



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS' REGULAR MEETING

August 5, 2009

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
AUGUST 5, 2009
9:45 A.M.

BOARD ROOM
7TH FLOOR

CALL TO ORDER

Opening Comments
Roll Call
Pledge of Allegiance
Proclamation/Commendations

Chairperson, Pamela Torliatt
Clerk of the Boards

PUBLIC COMMENT PERIOD

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

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)

CONSENT CALENDAR (ITEMS 1 – 4)

Staff/Phone (415) 749-

1. Minutes of July 1, 2009

L. Harper/5073

lharp@baaqmd.gov

2. Communications

J. Broadbent/5052

jbroadbent@baaqmd.gov

Information only.

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

J. Broadbent/5052

jbroadbent@baaqmd.gov

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

4. Quarterly Report of Air Resource Board Representative - Honorable Ken Yeager

J. Broadbent/5052

jbroadbent@baaqmd.gov

5. Quarterly Report of the Executive Office Activities

J. Broadbent/5052

jbroadbent@baaqmd.gov

COMMITTEE REPORTS AND RECOMMENDATIONS

6. Report of the **Stationary Source Committee Meeting** of July 13, 2009
CHAIR: G. GIOIA
J. Broadbent/5052
jbroadbent@baaqmd.gov
7. Report of the **Ad Hoc Committee on Port Emissions Meeting** of July 16, 2009
CHAIR: N. MILEY
J. Broadbent/5052
jbroadbent@baaqmd.gov
- Action(s): The Committee may recommend Board of Directors' approval of the following:*
- A) *Allocation of \$750,000 in funding to support emissions reductions projects at the Port of Oakland seaport.*
- B) *Referral to and recommendation by the Budget and Finance Committee to transfer \$750,000 in funding from reserves to the fiscal year 2009/10 budget.*
8. Report of the **Executive Committee Meeting** of July 29, 2009
CHAIR: P. TORLIATT
J. Broadbent/5052
jbroadbent@baaqmd.gov

PUBLIC HEARING

9. Public Hearing to consider adoption of proposed amendments to Regulation 8, Rule 32: Wood Products Coatings; Manual of Procedures, Volume I, Number 6: Emissions Averaging Procedure; and Adoption of a CEQA Negative Declaration
H. Hilken/4642
hhilken@baaqmd.gov

Proposed amendments to Regulation 8, Rule 32 reduce volatile organic compound (VOC) emissions from the application of stains, sealers and other types of coatings to wood products and from surface preparation and clean-up solvents used in the wood products industry. Wood products include kitchen cabinets, wood furniture, bathroom vanities, picture frames, outdoor speakers, architectural millwork and other wood products. The District proposed to consider VOC reductions under the 2005 Ozone Strategy Control Measure SS-5.

CLOSED SESSION

10. Conference with Legal Counsel – Existing Litigation
- Pursuant to Government Code Section 54956.9(a), a need exists to meet in closed session with legal counsel to consider the following cases:*
- Chevron Products Company, et al. v. Communities for a Better Environment, et al.**, California Court of Appeals, 1st Dist., Case No. A125531*
 - Richard M. Peekema v. Bay Area AQMD**, United States District Court, N.D. Cal., Case No. C09 03283 RS*

OPEN SESSION

OTHER BUSINESS

11. Report of the Executive Officer/APCO
12. Chairperson's Report
13. Time and Place of Next Meeting – 9:45 A.M. Wednesday, September 2, 2009 - 939 Ellis Street, San Francisco, CA 94109
14. Adjournment

CONTACT EXECUTIVE OFFICE - 939 ELLIS STREET SF, CA 94109

(415) 749-5130
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 Executive Office should be given at least 3 working days prior to the date of the meeting so that arrangements can be made accordingly.
- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the Air District's headquarters at 939 Ellis Street, San Francisco, CA 94109, at the time such writing is made available to all, or a majority of all, members of that body. Such writing(s) may also be posted on the Air District's website (www.baaqmd.gov) at that time.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET, SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

EXECUTIVE OFFICE:
MONTHLY CALENDAR OF DISTRICT MEETINGS

AUGUST 2009

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|---|------------|-------------|-------------|-------------------------------------|
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 5 | 9:45 a.m. | Board Room |
| Board of Directors Climate Protection Committee <i>(Meets 2nd Thursday each Month)</i> - CANCELLED | Thursday | 13 | 9:30 a.m. | 4 th Floor Conf. Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> - CANCELLED | Wednesday | 19 | 9:45 a.m. | Board Room |
| Board of Directors Mobile Source Committee – <i>(Meets 4th Thursday of each Month)</i> - CANCELLED | Thursday | 27 | 9:30 a.m. | 4 th Floor Conf. Room |

SEPTEMBER 2009

| <u>TYPE OF MEETING</u> | <u>DAY</u> | <u>DATE</u> | <u>TIME</u> | <u>ROOM</u> |
|---|------------|-------------|-------------|---|
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 2 | 9:45 a.m. | Board Room |
| Advisory Council Regular Meeting | Wednesday | 9 | 9:00 a.m. | Board Room |
| Board of Directors Climate Protection Committee <i>(Meets 2nd Thursday each Month)</i> | Thursday | 10 | 9:30 a.m. | 4th Floor Conf. Room |
| Board of Directors Regular Meeting <i>(Meets 1st & 3rd Wednesday of each Month)</i> | Wednesday | 16 | 9:45 a.m. | Board Room |
| Joint Policy Committee | Friday | 18 | 10:00 a.m. | MTC Auditorium 101 8 th Street Oakland, CA 94607 |
| Board of Directors Mobile Source Committee – <i>(Meets 4th Thursday of each Month)</i> | Thursday | 24 | 9:30 a.m. | 4 th Floor Conf. Room |

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 24, 2009

Re: Board of Directors' Draft Meeting Minutes

RECOMMENDED ACTION:

Approve attached draft minutes of the Board of Directors Regular Meeting of July 1, 2009.

DISCUSSION

Attached for your review and approval are the draft minutes of the Board of Directors Regular Meeting of July 1, 2009.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 749-5000

Board of Directors' Regular Meeting
July 1, 2009

DRAFT MINUTES

CALL TO ORDER: Chairperson Pamela Torliatt called the meeting to order at 9:48 a.m.

Roll Call: Chairperson Pamela Torliatt, Vice Chairperson Brad Wagenknecht, Secretary Tom Bates and Directors Chris Daly, John Gioia, Carole Groom, Scott Haggerty, Jennifer Hosterman, Yoriko Kishimoto, Carol Klatt, Eric Mar, Nate Miley, Mark Ross, Michael Shimansky and Gayle B. Uilkema

Absent: Harold Brown, Susan Garner, John Gioia, Liz Kniss, James Spring, Ken Yeager and Shirlee Zane

PLEDGE OF ALLEGIANCE: Alison Keane led the Pledge of Allegiance.

Public Comments: Francisco DeCosta questioned proper legal posting of agendas on the Air District's website and expenditure of Lennar settlement funds.

Boardmember Comments:

Chairperson Torliatt questioned and confirmed with Mr. Bunger the Air District's legal standard for noticed meetings and physical and website postings of agendas.

Executive Officer/APCO Jack Broadbent reported that extensive work has been completed by staff regarding Lennar settlement dollars. The District has engaged the community to develop a series of tools which can be duplicated elsewhere in the Bay Area. There are a number of viable projects in communities and a plan will be presented at the July 13th Stationary Source Committee meeting as part of a report on high profile facilities.

Proclamation(s)/Awards

The Board of Directors recognized the following employees who have completed milestones of 25, 30 and 40 years of service with the Air District during this first half of the calendar year:

25 Years: Steven Chin, Emmanuel Jimenez, Scott Lutz, and Michelle Torres
30 Years: Virginia Manalo
40 Years: Tom Story

CONSENT CALENDAR (Items 1-7):

1. Approval of Minutes of June 3, 2009 Regular Meeting;
2. Communications;
3. District Personnel on Out-of-State Business Travel;
4. Quarterly Report of the Executive Office Activities;

Director Shimansky requested removal of Items 5, 6 and 7.

Board Action: Director Wagenknecht made a motion to approve Consent Calendar Items 1, 2, 3 and 4; Director Kishimoto seconded the motion; carried unanimously without opposition.

Items Removed from Consent Calendar:

5. Consideration of Authorization for Execution of Purchase Order in Excess of \$70,000 Pursuant to Administrative Code Division II Fiscal Policies and Procedures Section 4.3 Contract Limitations
6. Consideration of an Amendment to a Contract for the West Oakland Measurement Study
7. Set Public Hearing for August 5, 2009 to Consider Proposed Amendments to Regulation 8, Rule 32: Wood Products Coatings; Manual of Procedures, Volume I, Number 6: Emissions Averaging Procedure; and Adoption of a CEQA Negative Declaration

Director Shimansky questioned why Items 5 and 6 had not been agendaized for review by a Committee. Mr. McKay explained that the items are budgeted and their expedient approval was necessary. Ms. Roggenkamp noted that Item 6 is also a budgeted item and is the request is to augment funds for an existing contract.

Mr. Broadbent explained that Item 7 is to set a public hearing August 5 and staff recommends cancellation of the July 15th and August 19th Board meetings. Chairperson Torliatt requested that staff poll Directors as to their availability for an August 5th Board meeting.

Board Action: Director Shimansky made a motion to approve Consent Calendar Items 5, 6 and 7; Director Klatt seconded the motion; carried unanimously without opposition.

COMMITTEE REPORTS AND RECOMMENDATIONS:

Report 8. Mobile Source Committee Meeting
June 25, 2009
Report given by Chairperson S. Haggerty

May 28, 2009 Committee minutes approved.

Discussion/Actions:

The Mobile Source Committee met on Thursday, June 25, 2009 and approved the Minutes of the May 28, 2009 meeting.

The Committee considered Board of Directors' approval of the Carl Moyer Program Off-Road Equipment Replacement Program and discussed program guidelines, eligible projects, cost effectiveness, total emissions reductions, existing and future District outreach efforts.

The Committee recommends Board of Directors' approval of:

1. Implementation of an Off-Road Equipment Replacement Program component of the Carl Moyer Program; and
2. Authorization for the Executive Officer/APCO to execute contracts with vendors and dismantlers to implement the Carl Moyer Program Off-Road Equipment Replacement Program.

The Committee then considered Board of Directors' approval of Carl Moyer Program Year 11 Projects with Proposed Grant Awards over \$100,000 and discussed recommended grant awards, eligible projects, emissions reductions and cost-effectiveness, marine-related and agricultural project applications. The Committee recommends Board of Directors' approval of:

1. Carl Moyer Program Year 11 projects with proposed grant awards over \$100,000; and
2. Authorization for the Executive Officer/APCO to enter into agreements for the recommended Carl Moyer Program Year 11 projects.

The Committee then received the FY 2009/2010 Bicycle Facility Program: Annual Report for FY 2008/2009 and considered the proposed revisions to Policies and Program funding allocation for FY 2009/2010. The Committee discussed definitions of Class I, II and III bikeways, the availability of funding to local agencies, and requested that staff investigate the possibility of a pooled purchase for bicycle rack and locker equipment. The Committee also discussed the possibility of increasing the funding allocation for the FY 09/10 Bike Facility Program and requested staff to return to the Mobile Source Committee with information about the program's history and a proposal to increase the program's funding allocation.

The Committee recommends that the Board of Directors:

1. Receive and file the Annual Report for the Bicycle Facility Program for Fiscal Year 2008/2009;
2. Approve the proposed Bicycle Facility Program Policies, presented in Attachment B, for use in Fiscal Year 2009/2010 and in subsequent years; and
3. Approve the allocation of \$600,000 in TFCA Regional Funds to the Bicycle Facility Program for Fiscal Year 2009/2010, and the authorization for the Executive Officer/APCO to execute funding agreements in accordance with the Board-approved Bicycle Facility Program Policies.

The next meeting of the Mobile Source Committee is scheduled for Thursday, July 23, 2009.

Board Action: Director Haggerty made a motion to approve the report and recommendation of the Mobile Source Committee; Director Kishimoto seconded the motion; carried unanimously without opposition.

Report 9. Executive Committee Meeting
June 29, 2009
Report given by Chairperson P. Torliatt

May 18, 2009 Committee minutes approved.

Discussion/Actions:

The Committee then received an update on the Joint Policy Committee from Ted Droettboom on six climate change priorities approved by the JPC for the 2009/2010 fiscal year, which include:

1. A Sustainable Community Strategy pursuant to SB 375

2. An Indirect Source Rule;
3. Parking policies relating to climate change;
4. Implementation of electric and alternative fuel vehicles, noting that the Air District has submitted a grant under the Federal Stimulus Program to facilitate fleet purchases and infrastructure;
5. Solar Installation Energy Finance Program, which is being led by ABAG and intended to be an extension of the program implemented in Berkeley; and
6. Adaptation, principally around sea level rise which is being led by BCDC and ABAG, and looks at development implications of a linear rise and a certain 16-inch sea level rise by 2050.

Mr. Droettboom reported that the JPC proposes the formation of Climate Bay Area, an organizational entity which recognizes the hundreds of climate initiatives across the Bay Area and intended to be led by regional agencies in partnership with business organizations. The JPC also proposes a Sustainable Community Strategy, to be developed as a genuine partnership between regional agencies and local governments and as an integrated land use and transportation plan which will serve to reduce CO₂ from automobile and light trucks across the region.

