plant and terminal operations. Condensation, a less common emission control technology, could be used to comply with some of the proposed rule amendments. Condensation would be expected to generate an organic liquid stream (which can be reused/recycled) and residual water. The residual water generated is expected to be in very low volume because the bulk of the condensate would be organic liquids. A small increase in wastewater could be generated using this control technology, which is expected to be handled by the existing wastewater discharge permit. Therefore, no significant impacts on water use or wastewater discharges are expected. No increases in demand for public utilities are expected as a result of the proposed rule amendments; therefore, no adverse significant impacts are expected.

XVI c. The proposed rule amendments are not expected to require the construction of additional permanent equipment at the affected facilities. Therefore, no changes to or increases in storm water are expected due to the proposed rule amendments.

XVI f and g. The proposed control measures may generate additional solid or hazardous waste in the form of carbon used to control organic emissions, should facilities choose to comply using control devices that consist of activated carbon filters. The additional volume of carbon is not expected to be significant since most facilities are expected to comply using low VOC cleaning agents and carbon is usually collected and regenerated so that little additional solid waste would be expected. The proposed rule amendments would not affected the ability of facilities to comply with federal, state, and local statutes and regulations related to solid waste. No significant impacts on waste generation are expected from the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII.	**MANDATORY FINDINGS OF SIGNIFICANCE.**				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☑
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☐	☑
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☑

Discussion of Impacts

XVII a. The proposed rule amendments do not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist. The proposed rule amendments are expected to result in emission reductions from refineries, chemical plants, gasoline bulk plants and terminals, and other affected facilities, thus providing a beneficial air quality impact and improvement in air quality. No significant adverse impacts are expected.

XVII b. The proposed amendments are expected to enhance the District's ability to enforce the Regulation 8, Rule 5 and enhance the operator's ability to detect tanks roof releases. The proposed rule amendments are expected to result in emission reductions from affected facilities, thus providing a beneficial air quality impact and improvement in air quality. The proposed rule amendments are part of a long-term plan to bring the Bay Area into compliance with the state ambient air quality standards for ozone. The proposed rule amendments do not have adverse environmental impacts that are limited individually, but cumulatively

considerable when considered in conjunction with other regulatory control projects. The proposed rule amendments are not expected to have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. No significant adverse impacts are expected.

XVII c. The proposed rule amendments are expected to result in emission reductions from affected facilities, thus providing a beneficial air quality impact and improvement in air quality. The proposed rule amendments are part of a long-term plan to bring the Bay Area into compliance with the state ambient air quality standards for ozone, thus reducing the potential health impacts due to ozone exposure. The proposed rule amendments are not expected to have significant adverse effects (either directly or indirectly) to human beings.

HLH\2487-BAAQMD\2487R8.3ChckList..doc

Chapter 4

References

Bay Area Air Quality Management District (BAAQMD), 2001. Revised 2001 San Francisco Bay Area Ozone Attainment Plan for the 1-hour National Ozone Standard, adopted October 24, 2001.

BAAQMD, 2001. Toxic Air Contaminant 2000 Annual Report. December 2001.

BAAQMD, 2002. 2002 BAAQMD Ambient Air Quality Data.

BAAQMD, 2004. Initial Study/Negative Declaration for the Amendments to Bay Area Air Quality Management District Regulation 8, Rule 8. June 2004.

BAAQMD, 2005. Draft Staff Report, Proposed Amendments to Regulation 8, Rule 28: Episodic Releases from Pressure Relief Devices at Petroleum Refineries and Chemical Plants, August 12, 2005.

BAAQMD, 2006. Bay Area 2005 Ozone Strategy, January 4, 2006

BAAQMD, 2006. Workshop Report, Proposed Amendments to Regulation 8, Rule 5: Storage of Organic Liquids, June 2006.

M:\HLH\3333-BAAQMD\3333-R8Ch4-Refs.doc