The Committee briefly discussed examples of sea level rise asked that a mechanism be in place for participation of stakeholders and environmental justice advocates, requested the Climate Bay Area be more clearly defined; that it identify how people are appointed and whether it is objective or policy-based and that the JPC revisit the policy of requiring a percentage of housing to be affordable.

The Committee then received an update and discussed objectives of the Air District's CEQA guidelines, the Air District's participation and lead on statewide CEQA & land use issues, thresholds of significance for greenhouse gas, toxic air contaminants, criteria pollutants, plan level thresholds, and their analytical methodologies.

The Committee then received an update on the Air District's 2009 Clean Air Plan and discussed its purpose, progress to date, benefits of multi-pollutant planning, and evaluation and stages of methodologies. The Clean Air Plan's framework includes various mobile and stationary source measures and land use/local impacts and strategies. The Clean Air Plan will be brought to the Joint Policy Committee in September where additional perspectives can be heard by regional agencies.

The Committee deferred discussion of the Strategic Facility Visioning Process and discussions to amend the Air District's Administrative Code regarding the Board of Directors Officers' Term of Office to the next Executive Committee meeting in July.

The Committee also deferred an overview of select milestones/activity for 2008/2009, which will be presented by the Executive Officer/APCO at today's Board of Directors' meeting. The Committee considered sending a letter of support for appointment to the California Air Resources Board. After a brief discussion, the Committee provided direction to staff to develop a policy relative to letters of support for appointments to the Air Resources Board.

The Committee then adjourned to Closed Session, pursuant to Government Code Section 54957 and 54957.6, to conduct performance evaluations of the Executive Officer/APCO and District Counsel. The Committee reconvened in Open Session and had no reportable action. The next meeting of the Committee is at the call of the Chair.

Board Action: Chairperson Torliatt made a motion to approve the report of the Executive Committee; Director Wagenknecht seconded the motion; unanimously approved without objection.

PUBLIC HEARING:

Public Hearing to Consider Adoption of proposed amendments to Regulation 8, Rule 3: Architectural Coatings, and adoption of a CEQA Negative Declaration – Staff Presentation by Principal Air Quality Specialist Victor Douglas

Recommendation: Adopt proposed Amendments to Regulation 8, Rule 3: Architectural Coatings and CEQA Negative Declaration.

Overview:

Mr. Douglas gave a presentation on regulatory review, labeling requirements, the regulatory proposal, current and proposed VOC limits, emissions and reductions, costs and cost effectiveness, the rule development process, and the following response to comments:

- Continue working on inclusion of a reactivity option – He said VOCs have varying abilities to form ozone in the atmosphere. The formability is called reactivity. Regulating compounds is another option for reducing ozone and staff believes reactivity may be appropriate and a feasible option can lead to greater reduction in ozone formations for coating regulations. However, during the rule development process, staff was not able to quickly reach consensus on the form of the reactivity stand it should take. Staff believes this should not hinder the implementation of the proposal and reduction of emissions that would be achieved. They are committed to continuing to work with the ARB, manufacturers, and EPA on developing a reactivity option for this and other coating rules.
- Another comment requested exempting TBAC as a VOC in this rule. Staff concluded that under Rule 8-45 Auto Body Refinishing operations, that available data on TBAC raised concerns about cancer health effects. The California Office of Environmental Health Hazard Assessment (OEHHA) recommended in testimony to the Board that the District not exempt TBAC as a VOC, and staff believes they are the best agency to make findings on compounds.
- Staff is confident that the proposed VOC limits can be met without reliance on TBAC. There are many coatings that are not formulated with TBAC, and further, the ARB did not exempt TBAC in the Architectural Coating Suggested Control Measures (SCM) or in the Aerosol Coating Rule. Therefore, TBAC is not exempted in this proposal.
- The proposal extends the compliance date by one year, as recommended in the 2000 SCM.
- Staff was requested to make modifications to labeling requirements which were made to allow greater flexibility. Further, minor changes were requested to be made in the definitions which were also done where appropriate.
- Corrected typographical errors

Director Comments/Questions:

Director Shimansky referred to VOC current and proposed limits and questioned why equal limits were not being set for all coating categories. Mr. Douglas explained there are different coatings and

flats have different properties and needs. Aluminum roofing coatings are used to weather conditions and their formulation must be different. The way paints dry and settle and reacts with substrates requires different formulations, therefore, it may require more VOCs than typical house paint.

Director Ross questioned the reason why certain lacquers have recommended guidelines for temperatures above and below 65°. Mr. Douglas discussed the formulation of lacquers, said humidity associated with temperature affects lacquers and it takes longer to cure when applied in a humid environment.

Director Kishimoto questioned any consequences of substituting chemicals to reduce VOC limits by manufacturers. Mr. Douglas said when coating manufacturers experiment and formulate products to reduce VOC limits and meet regulations they operate independently; certain products set the foundation for VOC limits. Some compounds can be substituted for exempt compounds, and because health effects for TBAC are not resolved staff does not want to allow their use as an exempt compound. She confirmed that the District does not tell manufacturers what they can and cannot use as long as they do not exceed VOC limits.

Director Hosterman questioned the timeframe for implementation of the new regulation, and Mr. Douglas said the new regulation is proposed to take effect January 1, 2011, and there are four more categories proposed for next January.

Chairperson Torliatt opened the public hearing.

Public Comments:

Alison Keane, National Paint and Coatings Association, Washington D.C., said they are happy the District adopted the ARB SCM for uniformity purposes. Their comments focus on where they saw differences with the ARB's SCM and the District's Rule:

1. Rust preventative coatings in the Aesthetic Compliance Section, Definitions, where the District uses a double negative; "Cannot be used for other than non-industrial purposes." She proposed it simply say it must be "for industrial use only."
2. In the Industrial Maintenance Sections, they are concerned with label statement changes, particularly with those with labels in stock. They would like to see all four standard label requirements instead of the two currently listed.
3. For Zinc-Rich Primers, they want to see all four label statements included. At the very least it should say "for professional use only" as well as "for industrial use only."
4. Staff has introduced the definition of medium density fiberboard and they agree with this.
5. The Sales Data Section inadvertently cited only one of two provisions they need for calculating VOC regulatory and they need both low solid and non-low-solid calculations, which she said has been done.
6. Regarding TBAC and unintended consequences of substituting a VOC or solvent to get VOC emission reductions, they strongly suggest that the Air District exempt TBAC. They need safe alternative substitutes. It has already been exempted in 49 states, 13 counties, for IM coatings at the South Coast and all end coatings in San Joaquin.

Robert Wendoll, Director, Dunn-Edwards Corporation, said he supports the Air District Rule implementing the SCM as given, except for minor modifications for statewide uniformity. He thanked Air District staff for their work in devising a transition mechanism for a phasing out process, for

clarification to written responses and comments on the question of whether the sell-through provision would apply to coatings in categories to be deleted, and for staff's work in investigating the possibility of a reactivity based option for the Rule.

Jim Nyarady, ARB, supported proposed amendments, said they developed the SCM through an extensive two year public process and found all limits are technically and commercially feasible. He discussed the variety of data sources on which they relied, and said the rule will reduce emissions by over 5 tons per day in the Bay Area. The District will be the first to incorporate the 2007 SCM into its Architectural Coatings Rule and they believe the current data supports the proposed limits as technologically and commercially feasible and urged the Board to adopt the amendments.

Ryan Kenny, Solvents Industry Group of the American Chemistry Council (SIG), said SIG strongly supports the adoption of reactivity based standards as a sole compliance option or at least as an alternative compliance option for all product categories and urges the District to include a Board Resolution committing the District to work on reactivity based approach for future architectural coating rules which would provide a highly efficient means for reducing ozone and afford industry formulation flexibility. The reactivity based rules are cost effective, enforceable, and promote the use of less toxic compounds.

Chairperson Torliatt closed the Public Hearing.

Committee/Staff Discussion & Comment:

Mr. Broadbent stated that in response to reactivity based standards, District staff is committed to evaluate and pursue reactivity based standards, has included it as part of the further study measure as part of the Clean Air Plan, and the District is not comfortable in recommending this type of approach at this time. There are complexities to work out and regulating the products have merit and possibilities for future amendments to the regulation, but staff is not prepared to recommend a reactivity based approach in the current amendments. He requested staff address public comments regarding labeling and other comments.

Mr. Dan Belik explained that staff tried adding labeling requirements contained in the draft so there is some flexibility which is consistent with the suggested control measure. They also heard a comment about a double negative and they worked through this and referenced the legal definition of non-industrial. They believe it is ultimately clearer and understood by all manufacturers and enforcers.

Mr. Broadbent confirmed with Chairperson Torliatt that staff was not suggesting any further amendments and industry representatives have participated and provided input.

Director Hosterman questioned the first speaker's request for exemption. Mr. Broadbent said TBAC is a particular compound the District believes should not be exempted due to the finding of toxic cancer impacts associated with coatings. Other air districts have allowed this, but they are also in the process of re-evaluation.

Mr. Douglas reiterated that the South Coast allowed TBAC for one category; industrial maintenance coatings, but they have a 100 g/l on the coating and it is used in a narrow field. In the Bay Area's proposal, they have a 250 g/l limit and feel confident that at that level, it can be formulated without the use of TBAC. Mr. Broadbent feels the more prudent thing to do is not to exempt it, continue to

monitor health information associated with TBAC and if staff feels its use would not create a toxic impact, a further amendment can be brought forward.

Director Uilkema questioned when the District would conduct further review. Mr. Broadbent said architectural coatings represent the largest stationary source emissions in terms of VOC and is continually reviewed. They have included it as part of a measure in the Clean Air Plan, which will occur in a couple of years.

Director Kishimoto questioned if reactivity based standards was more of a performance based standard, and Mr. Broadbent said all VOCs in paints do not create ozone the same. There has been a concerted effort to have a standard that would treat VOCs differently and the District is supportive of this approach. To make further gains in this source category, it makes sense to thoroughly review its regulation and implementation. He noted the federal EPA has encouraged Air Districts to consider this and it will be included it as part of the Clean Air Plan. Mr. Douglas added that the ARB did adopt an Aerosol Rule solely based on reactivity.

Vice Chair Wagenknecht complimented staff on their work and responsiveness to comments in amending the Regulation 8, Rule 3.

Board Action: Director Uilkema made a motion to adopt the Resolution approving proposed amendments to Regulation 8, Rule 3: Architectural Coatings; and adopt a California Environmental Quality Act (CEQA) Negative Declaration; Director Hosterman seconded the motion; carried unanimously without opposition.

CLOSED SESSION:

Public Employee Performance Evaluations (Government Code Section 54957 and 54957.6 - Pursuant to Government Code Section 54957 and 54957.6, the Board of Directors met in closed session to conduct performance evaluations of the Executive Officer/APCO and District Counsel.

Chairperson Torliatt deferred the Closed Session matter to the August 5, 2009 meeting.

OTHER BUSINESS:

Report of Executive Officer/APCO: Mr. Broadbent introduced Ms. Jennifer Chicconi, Manager of Executive Operations, formerly with Allied Waste, EPA and the South Coast Air District.

Mr. Broadbent presented a Summary of 2009 Ozone Season through June 30, 2009 and milestones underway and those completed to date. He provided an update on the Port Truck Emissions Reduction Project, stating that the new Rule takes effect January 1st and staff expects to continue to receive retrofit applications throughout July and August.

Director Uilkema confirmed with Chairperson Torliatt that the Executive Committee will discuss the Air District Foundation at their July 29th meeting. Chairperson Torliatt also requested an explanation and update be provided by staff at the July 29th meeting regarding a 2009 completion date for the ISR Rule.

Chairperson's Report: Chairperson Torliatt announced the cancellation of the July 15, 2009 Board of Directors meeting and requested that staff poll Directors as to their availability on August 5, 2009.

Vice Chairperson Wagenknecht, Directors Haggerty, Ross and Uilkema provided a brief report on their attendance at the A&WMA Conference held June 16-19, 2009 in Detroit, Michigan.

Board Member Comments: Secretary Bates reported that the Legislative Committee took a position on Assemblymember DeSaulnier's Bill for an increase on vehicle license fees, which he reported was moving forward.

Time and Place of Next Meeting: Regular Meeting - Wednesday, July 15, 2009 - 939 Ellis Street, San Francisco, CA 94109

Adjournment: Meeting adjourned at 11:21 a.m.

Lisa Harper
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 29, 2009

Re: Board Communications Received from July 1, 2009 through August 4, 2009

RECOMMENDED ACTION:

Receive and file.

DISCUSSION

A list of Communications received by the Air District from July 1, 2009 through August 4, 2009, if any, will be at each Board member's place at the August 5, 2009 Regular Board meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

BAY AREA AIR QUALITY MANGEMENT DISTRICT

Memorandum

To: Chair Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 22, 2009

Re: District Personnel on Out-of-State Business Travel

RECOMMENDED ACTION:

Receive and file.

BACKGROUND

In accordance with Section 5.4 (b) of the District's Administrative Code, Fiscal Policies and Procedures Section, the Board is hereby notified that the following District personnel have traveled on out-of-state business.

The out-of-state business travel summarized below covers the period from July 1 – July 31, 2009. Out-of-state travel is reported in the month following travel completion.

DISCUSSION

There were no employees who traveled out of state in the Month of July, 2009.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Linda J. Serdahl, CPA, CFE
Reviewed by: Jeffrey M. McKay



Linda S. Adams
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Arnold Schwarzenegger
Governor

TO: Members of the Board of Directors

FROM: Honorable Ken Yeager *KY*
Board Member

DATE: July 2, 2009

SUBJECT: QUARTERLY REPORT OF MY ACTIVITIES AS AN AIR RESOURCES BOARD MEMBER

The list below summarizes my activities as an Air Resources Board member from April 1 through June 30, 2009:

April Activities

- 2nd Meeting with Western States Petroleum Association re Low Carbon Fuel Standard (LCFS)
- 15th Air Resources Board Staff Briefings
- 16th Met with American Lung Association of Calif., Better World Group, Sierra Club and Friends of the Earth re LCFS
- 20th Call with Calif. Natural Gas Vehicle Coalition re LCFS
- 23rd & 24th Air Resources Board Meeting, Sacramento

May Activities

- 22nd Air Resources Board Staff Briefing
- 27th Met with 3Prong Power re Aftermarket Parts Certification for PHEV
- 28th Air Resources Board Meeting, Sacramento

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Members of Board of Directors
July 2, 2009
Page 2

June Activities

- 12th Met with California Strategies and their client Southwall Technologies re Cool Car Standards
- 22nd Air Resources Board Staff Briefings
- 22nd Met with Members of California Trucking Association re TRU Regulation
- 25th & 26th Air Resources Board Meeting, Sacramento
- 26th Pre-Confirmation Hearing Meeting with Director, Senate Rules & Appointments

Attachments: Public Agendas

**LOCATION:**

Air Resources Board
1001 I Street, 2nd Floor
Byron Sher Auditorium
Sacramento, California 95814

PUBLIC MEETING AGENDA**April 23 & 24, 2009****Webcast****Electronic Board Book**

This facility is accessible by public transit.
For transit information, call: (916) 321-BUSS,
website <http://www.sacrt.com/> (This facility is
accessible to persons with disabilities.)

**TO SUBMIT WRITTEN COMMENTS
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OF THE MEETING GO TO:**

<http://www.arb.ca.gov/lispub/comm/bclist.php>

April 23, 2009**9:00 a.m.****DAY-ONE****Agenda Item #****Agenda Topic****09-4-1:**

Health Update: Asthma Onset and Exacerbation in Children Exposed to Traffic-Related Air Pollution

Staff will present highlights of a study which investigated the relationship between childhood asthma and air pollution in Southern California. The investigators found a significant increase in asthma onset in children exposed to increased levels of traffic-related air pollution. In addition, staff will present the latest findings on the worsening of childhood asthma associated with exposure to traffic.

More Information Staff Presentation

09-4-2:

Public Meeting to Consider 4 Research Proposals

1. "Personal, Indoor, and Outdoor Particulate Air Pollution and Heart Rate Variability in Elderly Subjects with Coronary Artery Disease," University of California, Irvine, \$235,000, Proposal No. 2666-264.

2. "Central Nervous System Effects of Ambient Particulate Matter: The Role of Oxidative Stress and Inflammation," University of California, Irvine, \$309,141, Proposal No. 2667-264.

3. "Chamber Study and Model Development," University of California, Riverside, \$474,229, Proposal No. 2671-264.

4. "A Field Experiment to Assess the Impact of Information Provision on

Household Electricity Consumption," University of California, Los Angeles, \$173,934, Proposal No. 2679-264.

[More Information](#) [Staff Presentation](#)

09-4-3: Public Meeting to Consider Changes to the Research Screening Committee Membership

Staff will propose a new member to fill the vacancy left by Dr. Bob Devlin's resignation. The Board's legislatively mandated Research Screening Committee consists of scientists, engineers, and others who are knowledgeable, technically qualified, and experienced in air pollution problems. The Committee meets approximately four times a year to review proposed and completed research projects.

[Staff Presentation](#)

09-4-4: Public Hearing to Consider Adoption of a Proposed Regulation to Implement the Low Carbon Fuel Standard

Staff will propose for the Board's consideration the Low Carbon Fuel Standard regulation. The proposed regulation is designed to result in a reduction of the carbon intensity of gasoline and diesel transportation fuels by at least ten percent from their 2006 levels. When fully implemented, this will reduce greenhouse gas emissions by about 15 million metric tons a year (CO2 equivalent).

[More Information](#) [Staff Presentation](#)

[Michael O'Hare Presentation](#) [Thomas W. Hertel Presentation](#)

April 24, 2009

8:30 a.m.

DAY-TWO

09-4-5: Public Meeting to Consider the Small Business Toolkit for Reducing Greenhouse Gases

Staff will present ARB's Small Business Toolkit, designed to facilitate voluntary greenhouse gas emissions reductions among small California businesses. Toolkit components include actions to save money, financial resources, California success stories, a business specific carbon calculator, and a small business award program. ARB staff partnered with Next 10, Berkeley Institute for the Environment at UC Berkeley, Lawrence Berkeley National Laboratory, the California Energy Commission, and the California Public Utilities Commission to develop the Toolkit. The Toolkit was previously identified as an Early Action Item in 2007.

[More Information](#) [Staff Presentation](#)

09-4-6: Public Hearing to Consider the Adoption of a Proposed Regulation for Assembly Bill 118 Air Quality Improvement Program Guidelines

Staff will present a proposed regulation for Assembly Bill (AB) 118 Air Quality Improvement Program (AQIP) Guidelines. AB 118 (Nunez, 2007) provides ARB with \$50 million annually for AQIP to fund a variety of air

quality incentives, and requires ARB to adopt AQIP guidelines. The proposed Guidelines define the program's structure and establish minimum administrative implementation requirements.

More Information Staff Presentation

09-4-7:

Public Meeting to Consider the Adoption of the Proposed AB 118 Air Quality Improvement Program Funding Plan for Fiscal Year 2009-10

Staff will recommend that the Board approve allocation of Air Quality Improvement Plan (AQIP) funds to specific project categories for the 2009-10 fiscal year. AB 118 allows for the AQIP to fund a variety of air quality incentive projects to address criteria pollutant emissions, including low-emission vehicles and equipment, research, and workforce training.

More Information Staff Presentation

09-4-8:

Public Hearing to Consider a Status Report on the State Strategy for California's 2007 State Implementation Plan and Consider Approval of a Proposed Revision to the State Implementation Plan Reflecting Implementation of the 2007 State Strategy

Staff will brief the Board on the status of ARB's efforts to achieve the emission reductions outlined in the 2007 State Strategy. Staff will also recommend that the Board approve a proposed revision to the State Implementation Plan reflecting implementation of the 2007 State Strategy since it was adopted.

More Information Staff Presentation

CLOSED SESSION - LITIGATION

The Board will hold a closed session, as authorized by Government Code section 11126(e), to confer with, and receive advice from, its legal counsel regarding the following pending litigation:

Central Valley Chrysler-Jeep, Inc. et al. v. Goldstene, U.S. Court of Appeals, Ninth Circuit, No. 08-17378 on appeal from U.S. District Court (E.D. Cal. - Fresno).

Fresno Dodge, Inc. et al. v. California Air Resources Board et al., Superior Court of California (Fresno County), Case No. 04CE CG03498.

General Motors Corp. et al. v. California Air Resources Board et al., Superior Court of California (Fresno County), Case No. 05CE CG02787.

State of California by and through Arnold Schwarzenegger, the California Air Resources Board, and the Attorney General v. U.S. Environmental Protection Agency, and Stephen L. Johnson, Administrator, U.S. Court of Appeals, District of Columbia Circuit, Case No. 08-1178.

Green Mountain Chrysler-Plymouth-Dodge-Jeep, et al. v. Crombie, 508 F.Supp.2d 295, U.S. District Court Vermont (2007), appeal to U.S. Court of Appeals, Second Circuit, Nos. 07-4342-cv(L) and 07-4360-cv(CON).

National Paint and Coatings Association, Inc. v. State of California,

California Air Resources Board (Sacramento County Superior Court), Case No. 04CS01707.

OPPORTUNITY FOR MEMBERS OF THE BOARD TO COMMENT ON MATTERS OF INTEREST

Board members may identify matters they would like to have noticed for consideration at future meetings and comment on topics of interest; no formal action on these topics will be taken without further notice.

OPEN SESSION TO PROVIDE AN OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD ON SUBJECT MATTERS WITHIN THE JURISDICTION OF THE BOARD

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THE AGENDA ITEMS LISTED ABOVE MAY BE CONSIDERED IN A DIFFERENT ORDER AT THE BOARD MEETING. BOARD ITEMS NOTED ABOVE WHICH ARE NOT COMPLETED ON APRIL 23, WILL BE HEARD ON APRIL 24 BEGINNING AT 8:30 A.M.

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Back to Board Meetings & Other Information Page

LOCATION:

Air Resources Board
 1001 I Street, 2nd Floor
 Byron Sher Auditorium
 Sacramento, California 95814

PUBLIC MEETING AGENDA**May 28, 2009****Webcast****Electronic Board Book**

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 OF THE MEETING GO TO:**

<http://www.arb.ca.gov/lispub/comm/belist.php>

May 28, 2009**9:00 a.m.**

| <u>Agenda Item #</u> | <u>Agenda Topic</u> |
|-----------------------------|---|
| 09-5-1: | <p>Health Update: Reductions in Fine Particulate Matter (PM) and Improvements in Life Expectancy</p> <p><i>Staff will highlight a study that examines the changes in life expectancy associated with changes in ambient levels of fine PM in 51 cities, including San Francisco, San Jose, Los Angeles, and San Diego. The investigators were able to show a significant association between PM reductions and improvements in life expectancy.</i></p> <p><u>More Information</u> <u>Staff Presentation</u></p> |
| 09-5-5: | <p>Research Update: Assessment of Particulate Matter and Oxides of Nitrogen Retrofits for Diesel Control Program</p> <p><i>Staff will update the Board on the status on an ongoing research study conducted by ARB to investigate the characteristics of tailpipe emissions from vehicle technologies meeting the latest emission standards. The emission control technologies tested include diesel oxidation catalysts, continuously regenerating diesel particulate filter systems, and selective catalytic reduction systems. Sample collection for heavy-duty vehicles over a range of driving conditions has been completed and shown to be highly effective.</i></p> <p><u>More Information</u> <u>Staff Presentation</u></p> |
| 09-5-3: | <p>Public Meeting to Consider the Local Government Toolkit for Reducing Greenhouse Gases</p> <p><i>Staff will present ARB's California's Local Government Toolkit (Toolkit) which provides a "one-stop-shop" of guidance and resources to assist local governments with reducing greenhouse gas emissions. The Toolkit includes</i></p> |

cost-saving actions, financial resources, California case studies, a decision-support tool, a peer-networking online discussion forum, and a climate leadership recognition program. (The Toolkit is located at www.coolcalifornia.org.)

[More Information](#) [Staff Presentation](#) [California Climate Action Network Presentation](#) [California Energy Commission Presentation](#)

09-5-2: Public Hearing to Consider the Proposed Amendments to the On-Board Diagnostic Regulations for Light-Duty, Medium-Duty, and Heavy-Duty Engines and Vehicles (OBD II and HD OBD) and Proposed Adoption of a Heavy-Duty On-Board Diagnostic Specific Enforcement Regulation

Staff's proposal would update the HD OBD requirements for heavy-duty engines, with most of the proposed amendments related to the diesel requirements. The proposed amendments to the OBD II regulation are aimed at making the diesel-related requirements for medium-duty vehicles consistent with those being proposed for the HD OBD regulation. The proposal would also adopt an enforcement regulation which would detail enforcement procedures to be used for noncompliance issues of the HD OBD regulation.

[More Information](#) [Staff Presentation](#)

09-5-4: Continuation of Public Hearing to Consider Adoption of Aftermarket Parts Certification Requirements for Plug-In Hybrid Electric Vehicles

Staff developed modifications to the new certification and installation requirements for aftermarket kits converting hybrid electric vehicles to plug-in hybrid electric vehicles originally presented at the January 23, 2009, Board hearing. The modified requirements will be presented for adoption.

[More Information](#) [Staff Presentation](#)

09-5-6: Update the Board on Existing Grant Agreements for the Proposition 1B: Goods Movement Emission Reduction Program and the Lower-Emission School Bus Program

Staff will provide an update on the first installments of bond funding received to support this program. Staff will also describe and request Board support for the changes needed to existing grant agreements to reflect the delay in funding and incorporate other amendments requested by local agencies or ARB staff to improve implementation.

[More Information](#) [Staff Presentation](#)

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Superior Court of California (Fresno County), Case No. 05CE CG02787.

State of California by and through Arnold Schwarzenegger, the California Air Resources Board, and the Attorney General v. U.S. Environmental Protection Agency and Stephen L. Johnson, Administrator, U.S. Court of Appeals, District of Columbia Circuit, Case No. 08-1178.

California Business Properties Association, et al. v. California Air Resources Board, Superior Court of California (Sacramento), Case No. 34-2009-80000232.

Green Mountain Chrysler-Plymouth-Dodge-Jeep, et al. v. Crombie, 508 F.Supp.2d 295, U.S. District Court Vermont (2007), appeal to U.S. Court of Appeals, Second Circuit, Nos. 07-4342-cv(L) and 07-4360-cv(CON).

Pacific Merchant Shipping Association v. Goldstene, U.S. District Court, EDCA, Case No. 2:09-CV-01151-MCE-EFB.

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LOCATION:



Air Resources Board
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Byron Sher Auditorium
Sacramento, California 95814

REVISED
PUBLIC MEETING AGENDA

June 25 & 26, 2009

Webcast

Electronic Board Book

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<http://www.arb.ca.gov/lispub/comm/bclist.php>

June 25, 2009

9:00 a.m.

DAY-ONE

Agenda Item #

Agenda Topic

09-6-1:

Health Update: The Urban Environment and Health

Staff will present an overview of the literature on the characteristics of the urban environment that may influence health. The urban environment, which is also known as the built environment, influences global warming and climate change as addressed in Senate Bill 375. It is also emerging as an important factor for health promotion and obesity prevention. The studies presented will focus on results from the Portland Neighborhood Environment and Health Study and show that highly walkable neighborhoods are associated with reduced obesity and other health conditions linked with excess weight compared to other neighborhoods.

More Information Staff Presentation

09-6-2:

Public Meeting to Update the Board on the Climate Change Scoping Plan Implementation

Staff will update the Board on the status of implementing the Climate Change Scoping Plan.

More Information Staff Presentation

09-6-3:

Public Hearing to Consider Adoption of a Proposed Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfills

Staff will propose a regulation which would require the installation of gas collection and control systems at smaller and other uncontrolled municipal

solid waste landfills. The proposed regulation includes requirements for all affected landfills to ensure that gas collection and control systems are operating optimally and that fugitive emissions are minimized.

[More Information](#) [Staff Presentation](#)

09-6-4: Public Hearing to Consider Adoption of Cool Car Standards and Test Procedures for 2012 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks and Medium Duty Vehicles

Staff will propose a regulation that would require glass on new vehicles less than or equal to 10,000 pounds to meet solar management standards. Solar glass will reduce a vehicle's interior temperature when it is parked in the sun, making the driver less likely to activate the air conditioner and allowing manufacturers to downsize a vehicle's air conditioning unit. Reducing mobile air conditioning usage or downsizing of a vehicle's air conditioning unit will result in lower greenhouse gas emissions, as well as reduced fuel use.

[More Information](#) [Staff Presentation](#)

09-6-5: Public Hearing to Consider Adoption of a Proposed AB 32 Cost of Implementation Fee Regulation and Proposed Amendment to the Existing Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

Staff will propose a new regulation to assess fees on sources of greenhouse gas emissions. The revenue from these fees will be used to pay for the administrative costs of implementing the California Global Warming Act of 2006 (AB 32), as specified in Health and Safety Code section 38597. Staff will also propose an amendment to ARB's Mandatory Reporting Regulation to require electronic reporting of the required data.

[More Information](#) [Staff Presentation](#)

09-6-6: THIS ITEM HAS BEEN POSTPONED UNTIL FURTHER NOTICE: Public Meeting to Provide the Board Information on the New Drive Clean Website

Staff will give the Board a preview of the new Drive Clean website. This website is a buying guide for clean and efficient vehicles and features smog and global warming scores for cars certified in California.

June 26, 2009

8:30 a.m.

DAY-TWO

Agenda Item #

Agenda Topic

09-6-7:

Public Hearing to Adopt Proposed AB 118 Enhanced Fleet Modernization Program Regulation (Car Scrap)

Staff will propose a new regulation to expand the State's voluntary accelerated vehicle retirement program to target the highest polluting vehicles in the areas with the greatest air quality problems. The proposal includes additional compensation for vehicle replacement and low-income populations.

[More Information](#) [Staff Presentation](#)

09-6-10: Public Meeting to Update the Board on Outreach and Funding Assistance for Truck Owners

Staff will describe plans for ARB and local air district outreach to truck owners on rule requirements and incentive funding. This informational update will cover development of a comprehensive portal or front door for truck owners to access information on all ARB rules affecting trucks and on-board equipment, as well as available incentives.

Staff Presentation

09-6-11: Public Meeting to Update the Board on ARB Efforts to Develop Recommendations for Further Locomotive and Railyard Emission and Risk Reductions.

Staff will provide the Board with a brief informational update on efforts to develop recommendations that can provide further locomotive and railyard emissions and risks reductions beyond those expected from existing U.S. EPA and ARB regulations and agreements.

Staff Presentation

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California Business Properties Association, et al. v. California Air Resources Board, Superior Court of California (Sacramento), Case No. 34-2009-80000232.

Memorandum

To: Chairperson, Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 20, 2009

Re: Report of Division Activities for the Months of April 2009-June 2009

ADMINISTRATION AND HUMAN RESOURCES– S. HUNDEL, ACTING DIRECTOR**Human Resources Office**

The Human Resources (HR) Office conducted seven training sessions consisting of sessions regarding Working Across Generations; Technical Writing; Public Speaking; Defensive Driving; and Legal Issues. The HR Office also coordinated six recruitment exams including exams for Director of Administration; Manager of Executive Operations; and Health Officer. The HR Office continues to administer payroll, benefits, safety, labor relations, and library services.

Business Office

The Business Office has initiated the remodel of 6th floor ISS workspace, with the planned completion date being July 29, 2009. The Business Office also posted a Request for Proposal seeking bids to upgrade our card reader badge system. This upgrade will allow the District to better monitor our building and provide enhanced security options as well as provide consistent badges for all District employees.

COMPLIANCE AND ENFORCEMENT – K. WEE, DIRECTOR**Enforcement Program**

Staff continues to work with the gas station owners to complete compliance schedules/agreements to install state-mandated vapor recovery equipment and monitoring instrumentation. Staff has conducted over 700 inspections and visits to facilitate compliance and enforce the April 1, 2009 deadline. A marine terminal at the Port of Oakland received 3 Notice of Violations for trucks exceeding the 30-minute queue idling limit in state law. Staff attended the City of Benicia Council meeting on May 5, 2009, presenting a brief overview of the Valero Refinery release that occurred on April 6, 2009 and answered questions from the council. On June 16, staff attended San Mateo County Environmental Task Force; this multi-agency task force meeting that was coordinated by the District Attorney's office.

Compliance Assurance Program

On April 9, District staff, CARB, and the Port of Oakland staff cooperatively hosted a meeting at the Port of Oakland with marine terminal operators and trucking companies to provide information about the upcoming Drayage Truck Rule (DTR) registry deadline of September 30. Staff also participated in the monthly Trucker Work Group meetings to continue to promote early compliance with the January 1, 2010 DTR engine emission standard deadline. Staff approved the Flare Minimization Plan 1st annual updates for the bay area refineries on April 22 after addressing comments received from the public and updated and posted February '09 through April '09 refinery monitoring data and graphs to the District website. On June 10, staff participated in a regional mock oil spill exercise jointly conducted by the USCG & California Department of Fish and Game and provided a short presentation on the FLIR camera and its capabilities image hydrocarbon plumes to USCG staff. On June 8, District and U.S. EPA staff met with parents, faculty and administrators at the Steven's Creek Elementary School to discuss upcoming, school located, hexavalent chrome monitoring downwind of the Lehigh Southwest Cement Plant.

Compliance Assistance Program

Staff produced five (5) advisories regarding: new requirements for perchloroethylene and synthetic dry cleaning operations, new requirements for commercial digital printing operations, new registration and permitting requirements for small graphic arts operations, changes to the graphic arts rule (Regulation 8-20), and new fees for asbestos demolition and renovation operations. On February 3 staff sponsored a pre-burn season meeting with CARB, Department of Fish and Game, Suisun Resource Conservation District, other air districts, and representatives from local fire departments to discuss changes to the marsh burn program for 2009. Staff spoke at an annual environmental workshop for private duck club owners in the Suisun Marsh at the Suisun Resource Conservation District office on April 29, 2009. On April 16, staff conducted an asbestos compliance assistance training class for the Central Coast Claims Association (CCCA) in San Jose. Sixty-seven members attended, representing the construction industry, restoration business, insurance claims adjusters and lawyers that specialize in restoration cases. On May 21, staff conducted another asbestos compliance assistance training class for representatives from San Ramon, Danville, Alamo and Walnut Creek building departments. Staff hosted a Grant Application Workshop held at Lehigh Southwest Cement in Cupertino on April 28. The Workshop provided information on grant funds available for Truckers to reduce emissions from heavy-duty diesel engines. Staff attended the West Oakland/Custom Alloy Scrape Sales Air Monitoring Community Meeting on May 11, 2009 where staff presented the draft sampling analysis plan. Downwind sampling sites will be at ASA Academy School and Excel (McClymonds) High School and one upwind site still to be decided.

Staff completed the upgrade of the District toll-free air pollution complaint (1-800-334-ODOR) line with new capabilities to receive air pollution complaints from the public in the following languages: Spanish, Mandarin, Vietnamese and Cantonese.

Operations

The 2nd quarter in-service training sessions were conducted in May including: respiratory protection and heat stress, EVR Phase II update, NOV report writing with Legal Staff, review of Regulation 6, Rule 3: Wood-burning Devices and updates on amended regulations Regulation 8, Rule 33: Bulk Terminals, Regulation 8, Rule 20: Graphic Arts and Coating Operations, Regulation 11, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations and Regulation 8, Rule 17: Non-Halogenated Solvent Dry Cleaning Operations. On April 17, twenty two (22) inspectors attended defensive driving training. Staff also attended Visible Emission Training on April 29 in West Sacramento and Pleasanton Fairgrounds on June 11. Staff processed 7 Prescribed Burn Smoke Management Plans for burns in Alameda, Contra Costa and Santa Clara counties. Staff approved 2 Asbestos Dust Mitigation Plans (ADMPs) for the American Canyon Syar Quarry Project in Solano County and the Lowe’s San Jose Project in Santa Clara County.

(See Attachment for Activities by County)

ENGINEERING DIVISION – B. BATEMAN, DIRECTOR

Permit Activity Summary

In the second quarter of 2009, 333 new permit applications were received: 230 standard New Source Review applications, 94 Gasoline Dispensing Facility applications, 6 Title V applications, and 3 Banking applications. During this period, the Division issued 399 Authorities to Construct and 405 Permits to Operate.

| Engineering Division Permit Activity – 2nd Quarter 2009 | | | |
|--|------|--|-----|
| Annual update packages started | 948 | Permits to Operate issued (new and modified) | 405 |
| Annual update packages completed | 1257 | Exemptions | 28 |
| Total update pages entered | 1289 | Authorities to Construct denied | 0 |
| New applications received | 333 | New Companies added to Data Bank during the 2 nd quarter 2009 | 113 |
| Authorities to Construct issued | 399 | | |

Toxics Program

A total of 102 Health Risk Screening Analyses (HRSAs) were completed during the quarter for new/modified source permit applications. The majority of these HRSAs were for diesel engine emergency backup generators.

Staff has continued rule development work on amendments to Regulation 11, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning. The Board of Directors adopted revisions to this rule on March 4, 2009, but directed staff to develop an accelerated phase-out schedule for Perc. Staff conducted a public workshop on June 10, 2009, to

discuss potential options for the accelerated phase-out. Staff plans to present recommended rule amendments to the Board of Directors' Stationary Source Committee in October 2009, with consideration of adoption before the full Board expected in November 2009.

Staff has also prepared proposed amendments to Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. Staff is proposing to add more stringent health risk standards for projects with new or modified sources of toxic air contaminants that would be located in areas identified as "Priority Communities" under the District's Community Air Risk Evaluation (CARE) Program. Staff is also considering applying these more stringent standards to new/modified sources that would be located outside the Priority Communities, but that would be located in proximity to a K-12 school. The proposed rule amendments also include updated health effects values (i.e., cancer potency factors and non-cancer reference exposure levels) adopted by Cal/EPA's Office of Environmental Health Hazard Assessment. Staff has scheduled a public workshop to discuss these proposed rule amendments on July 30, 2009.

Staff prepared a summary report of ambient air monitoring data in West Berkeley and the associated health risks to the community. Staff also attended a meeting of the City of Berkeley's Community Environmental Advisory Commission, at which questions regarding the summary report, and the nearby Pacific Steel Casting Company, were answered.

Staff attended a community meeting regarding Dutra Materials, a proposed asphalt plant near Petaluma. The Sonoma County Board of Supervisors has not yet taken final action to approve, or disapprove, this project.

Staff continued analysis of a supplemental toxic emission inventory report submitted by the Lehigh Southwest Cement Company (Cupertino) to meet Air Toxics Hot Spots Program requirements. Staff participated in a meeting with parents of students attending the Steven's Creek Elementary School, regarding an air monitoring project being conducted in partnership with U.S. EPA. Staff also participated in a community meeting held by Santa Clara County planning staff regarding the Lehigh facility and their quarry reclamation plan amendment.

Staff has completed a Health Risk Assessment (HRA) for Sentinel Cremation Societies in Emeryville. Several new residential buildings have been built immediately adjacent to the crematory, and Sentinel will likely now be subject to the public notification requirements of the Air Toxics Hot Spots Program. The Office of Environmental Health Hazard Assessment is currently reviewing the HRA. Notices will be sent to affected members of the public, and Sentinel will also conduct a community meeting with the public to discuss the results of the HRA.

Title V Program

EPA provided the District with its draft Title V Program Evaluation report on June 4, 2009. The District has recently provided EPA with comments on the draft report. The final Program Evaluation report is expected to be submitted to the District in the 3rd quarter of 2009.

The Title V renewal permits for the Bay Area refineries have been drafted and circulated for internal District review. Public noticing of the refineries' Title V renewal permits is expected to occur in late August 2009.

A draft Title V renewal permit for Lehigh Southwest Cement Company (Cupertino) has been prepared and circulated for internal District review. It is expected that this Title V renewal permit will be released for public comment in August and a public hearing held in September.

In 2008, the District issued the Clean Fuels Expansion Project (CFEP) Authority to Construct for the ConocoPhillips Refinery (Rodeo). Title V permit revisions that incorporate applicable requirements for the CFEP were issued recently for ConocoPhillips - San Francisco Refinery and ConocoPhillips Carbon Plant. The final component of the CFEP, a new hydrogen plant for Air Liquide Large Industries US LP, is expected to be issued after EPA comments are addressed.

Permit Evaluation Program

The Air District issued the permit and CEQA Notice of Exemption for Tesoro Refinery's (Martinez) new flare and flare gas recovery system for the No. 50 Crude Unit (required to replace the No. 50 Crude Unit Blowdown Tower).

Staff continued work on the PSD permit for the proposed Russell City Energy Center (Hayward). Staff has revised the draft PSD permit based on public comments, recent changes in federal PSD requirements, and additional factual information since the initial draft PSD permit was proposed. Staff plans to conduct an additional public comment period on the revised draft permit and the Additional Statement of Basis, and will hold a public hearing in September to provide the public with another opportunity to comment.

Staff continued evaluation of permit applications for the proposed Marsh Landing Generating Station (Antioch) and Willow Pass Generating Station (Pittsburg). These are new proposed power plants that would be located at existing power plant sites in Contra Costa County. Staff is reviewing the projects and working on the Preliminary Determinations of Compliance. Review of these applications has recently been delayed, however, based on changes in EPA PSD requirements relative to PM_{2.5}.

Staff continued work in implementing the CARB Airborne Toxic Control Measures (ATCMs) for stationary and portable diesel engines. Many diesel engine permit applications continue to be received, and a workgroup meets as needed to resolve implementation issues.

Staff provided engineering support for the annual Flare Minimization Plan (FMP) updates for the five Bay Area refineries. Public comments were reviewed, and the updated FMPs were approved on April 17, 2009. A review of flare monitoring data indicates that three out of the five refineries have shown marked success at reducing flaring. The next FMP annual updates are due in October 2009. Staff provides engineering support in reviewing and evaluating Flare Causal Reports on an ongoing basis.

Engineering Projects Program

Staff continued participation in the Production System database conversion project, including providing technical input on the authority to construct/permit to operate process, the Title V permit process, the flare report inspection/review process, and the permit renewal process to identify potential improvements and to develop necessary policies and procedures to help on the project. Staff also continued workgroup meetings to develop key requirements for future permit systems for the following source categories: graphic arts, wood coating, miscellaneous metal parts, plastic parts, solvent cleaning, dry cleaning, auto bodies and internal combustion engines.

Staff completed a project to provide permit evaluators an improved mapping tool so that facilities/projects located near District boundaries in Solano and Sonoma counties can be more accurately identified.

Staff posted the most recent annual offset equivalency report to the District website. These reports demonstrate that the District's offset program is at least equivalent to federal requirements that focus only on major sources.

Staff continued efforts to update Best Available Control Technology cost-effectiveness criteria, including consideration of separate cost triggers for precursor organic compounds and non-precursor organic compounds.

Engineering Division staff continued meetings with other divisions to develop an online portal to register small graphic arts operations to help streamline regulatory requirements. The registration portal was released in June 2009.

Staff attended the CAPCOA Engineering Symposium in June, at which a variety of important issues common to air districts were discussed.

LEGAL DIVISION – B. BUNGER, DISTRICT COUNSEL

The Air District Counsel's Office received 137 violations reflected in Notices of Violation (NOVs) for processing.

Mutual Settlement Program staff initiated settlement discussions regarding civil penalties for 139 violations reflected in NOVs. In addition, 6 Final 30 Day Letter(s) were sent regarding civil penalties for 13 violations reflected in NOVs. Finally, settlement negotiations resulted in collection of \$59,050 in civil penalties for 59 violations reflected in NOVs.

Counsel in the Air District Counsel's Office initiated settlement discussions regarding civil penalties for 2 violations reflected in NOVs. Settlement negotiations by counsel resulted in collection of \$969,725 in civil penalties for 181 violations reflected in NOVs.

(See Attachment for Penalties by County)

COMMUNICATION AND OUTREACH – L. FASANO

Staff contracted four consulting firms for the Summer spare the Air Season which launched in May. The first and second *Spare the Air Every Day* Alerts of 2009 for smog were issued on April 20 and 21st in advance of the official kickoff of the summer *Spare the Air Every Day* season.

Staff responded to numerous media inquiries regarding the Spare the Air Alerts, the Valero Refinery sulfur release, smoke from fires in Alameda and Oakland, the enhanced vapor recovery rule and a lawsuit filed by the Healthy Air Coalition in Berkeley, the ALA Report Card, Spare the Air Alerts, the EPA proposed regulation for mercury, the enhanced vapor recovery rule and the Vehicle Buyback Program, the Climate Summit, the explosion on O'Farrell. Staff attended, prepared a press release and talking points for Tom Bates' testimony to the state Assembly's Select Committee on Ports about the disproportionate level of air pollution from the Port of Oakland and assistance the District needs from the legislature to continue pressuring the Port to clean up its operations. Staff worked with CBS-5 Greenreporter Jeffrey Schaub to coordinate a TV story on the environmental benefits of switching to an electric lawn mower. Entitled "Gas Guzzler in the Garage May Be Your Mower," the piece aired on prime time 6 PM slot and lasted for over 3 minutes. The story aired on June 11. Communications Director Lisa Fasano spoke at the Sunday Streets San Francisco press conference at Aquatic Park on April 16th. The event kicked off the series of Sunday Streets events throughout the spring and summer in San Francisco. The Air District is a major sponsor of Sunday Streets. Staff participated in a press conference for Sunday Streets San Francisco on June 3 and District staff was quoted in the SFstreetsblog.

Staff responded hundreds of calls from the public regarding the enhanced vapor recovery rule, general air quality and permitting concerns, fireplace burning, agricultural burns, vehicle buy back program, and the new website.

All public information officers, along with enforcement and engineering staff, had Environmental Risk & Crisis Communications training from Dr. Vincent Covello from the Center for Risk Communication, New York City on April 28th.

Staff has met with MTC to discuss how we can further collaborate on the *Spare the Air, Every Day* program, and the Employer Program. The agencies will reconvene next week to work out collaboration on ride share programs and promotions. Staff met with Google transportation director to discuss carpool opportunities. Staff met with ALA representatives to discuss direction for future collaborations.

The newly designed District website was presented by staff at the All Hands meeting on Thursday June 4, and went live to the general public on Monday, June 8. Staff issued a press release announcing the new and improved website to the media. Staff published the Guide to the Bay Area Air Quality Management District, updated for 2009, and the 2008 Annual Report. These documents were distributed to the Board of Directors at the June 3 Board meeting. The guidebook serves as a general introduction to the agency, explaining our ongoing programs and activities, and the 2008 Annual Report highlights the District's accomplishments last year, with an extensive data summary. These

documents will be distributed to 3,000 stakeholders in the Bay Area over the next few weeks. Staff published the Spring 2009 issue of the Air Currents newsletter and distributed it to 3,500 Bay Area residents. The issue contains articles about enforcement of the Air District's wood burning regulation during the Winter Spare the Air season, publication of the GHG inventory, and the new dry cleaner regulation, among other stories.

New Public Information Manager – The Communications and Outreach Office welcomed Ana Sandoval as the new Public Information Manager, on temporary assignment from the Executive Office.

Community Outreach

Staff participated in the Contra Costa Asthma Coalition meeting April 2 in Richmond. Staff outlined the District's upcoming Community Grant Program and Carl Moyer Program to outreach for potential projects. Representatives from Communities for a Better Environment presented their findings from the Richmond Health Survey, which surveyed a total of 198 households in Richmond regarding residents' health, the health of their families, and their neighborhood.

Staff is working with Bobbi Fischer and Marilyn Ababio with Fischer Communications to discuss grant contract logistics, deliverable expectations and timelines, and overall contract questions and concerns. Staff worked with a nationally renowned civic engagement specialist that has drafted an outreach strategy, survey and marketing materials as well as scouted locations for two community dialogue meetings to be held in late July in the Bay View Hunters Point neighborhood of San Francisco. The dialogue meetings and surveys are planned to engage hundreds of BVHP residents in a conversation with the District about air pollution and health-related challenges and potential solutions for air quality in Southeast San Francisco. The Air District, through a contractor Fischer Communications, is currently evaluating multi-language communication as they relate to community meetings in, and around, impacted communities. Staff hopes to schedule interviews during the week of June 8th between Fischer Communications and Air District Division Directors to discuss division specific work issues and how the District, as a whole, can better serve impacted communities and populations with limited English proficiency.

On June 8, outreach staff joined air monitoring, inspection, and engineering staff in a discussion with parents, teachers, and school administrators to discuss concerns regarding air quality issues related to the Lehigh Cement Quarry in Cupertino. US EPA Region IX representatives were also in attendance to describe the upcoming air monitoring project that will be in operation within the next few weeks. The Air District will be working with US EPA to monitor outdoor air quality at Stevens Creek Elementary School for hexavalent chromium as part of a school air toxics initiative.

On June 9, outreach staff participated in a meeting with one of the District's nine resource teams. Staff gave a presentation on the District's Protect Your Climate curriculum for 4th and 5th graders and proposed that the team make adoption of the curriculum in all elementary schools in a local school district one of its projects. In addition, staff gave a report to the resource team members on the District's new website. Approximately 20 people attended. In this quarter, Contra Costa Environmental Justice

Team members received a presentation of the upcoming Richmond Green Business Forum from the Chamber of Commerce and the North Richmond Protective Action Plan from the Office of Emergency Services. The team will be working on outreach for the Green Business Expo next month.

The District is providing additional sponsorship for the education and outreach of the Napa Firewise program. This program provide residents with the option of chipping wood in lieu of burning to build a defensible space around their property. The chipping program has helped reduce particulate matter emitted into the air by more than 200,000 pounds since 2005.

PLANNING DIVISION – H. HILKEN, DIRECTOR

Air Quality Planning Program

Staff organized and convened the Air District's 2009 Climate Action Leadership Summit at the Fox Theater in Oakland held on May 4th. Over 430 local government and local climate experts attended the event, which featured keynote speaker Thomas Friedman, nine topical breakout sessions, and a full day of information sharing. Staff continued to work with Climate Protection Grant recipients to review their work, track progress and ensure completion of funded deliverables. Staff researched options for the District's foundation, including convening discussions with representatives from the San Francisco Carbon Fund, the Oregon Climate Trust and the Cambridge Climate Alliance. Staff participated in SB375 regional workgroup meetings. Staff presented the Protect Your Climate curriculum in San Jose to the Alum Rock School District Green Cluster.

Staff worked towards key milestones in developing the Bay Area 2009 Clean Air Plan. Staff held a series of three workshops throughout the Bay Area to provide a summary update on implementation of control measures and emission reductions realized from the 2005 Ozone Strategy, a summary of the current all feasible control measures review process, and a list of preliminary control measures for the 2009 CAP. Staff also held a public workshop to receive public input on a draft Multi-pollutant Evaluation Methodology technical document. Staff began to define a draft control strategy, including consultation with staff from all District divisions and partner regional agencies. Staff continued directing and reviewing the work of consultants in developing an update to District's CEQA guidelines. Staff published a draft thresholds of significance options report and held workshops on the CEQA guidelines update in three Bay Area locations. Staff continues to work with the CAPCOA GHG Mitigation Workgroup in developing GHG CEQA thresholds of significance and mitigation measures for implementation by projects. Staff initiated rule development process for the District's Indirect Source Review Rule by convening the first stakeholder workgroup meeting. Staff presented as part the FOCUS program's lecture series on the Indirect Source Review Rule.

Community Air Risk Evaluation (CARE) Program

Staff revised the maps of Bay Area Impacted Communities based on high resolution modeling as a foundation for the Clean Air Communities Initiative. The maps were used in the recent Carl Moyer Program call for projects. Working with the Desert Research Institute, staff conducted a pilot air measurement study using the mobile sampling van and identified eight sampling locations for the West Oakland Measurement Study. Staff convened a third community meeting to discuss progress and receive input on the air monitoring study the District will conduct near the Custom Alloy Scrap Sales facility in West Oakland. Staff presented papers on work related to the CARE program at two conferences: the Air and Waste Management Association's Annual conference and the NATO/SPS International Technical Meeting on Air Pollution Modeling and its Application. Staff conducted two meetings of the Cumulative Impact Resolution Work Group to discuss possible revisions to the District permit process (Regulation 2, Rule 5) that would require stricter permitting requirements of new and modified stationary sources in impacted communities and near sensitive receptors. Staff also discussed these items with the CARE Task Force. Staff participated in meetings with ABAG staff to discuss priority development areas in the Bay Area and potential air quality issues associated with infill development.

Rule Development Program

Staff presented proposed amendments to District Regulation 8, Rules 33 and 39 concerning gasoline bulk terminals, bulk plants and delivery vehicles at a public hearing; the Board of Directors adopted the amendments. Staff hosted a public workshop to consider input on draft amendments to District Regulation 8, Rule 32: Wood Coatings. Staff also participated in hosting a public workshop to consider input on draft amendments to District Regulation 11, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations. Staff assisted in developing stationary source control measures for the 2009 Clean Air Plan and participated in Clean Air Plan workshops.

Research and Modeling Program

Staff held several internal meetings to present particulate matter modeling and data analysis activities. Staff presented three technical papers at an international conference in San Francisco on air quality modeling, sponsored by NATO. Staff participated in several Central California Air Quality Study conference calls to discuss the status of ongoing and new projects, evaluation of project proposals, and establishment of a new hydrocarbon monitoring station between the Bay Area and Sacramento. Staff assisted staff from the Sacramento Metropolitan AQMD in evaluating the effectiveness of wood burning prohibitions in Sacramento. Staff continued with the investigation of particulate matter and toxics response to emission reductions in the Bay Area. Staff completed a draft regional toxics modeling report for the CARE program and continued working on the CARE-sponsored West Oakland Truck Survey. Staff developed a draft multipollutant evaluation methodology. Staff prepared various GIS based maps to support the District's grant applications to State and federal funding sources.

Emission Inventory Program

Staff continued work on preparing the 2008 base year emission inventory and the Small Ports Emissions Inventory. Staff completed the District's 2008 GHG inventory and submitted it to the Climate Action Registry. Staff continued providing emission inventory data and guidance to District staff on various tasks. Staff responded to inquiries from local governments regarding preparation of GHG emission inventories.

STRATEGIC INCENTIVES – J. COLBURN, DIRECTOR

Goods Movement Program

The 2009 Port Truck Retrofit Program processed grant projects at an unprecedented rate. Staff generated and delivered 168 funding agreements, inspectors conducted 125 inspections, and 119 agreements were fully executed. Since opening on 5/4, the OT 411 Port Center has hosted over 1,250 visits and distributed over 1000 application packets. In addition, on 5/28, the Port of Oakland acted to execute a memorandum of understanding (MOU) with the District to make an additional \$3 million and the original \$2 million committed to port retrofits available for expenditure.

Federal Stimulus Applications

The District applied for American Recovery and Reinvestment Act (ARRA) and related funding for two programs, winning an award for one.

- **Diesel Emissions reductions at the Port of Oakland:** On 6/5/2009, the District was notified by the U.S. EPA that it had been selected to receive \$2 million in funding from the competitive ARRA National Clean Diesel Funding Assistance Program. Funds will retrofit and repower diesel heavy-duty trucks, locomotives, buses and marine vessels at the Port of Oakland. This effort will pave the way towards a cleaner and more efficient cargo transportation network. Funding is expected to be distributed to the District in August/September 2009.
- **Bay Area Alternative Fuel and Advanced Technology Vehicle and Infrastructure Project:** On 5/29, staff submitted an application to the U.S. Department of Energy (DOE) for \$13.9 million. The District applied on behalf of 30 Bay Area Cities, Counties and local governments seeking funding covering over 800 vehicles, over 1150 electric charging spots at 115 locations, and 6 other alternative fuel stations spread throughout the nine counties of the Bay Area. Also, on 6/9, staff submitted a final application to the California Energy Commission (CEC) for approximately \$10 million in AB 118 funding to serve as a cost share for the same project, having received preliminary CEC approval of the District's pre-proposal. Successful applicants will be notified in September 2009.

Transportation Fund for Clean Air (TFCA) Program**Regional Fund:**

Policies and allocations were approved on 4/1 and on 5/6 that will shift the Regional Fund to an ongoing call for projects, phased in by project type during 2009. Allocations include \$4 million to shuttle and Regional rideshare projects, and \$5 million to alternative fuel/hybrid vehicle and infrastructure projects.

County Program Manager Fund:

On 5/6, the allocation of all FY09/10 funds to the nine County Program Managers was approved. Also on 5/6, the final remaining allocation of FY08/09 funds was made, to Napa County. On 6/12, staff provided all funding agreements to the counties for signature. On 6/16, staff participated in a Program Manager/Air District Work Group meeting, continuing a productive collaboration.

Carl Moyer (CMP)/Mobile Source Incentive Fund (MSIF) Program

On 4/15, staff launched a call for application for CMP Year 11. Eligible heavy-duty engine projects include off-road equipment, on-road vehicles, locomotives, marine vessels, and agricultural equipment. As in years past, projects that reduce emissions in designated impacted communities will receive highest priority. In addition, staff has worked with the Communications Office and an outreach contractor to provide information to prospective grantees. Up to \$20 million in Year 11 funding is available.

Staff prepared to launch a new Voucher Incentive Program on 7/7. The goal of this program is to allow funding opportunities for owners of small fleets (3 or fewer vehicles) to replace their older heavy-duty diesel vehicles more quickly with cleaner diesel vehicles.

Lower Emission School Bus Program (LESBP):

On 5/14, the District was notified by the Air Resources Control Board that it had been awarded \$382,000 in ARRA funding under the 2009 Diesel Emission Reduction Program (DERA). The funds will be used to retrofit model year 1987 or newer school buses.

Vehicle Buy Back

Staff prepared for the expansion of the program on 7/1, increasing eligibility by two years to 1989 or older vehicles and increasing payment from \$650 to \$1000 per vehicle. Following a press release on 6/25, the San Jose Mercury News and KRON evening news both covered the story.

TECHNICAL DIVISION – G. KENDALL, DIRECTOR**Air Quality**

During the second quarter of 2009, the national standard was exceeded on 5 days during April through June. Although the summertime Spare the Air program began on May 11th 2009 the national ozone was first exceeded on April 21st at San Martin. On that day winds were and offshore temperatures were in the upper 90s.

In May, the national ozone standard was exceeded at Livermore and San Martin on May 16th; and at Livermore, Los Gatos, Bethel Island, Concord, and Hayward on May 17th. The two-day episode occurred when high pressure over California caused the onshore flow to weaken over the Bay Area, resulting in light winds and inland temperatures of over 100°F.

A two-day heat wave in the Bay Area resulted in exceedances of the national ozone standard on June 27th and 28th. Another high pressure pattern over California resulted in light winds and inland temperatures of 107°. The national ozone standard was exceeded Livermore and Los Gatos on June 27th; and Livermore, Los Gatos and San Martin on June 28th.

Air Monitoring

On April 1st 2009, PM_{2.5} sampling was reduced to EPA-mandated summertime schedules. In addition, ozone analyzers at four sites on April 1st after being shut down on December 1st, 2008, as allowed by a waiver granted by EPA during the low ozone winter season. 26 air monitoring stations were operating from April 1st. The fire damaged San Pablo station is off line awaiting repairs.

Meteorology and Forecasting

The 1st quarter 2009 air quality data were quality assured and entered into the EPA Air Quality System (AQS) database. Staff continued to make daily air quality, summertime Spare the Air, and open burn forecasts. Staff participated in a multi-day EPA technical system audit at the end of May. The 2008 Monitoring Network Plan was prepared and submitted to EPA and placed on the Air District web site. Staff attended a Suisun Marsh Burn meeting in Cordelia to meet with burners and various air quality regulatory agencies to discuss improvements to the burn program for in the Suisun Marsh area.

Performance Evaluation

The Performance Evaluation Group conducted regular, mandated performance audits on 106 analyzers at 23 Air District monitoring stations. Work has begun on procuring standard gases and test equipment for auditing the three planned Photochemical Assessment Monitoring stations at: Livermore, San Ramon, and Patterson Pass.

Hydrogen Sulfide and Sulfur Dioxide monitors were audited at the Shell and Refinery and the ConocoPhillips Refinery Ground Level Monitoring (GLM) networks. All GLM monitors passed the audit.

Staff attended the May Air Monitoring Technical Advisory Committee meeting at the Air Resources Board in Sacramento; and two auditors attended training in San Jose on the new URG 3000 black carbon monitoring instrument.

Laboratory

In addition to routine ongoing analyses, an air sample collected on June 5, 2009 near the man-hole cover of the burning PG & E transformer station at the corner of O'Farrell and Polk streets, San Francisco was analyzed for hydrocarbons, carbon monoxide and carbon dioxide.

Two air samples in the vicinity of the Valero, Benicia episodic event of May 15, 2009 were analyzed for toxics and reduced sulfur compounds.

One vapor sample from the outlet of a vacuum truck and one vapor sample from a 12' diameter "produced water tank" at ABA Energy Horigan Ryan #1 gas production well in Rio Vista were analyzed for total hydrocarbons and speciated hydrocarbons.

Two ambient air samples from the vicinity of the fire on April 8th, 2009 at Schnitzer Steel Co. in Oakland were analyzed for toxics, methane, carbon dioxide and carbon monoxide.

Source Test

Ongoing Source Test activities during April, May, and June of 2009 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 reports for March, April, and May were reviewed. The Source Test Section participated in the District's Rule Development efforts and Business System Analysis for the new production system.

| |
|-------------------|
| STATISTICS |
|-------------------|

Administrative Services:**Accounting/Purchasing/Comm.**

| | |
|-------------------------------|-------|
| General Checks Issued | 1,584 |
| Purchase Orders Issued | 828 |
| Checks/Credit Cards Processed | 3,696 |
| Contracts Completed | 93 |
| RFP's | 5 |

Executive Office:

| | |
|--------------------------------|-----|
| Meetings Attended | 129 |
| Board Meetings Held | 5 |
| Committee Meetings Held | 14 |
| Advisory Council Meetings Held | 2 |
| Hearing Board Meetings Held: | 0 |
| Variances Received | 2 |

Information Systems

| | |
|----------------------------|----|
| New Installation Completed | 18 |
| PC Upgrades Completed | 15 |

| | |
|-------------------------|-----|
| Service Calls Completed | 508 |
|-------------------------|-----|

Human Resources

| | |
|---------------------------------------|-------|
| Manager/Employee Consultation (Hrs.) | 280 |
| Management Projects (Hrs.) | 280 |
| Employee/Benefit Transaction | 500 |
| Training Sessions Conducted | 7 |
| Applications Processed | 270 |
| Exams Conducted | 6 |
| New Hires | 1 |
| Payroll Administration (Hrs.) | 520 |
| Safety Administration | 150 |
| Inquiries (voice/telephone/in-person) | 6,300 |

Vehicle/Building Maintenance

| | |
|--------------------------------|-----|
| Vehicle Services Completed | 145 |
| Requests for Building Services | 340 |

Compliance and Operations Program

| | |
|---------------------------------------|-------|
| Asbestos Plans Rec'd | 1,217 |
| Coating and other petitions Evaluated | 14 |
| Open Burn Notifications Rec'd | 335 |
| Prescribed Burn Plans Evaluated | 7 |
| Smoking Vehicle Complaints Rec'd | 3,066 |
| Tank/Soil Removal Notifications Rec'd | 23 |
| Compliance Assistance Inquiries Rec'd | 182 |
| Green Business Reviews | 32 |
| Flare Notifications | 35 |

Compliance Assurance Program

| | |
|--|-------|
| Industrial Inspections Conducted | 2,249 |
| GDF Inspections Conducted | 285 |
| Asbestos Inspections Conducted | 573 |
| Open Burning Inspections Conducted | 44 |
| Auto Body/Dry Cleaning Inspections Conducted | 101 |
| Grants Inspections Conducted | 302 |

Engineering Division:

| | |
|---|-------|
| Annual Update Packages Started | 948 |
| Annual Update Packages Completed | 1,257 |
| Total Update Pages Entered | 1,289 |
| New Applications Received | 333 |
| Authorities to Construct Issued | 399 |
| Permits to Operate Issued (new and modified) | 405 |
| Exemptions | 28 |
| Authorities to Construct Denied | 0 |
| New Companies added to Databank during the 2 nd Quarter 2009 | 113 |

Communications and Outreach Division:

| | |
|----------------------------------|-----|
| Presentations Made | 5 |
| Responses to Media Inquiries | 153 |
| Press Releases | 14 |
| General Requests for Information | 600 |
| Visitors | 0 |

STATISTICS (continued)

Compliance and Enforcement Division:

Enforcement Program

| | |
|--|-----|
| Reportable Compliance Activity Investigated | 145 |
| Citizen Complaints Investigated | 581 |
| GDF Tags Issued | 11 |
| Violations Resulting in Notices of Violation | 172 |
| Violations Resulting in Notice to Comply | 122 |
| New Hearing Board Cases Reviewed | 6 |

Technical Services:

2ns Quarter 2009 Ambient Air Monitoring

| | |
|---|---|
| Days Exceeding Nat’l 24-hour PM _{2.5} Std..... | 0 |
| Days Exceeding Nat’l 24-hour PM ₁₀ Std..... | 0 |
| Days Exceeding Nat’l 24-hour PM ₁₀ Std..... | 0 |
| Days Exceeding the Nat’l 8-hour Ozone Std..... | 5 |
| Days Exceeding the State 1-hour Ozone Std..... | 4 |
| Days Exceeding the State 8-hour Ozone Std..... | 5 |

Ozone Totals, Jan.-Dec. 2009

| | |
|--|---|
| Days Exceeding Nat’l 8-hour Ozone Std..... | 5 |
| Days Exceeding State 1-hour Ozone Std..... | 4 |
| Reports..... | 0 |
| Days Exceeding State 8-hour Ozone Std..... | 5 |

Particulate Totals, Jan.-Dec. 2009

| | |
|--|---|
| Days Exceeding Nat’l 24-hour PM _{2.5} Std..... | 6 |
| Days Exceeding the Nat’l 24-hour PM ₁₀ Std..... | 0 |
| Days Exceeding State 24-hour PM ₁₀ Std..... | 0 |

PM_{2.5} Winter Season Totals for 2008-2009

| | |
|---|----|
| Days Exceeding Nat’l 24-hour PM _{2.5} Std..... | 13 |
|---|----|

2nd Quarter 2009 Agricultural Burn Days

| | |
|--|----|
| April-June Permissive Burn Days – North..... | 80 |
| April-June No-Burn Days – North..... | 11 |
| April-June Permissive Burn Days – South..... | 80 |
| April-June No-Burn Days – South..... | 11 |
| April-June Permissive Burn Days – Coastal..... | 80 |
| April-June No Burn Days – Coastal..... | 11 |

Laboratory

| | |
|--------------------------------|-------|
| Sample Analyzed..... | 1,152 |
| Inter-Laboratory Analyses..... | 4 |

Technical Library

| | |
|-----------------------------|--|
| Titles Indexed/Cataloged | |
| Periodicals Received/Routed | |

Source Test

| | |
|---------------------------------------|-------|
| Total Source Tests..... | 218 |
| Pending Source Tests..... | 6 |
| Violation Notices Recommended..... | 7 |
| Contractor Source Tests Reviewed..... | 3,916 |

Continuous Emissions Monitoring (CEM)

| | |
|--|-----|
| Indicated Excess Emission Report Eval..... | 27 |
| Monthly CEM Reports Reviewed..... | 138 |
| Indicated Excesses from CEM..... | 11 |

Ground Level Monitoring (GLM)

| | |
|--|---|
| April-June Ground Level Monitoring SO ₂ Excess | |
| April-June Ground Level Monitoring H ₂ S Excess | |
| Reports..... | 3 |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009

Alameda County

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|---|-------------|-----------------------------------|
| 4/28/2009 | D0476 | Alameda Gas & Mart | Alameda | Gasoline Dispensing Facilities |
| 6/10/2009 | C7128 | City of Alameda, Maintenance Serv Div | Alameda | Gasoline Dispensing Facilities |
| 5/19/2009 | C9330 | ConocoPhillips #2611270 | Alameda | Gasoline Dispensing Facilities |
| 4/21/2009 | C0081 | Albany Hill Mini Mart | Albany | Gasoline Dispensing Facilities |
| 4/09/2009 | B2071 | Bayer Healthcare LLC | Berkeley | Failure to Meet Permit Conditions |
| 5/01/2009 | C9474 | Berkeley Petroleum/Econo Gas | Berkeley | Gasoline Dispensing Facilities |
| 6/10/2009 | C0070 | Berkeley Touchless Carwash | Berkeley | Gasoline Dispensing Facilities |
| 6/10/2009 | C0090 | Chevron #1745 | Berkeley | Gasoline Dispensing Facilities |
| 4/17/2009 | C6992 | San Pablo Mini Mart | Berkeley | Gasoline Dispensing Facilities |
| 6/10/2009 | C0722 | ARCO Facility #06041 - NARRA INC | Dublin | Gasoline Dispensing Facilities |
| 5/19/2009 | C9577 | Dublin Fed Prison, ATTN: D Hickey, Garage | Dublin | Gasoline Dispensing Facilities |
| 6/10/2009 | C5960 | Unocal #7176 | Dublin | Gasoline Dispensing Facilities |
| 4/17/2009 | D0501 | A&T Blacow Gas | Fremont | Gasoline Dispensing Facilities |
| 4/21/2009 | C9282 | ConocoPhillips #30169 | Fremont | Gasoline Dispensing Facilities |
| 6/29/2009 | D0582 | Fremont Gas & Car Wash | Fremont | Gasoline Dispensing Facilities |
| 4/28/2009 | C7595 | Fremont Unified School District | Fremont | Gasoline Dispensing Facilities |
| 4/07/2009 | A8391 | Western Digital Corporation | Fremont | Failure to Meet Permit Conditions |
| 4/21/2009 | C9279 | 76 Gas Station | Hayward | Gasoline Dispensing Facilities |
| 4/01/2009 | C8775 | All American Oil | Hayward | Gasoline Dispensing Facilities |
| 5/19/2009 | C9764 | Arco SS #1319 - Daven Loomba | Hayward | Gasoline Dispensing Facilities |
| 4/28/2009 | C9145 | Ashraf Ali #256049 | Hayward | Gasoline Dispensing Facilities |
| 5/06/2009 | T5717 | BART Police | Hayward | Open Burning |
| 4/17/2009 | C0278 | Breakwater 76 | Hayward | Gasoline Dispensing Facilities |
| 6/10/2009 | C7805 | City of Hayward-Waste Water Treatment Plt | Hayward | Gasoline Dispensing Facilities |
| 4/17/2009 | C8066 | DLA Service Station | Hayward | Gasoline Dispensing Facilities |
| 4/28/2009 | C9149 | Hayward Chevron | Hayward | Gasoline Dispensing Facilities |
| 5/29/2009 | C0764 | Hayward Gas | Hayward | Gasoline Dispensing Facilities |
| 4/23/2009 | T4174 | Martin Chitwood | Hayward | Resin Mfg. |
| 6/02/2009 | C8815 | Mission Chevron | Hayward | Gasoline Dispensing Facilities |
| 5/07/2009 | C8026 | Quick Gas N Shop | Hayward | Gasoline Dispensing Facilities |
| 4/09/2009 | A0200 | Rohm and Haas Chemicals LLC | Hayward | Failure to Meet Permit Conditions |
| 5/07/2009 | C9292 | Tosco Northwest Company | Hayward | Gasoline Dispensing Facilities |
| 4/28/2009 | C0056 | West A Valero | Hayward | Gasoline Dispensing Facilities |
| 5/19/2009 | C7939 | ARCO Fac #771/AM PM Mini Market-NARRA INC | Livermore | Gasoline Dispensing Facilities |
| 6/10/2009 | C8961 | Chevron #352035 - CTV Enterprises Inc | Livermore | Gasoline Dispensing Facilities |
| 6/10/2009 | C8677 | City Of Livermore | Livermore | Gasoline Dispensing Facilities |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009
Continued

Alameda County
Countined

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|--|-------------|---|
| 4/08/2009 | C8876 | Livermore Beacon | Livermore | No Permit to Operate |
| 5/29/2009 | C9893 | Livermore Gas | Livermore | Gasoline Dispensing Facilities |
| 6/10/2009 | C9920 | Parthian Chevron | Livermore | Gasoline Dispensing Facilities Major Facility Review (Title V), Parametric Monitoring & Recordkeeping Procedures |
| 6/22/2009 | A5095 | Republic Services Vasco Rd., LLC | Livermore | Recordkeeping Procedures |
| 5/05/2009 | A2066 | Waste Management of Alameda County | Livermore | Major Facility Review (Title V) |
| 5/19/2009 | C8217 | Chevron #8168 | Newark | Gasoline Dispensing Facilities |
| 4/28/2009 | A0079 | Morton International Inc | Newark | Major Facility Review (Title V) |
| 6/10/2009 | C8866 | Alaska Gasoline | Oakland | Gasoline Dispensing Facilities |
| 6/10/2009 | C7951 | Bay Area Rapid Transit District | Oakland | Gasoline Dispensing Facilities |
| 5/19/2009 | C0698 | China Town 76 Unocal #0752 | Oakland | Gasoline Dispensing Facilities |
| 4/28/2009 | C9646 | City of Oakland/Fire Station #1 | Oakland | Gasoline Dispensing Facilities |
| 4/28/2009 | C6475 | City of Oakland-Municipal Service Center | Oakland | Gasoline Dispensing Facilities |
| 4/28/2009 | C6473 | City of Oakland-Police Admin Bldg | Oakland | Gasoline Dispensing Facilities |
| 5/01/2009 | C9693 | Golden Gas | Oakland | Gasoline Dispensing Facilities |
| 5/29/2009 | C0686 | Grand Mandana Gas Station | Oakland | Gasoline Dispensing Facilities |
| 5/19/2009 | C0803 | Ken Betts Chevron | Oakland | Gasoline Dispensing Facilities |
| 5/06/2009 | A0030 | Owens-Brockway Glass Container Inc | Oakland | Major Facility Review (Title V) |
| 6/10/2009 | C6875 | Rino Pacific | Oakland | Gasoline Dispensing Facilities |
| 6/10/2009 | C0279 | SAVE ON GAS - WING WONG | Oakland | Gasoline Dispensing Facilities Asbestos Demolition, Renovation & Mfg. |
| 4/7/2009 | J9709 | Sterling Environmental Corporation | Oakland | Asbestos Demolition, Renovation & Mfg. |
| 4/21/2009 | C9286 | Tosco Northwest Company | Oakland | Gasoline Dispensing Facilities |
| 4/17/2009 | C9398 | Trucker's Friends, Inc | Oakland | Gasoline Dispensing Facilities |
| 4/21/2009 | C9386 | Unocal #0746 | Oakland | Gasoline Dispensing Facilities |
| 4/17/2009 | D0353 | Wong's Valero | Oakland | Gasoline Dispensing Facilities |
| 4/28/2009 | C9211 | Pleasanton (Coast) Station | Pleasanton | Gasoline Dispensing Facilities |
| 4/28/2009 | C7767 | Pleasanton Garbage Service, Inc | Pleasanton | Gasoline Dispensing Facilities |
| 4/17/2009 | C0874 | 167th Ave Gas Station | San Leandro | Gasoline Dispensing Facilities |
| 6/02/2009 | C9936 | Bancroft 76 | San Leandro | Gasoline Dispensing Facilities |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009
Continued

Alameda County
Countined

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|-------------------------------------|-------------|--------------------------------|
| 5/29/2009 | C9070 | Grand Gas Station | San Leandro | Gasoline Dispensing Facilities |
| 4/22/2009 | C0743 | Mash Petroleum dba Monument Gas | San Leandro | Gasoline Dispensing Facilities |
| 4/22/2009 | C9794 | Mash Petroleum dba Techco Gas | San Leandro | Gasoline Dispensing Facilities |
| 4/01/2009 | D0060 | Premier Gasoline and Snacks | San Leandro | Gasoline Dispensing Facilities |
| 4/28/2009 | C8083 | Richard's Automotive Service | San Leandro | Gasoline Dispensing Facilities |
| 4/17/2009 | C0926 | San Leandro Gas & Car Wash | San Leandro | Gasoline Dispensing Facilities |
| 6/10/2009 | C9277 | 76 Gas Station | San Lorenzo | Gasoline Dispensing Facilities |
| 6/10/2009 | C9006 | 76 Gas Station #5760 | San Lorenzo | Gasoline Dispensing Facilities |
| 5/29/2009 | C9080 | Cal Gas | San Lorenzo | Gasoline Dispensing Facilities |
| 5/29/2009 | C6695 | SFWD/Sunol Yard Headquarters | Sunol | Gasoline Dispensing Facilities |
| 6/10/2009 | C0268 | City of Union City Maint Facility | Union City | Gasoline Dispensing Facilities |
| 5/29/2009 | C9618 | New Haven School District-Corp Yard | Union City | Gasoline Dispensing Facilities |

Contra Costa
County

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|-------------------------------------|---------------|--|
| 5/05/2009 | B9654 | Antioch Convertibles and Upholstery | Antioch | No Permit to Operate |
| 4/21/2009 | I0158 | Burger King | Antioch | Particulate Matter & Visible Emissions |
| 4/09/2009 | B8143 | Gateway Generating Station | Antioch | No Authority to Construct; Failure to Meet Permit Conditions |
| 5/07/2009 | C1124 | Lone Tree Gas & Food | Antioch | No Permit to Operate |
| 4/17/2009 | C0237 | Trinity Valero Enterprises | Antioch | Gasoline Dispensing Facilities |
| 6/02/2009 | C5801 | USA Gasoline #91 | Antioch | Gasoline Dispensing Facilities |
| 4/28/2009 | C1164 | Brentwood American Station | Brentwood | Gasoline Dispensing Facilities |
| 5/29/2009 | C5455 | Brentwood Blvd 76 - Moneshpal S | Brentwood | Gasoline Dispensing Facilities |
| 5/07/2009 | T5728 | Ron Nunn Farms | Brentwood | Open Burning |
| 6/10/2009 | C0453 | Calif Dept of Forestry & Fire | Clayton | Gasoline Dispensing Facilities |
| 5/07/2009 | C7876 | ARCO | Concord | Gasoline Dispensing Facilities |
| 6/16/2009 | Q5080 | Gulf Transportation | Concord | Gasoline Bulk Terminals & Gasoline Delivery Vehicles |
| 4/08/2009 | A1753 | John Muir Health - Concord Campus | Concord | Failure to Meet Permit Conditions |
| 5/06/2009 | A0581 | ST Shore Terminals LLC | Crockett | Major Facility Review (Title V) |
| 6/11/2009 | I0155 | Burger King #1818 | Danville | Particulate Matter & Visible Emissions |
| 4/17/2009 | C1175 | Dash #179 | Discovery Bay | Gasoline Dispensing Facilities |
| 4/28/2009 | C1318 | Unocal #4296 | El Cerrito | Gasoline Dispensing Facilities |
| 6/29/2009 | C9477 | Kay & Appian Express Mart & Gaso | El Sobrante | Gasoline Dispensing Facilities |
| 4/08/2009 | L2463 | BO'S BBQ | Lafayette | Particulate Matter & Visible Emissions |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009
Continued

**Contra Costa
County Continued**

| Status Date | Site # | Site Name | City | Regulation Title |
|------------------------|---------------|---|--------------------------|--|
| 6/02/2009 | C9427 | EASY SERV | Martinez | Gasoline Dispensing Facilities |
| 4/28/2009 | C9730 | Martinez Gas and Carwash | Martinez | Gasoline Dispensing Facilities |
| 4/02/2009 | A7034 | Plains Products Terminals LLC | Martinez | Major Facility Review (Title V); Storage of Organic Liquids |
| 6/11/2009 | A0011 | Shell Martinez Refinery | Martinez | Standards of Performance for New Stationary Sources; Equipment Leaks; Gasoline Dispensing Facilities |
| 6/11/2009 | I0192 | Carl's Jr. | Oakley | Particulate Matter & Visible Emissions |
| 5/07/2009 | C1447 | Candia's Valero Service | Orinda | No Permit to Operate |
| 6/29/2009 | B3719 | East Bay Municipal Utility Dist | Orinda | Gasoline Dispensing Facilities |
| 4/28/2009 | C9411 | Orinda Unocal 76 #3518 | Orinda | Gasoline Dispensing Facilities |
| 4/08/2009 | D0455 | Pleasant Hill Shell-Shell Oil Products | Pleasant Hill | Gasoline Dispensing Facilities |
| 5/06/2009 | A0010 | Chevron Products Company | Richmond | No Permit to Operate Organic Compounds: Misc Operations; Storage of Organic Liquids; Gasoline Dispensing Facilities |
| 5/29/2009 | C7184 | Imperial 76 #3713 | Richmond | Gasoline Dispensing Facilities |
| 5/05/2009 | A0016 | ConocoPhillips - San Francisco Refinery | Richmond | Major Facility Review (Title V); Equipment Leaks; Storage of Organic Liquids |
| 6/10/2009 | C9293 | Walnut Creek Gasoline | Rodeo Walnut Creek | Gasoline Dispensing Facilities |
| 4/21/2009 | D0512 | Walnut Creek Valero | Walnut Creek | Gasoline Dispensing Facilities |

San Mateo County

| Status Date | Site # | Site Name | City | Regulation Title |
|------------------------|---------------|--------------------------------|----------------|--|
| 4/28/2009 | C8258 | City of Belmont | Belmont | Gasoline Dispensing Facilities |
| 4/17/2009 | C5709 | Valero | Burlingame | Gasoline Dispensing Facilities |
| 4/21/2009 | I0150 | Burger King 4786 | Daly City | Particulate Matter & Visible Emissions |
| 6/11/2009 | I0028 | Carl's Jr. 7170 | Daly City | Particulate Matter & Visible Emissions |
| 4/01/2009 | C2867 | Rainer's Gas | East Palo Alto | Gasoline Dispensing Facilities |
| 4/21/2009 | C9424 | Foster City Touchless Car Wash | Foster City | Gasoline Dispensing Facilities |
| 5/07/2009 | D0497 | Millbrae Gas and Food | Millbrae | Gasoline Dispensing Facilities |
| 6/10/2009 | C2970 | Olympic | Millbrae | Gasoline Dispensing Facilities |
| 5/29/2009 | C6250 | San Francisco Water Department | Millbrae | Gasoline Dispensing Facilities |
| 4/23/2009 | T5517 | Simon Luo | Millbrae | Asbestos Demolition, Renovation & Mfg. |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009
Continued

San Mateo County
Continued

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|--|---------------------|---|
| 5/19/2009 | C9939 | Bay Area Oil #255898 dba 76 Station | Pacifica | Gasoline Dispensing Facilities |
| 4/21/2009 | C9612 | Ron Ramies Automotive Inc. Broadway Auto Service | Portola Valley | Gasoline Dispensing Facilities |
| 4/22/2009 | C3027 | (Beacon) | Redwood City | Gasoline Dispensing Facilities |
| 5/01/2009 | C9024 | El Camino Martco | Redwood City | Gasoline Dispensing Facilities |
| 5/29/2009 | C8716 | Pacific Commercial Fueling Inc. | Redwood City | Gasoline Dispensing Facilities |
| 4/21/2009 | C3039 | Touchless Redwood Gasoline | Redwood City | Gasoline Dispensing Facilities |
| 4/17/2009 | D0113 | Valley Market & Gas | Redwood City | Gasoline Dispensing Facilities |
| 4/21/2009 | C9421 | San Bruno Chevron | San Bruno | Gasoline Dispensing Facilities |
| 5/29/2009 | C3134 | Shelter Creek Chevron | San Bruno | Gasoline Dispensing Facilities |
| 4/21/2009 | C3155 | Nielsen Automotive Inc. | San Carlos | Gasoline Dispensing Facilities |
| 4/29/2009 | A5932 | New Look Auto Body | San Mateo | Motor Vehicle & Mobile Equip Coating Operations |
| 4/17/2009 | C3260 | Olympic | San Mateo | Gasoline Dispensing Facilities |
| 6/29/2009 | D0752 | Pacific Fuel & Auto Service, Inc. | San Mateo | Gasoline Dispensing Facilities |
| 5/29/2009 | C8817 | San Mateo Auto Services | San Mateo | Gasoline Dispensing Facilities |
| 5/29/2009 | D0453 | San Mateo Gas Co | San Mateo | Gasoline Dispensing Facilities |
| 5/29/2009 | C0272 | KP Gas | South San Francisco | Gasoline Dispensing Facilities |
| 5/29/2009 | C3331 | Westborough Chevron | South San Francisco | Gasoline Dispensing Facilities |

Santa Clara County

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|---------------------------------|-------------|--|
| 4/17/2009 | C3435 | De Anza Carwash Inc | Cupertino | Gasoline Dispensing Facilities |
| 5/19/2009 | A0017 | Lehigh Southwest Cement Company | Cupertino | Continuous Emission Monitoring & Recordkeeping Procedures; Major Facility Review (Title V); Gasoline Dispensing Facilities |
| 5/29/2009 | C7583 | Chevron Inc #9-0049 | Gilroy | Gasoline Dispensing Facilities |
| 4/22/2009 | D1857 | J N Abbott Distributor Inc | Gilroy | Gasoline Dispensing Facilities |
| 6/10/2009 | C0829 | Conoco Phillips #255957 | Los Altos | Gasoline Dispensing Facilities |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009
Continued

Santa Clara County
Continued

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|---|---------------|-----------------------------------|
| 6/10/2009 | C8149 | Rancho 76 | Los Altos | Gasoline Dispensing Facilities |
| 6/10/2009 | C3535 | Los Gatos Chevron | Los Gatos | Gasoline Dispensing Facilities |
| 6/29/2009 | C7035 | Los Gatos-Almaden Chevron | Los Gatos | Gasoline Dispensing Facilities |
| 4/17/2009 | C3537 | Valero Station | Los Gatos | Gasoline Dispensing Facilities |
| 6/29/2009 | C9037 | Main Street Gas | Milpitas | Gasoline Dispensing Facilities |
| 5/01/2009 | D1453 | Morgan Hill Gas | Morgan Hill | Gasoline Dispensing Facilities |
| 6/29/2009 | D0406 | Mountain View Valero SS#7542 | Mountain View | Gasoline Dispensing Facilities |
| 4/21/2009 | C9526 | Alum Rock Chevron | San Jose | Gasoline Dispensing Facilities |
| 6/10/2009 | C0551 | ARCO Station | San Jose | Gasoline Dispensing Facilities |
| 5/29/2009 | C3871 | Bird Ave Chevron Inc | San Jose | Gasoline Dispensing Facilities |
| 6/09/2009 | B7019 | Cadence Design Systems, Inc | San Jose | No Permit to Operate |
| 6/02/2009 | C0451 | CDF Fire Smith Creek | San Jose | Gasoline Dispensing Facilities |
| 5/19/2009 | C7942 | Chevron #96215 | San Jose | Gasoline Dispensing Facilities |
| 5/01/2009 | C7684 | Chevron Inc #9-2620 | San Jose | Gasoline Dispensing Facilities |
| 5/07/2009 | C8793 | Contract Transportation Service | San Jose | Gasoline Dispensing Facilities |
| 5/07/2009 | B0751 | Micrel Semiconductor Inc | San Jose | Failure to Meet Permit Conditions |
| 6/10/2009 | C8526 | Oak Grove School District | San Jose | Gasoline Dispensing Facilities |
| 5/19/2009 | A0475 | Santa Clara Valley Health & Hospital System | San Jose | Failure to Meet Permit Conditions |
| 6/10/2009 | C7732 | Unocal #5954 | San Jose | Gasoline Dispensing Facilities |
| 6/10/2009 | C8003 | Unocal #5995 | San Jose | Gasoline Dispensing Facilities |
| 6/29/2009 | D0365 | Valero Refining Co SS#7445 | San Jose | Gasoline Dispensing Facilities |
| 4/17/2009 | C9705 | Valley Fair Market and Gas | San Jose | Gasoline Dispensing Facilities |
| 6/29/2009 | D0021 | West San Carlos Gas | San Jose | Gasoline Dispensing Facilities |
| 5/29/2009 | C5610 | ARCO Facility #02153 – Wasu D P | Santa Clara | Gasoline Dispensing Facilities |
| 6/29/2009 | B0647 | California's Great America | Santa Clara | Gasoline Dispensing Facilities |
| 5/29/2009 | C9606 | Unocal Service Station #4425 | Santa Clara | Gasoline Dispensing Facilities |
| 6/10/2009 | D0529 | Valero of Santa Clara | Santa Clara | Gasoline Dispensing Facilities |
| 6/29/2009 | C6528 | ARCO #2145 | Sunnyvale | Gasoline Dispensing Facilities |
| 5/29/2009 | C9321 | BP Facility #11231 | Sunnyvale | Gasoline Dispensing Facilities |
| 4/17/2009 | C3435 | De Anza Carwash Inc | Cupertino | Gasoline Dispensing Facilities |
| 5/29/2009 | C7583 | Chevron Inc #9-0049 | Gilroy | Gasoline Dispensing Facilities |
| 4/22/2009 | D1857 | J N Abbott Distributor Inc | Gilroy | Gasoline Dispensing Facilities |
| 6/10/2009 | C0829 | Conoco Phillips #255957 | Los Altos | Gasoline Dispensing Facilities |
| 6/10/2009 | C8149 | Rancho 76 | Los Altos | Gasoline Dispensing Facilities |
| 6/10/2009 | C3535 | Los Gatos Chevron | Los Gatos | Gasoline Dispensing Facilities |
| 6/29/2009 | C7035 | Los Gatos-Almaden Chevron | Los Gatos | Gasoline Dispensing Facilities |
| 4/17/2009 | C3537 | Valero Station | Los Gatos | Gasoline Dispensing Facilities |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009
Continued

Santa Clara County
Continued

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|---|---------------|-----------------------------------|
| 6/29/2009 | C9037 | Main Street Gas | Milpitas | Gasoline Dispensing Facilities |
| 5/01/2009 | D1453 | Morgan Hill Gas | Morgan Hill | Gasoline Dispensing Facilities |
| 6/29/2009 | D0406 | Mountain View Valero SS#7542 | Mountain View | Gasoline Dispensing Facilities |
| 4/21/2009 | C9526 | Alum Rock Chevron | San Jose | Gasoline Dispensing Facilities |
| 6/10/2009 | C0551 | ARCO Station | San Jose | Gasoline Dispensing Facilities |
| 5/29/2009 | C3871 | Bird Ave Chevron Inc. | San Jose | Gasoline Dispensing Facilities |
| 6/09/2009 | B7019 | Cadence Design Systems, Inc. | San Jose | No Permit to Operate |
| 6/02/2009 | C0451 | CDF Fire Smith Creek | San Jose | Gasoline Dispensing Facilities |
| 5/19/2009 | C7942 | Chevron #96215 | San Jose | Gasoline Dispensing Facilities |
| 5/01/2009 | C7684 | Chevron Inc #9-2620 | San Jose | Gasoline Dispensing Facilities |
| 5/07/2009 | C8793 | Contract Transportation Service | San Jose | Gasoline Dispensing Facilities |
| 5/07/2009 | B0751 | Micrel Semiconductor Inc | San Jose | Failure to Meet Permit Conditions |
| 6/10/2009 | C8526 | Oak Grove School District | San Jose | Gasoline Dispensing Facilities |
| 5/19/2009 | A0475 | Santa Clara Valley Health & Hospital System | San Jose | Failure to Meet Permit Conditions |
| 6/10/2009 | C7732 | Unocal #5954 | San Jose | Gasoline Dispensing Facilities |
| 6/10/2009 | C8003 | Unocal #5995 | San Jose | Gasoline Dispensing Facilities |
| 6/29/2009 | D0365 | Valero Refining Co SS#7445 | San Jose | Gasoline Dispensing Facilities |
| 4/17/2009 | C9705 | Valley Fair Market and Gas | San Jose | Gasoline Dispensing Facilities |
| 6/29/2009 | D0021 | West San Carlos Gas | San Jose | Gasoline Dispensing Facilities |
| 5/29/2009 | C5610 | ARCO Facility #02153 – Wasu D P | Santa Clara | Gasoline Dispensing Facilities |
| 6/29/2009 | B0647 | California's Great America | Santa Clara | Gasoline Dispensing Facilities |
| 5/29/2009 | C9606 | Unocal Service Station #4425 | Santa Clara | Gasoline Dispensing Facilities |
| 6/10/2009 | D0529 | Valero of Santa Clara | Santa Clara | Gasoline Dispensing Facilities |
| 6/29/2009 | C6528 | ARCO #2145 | Sunnyvale | Gasoline Dispensing Facilities |
| 5/29/2009 | C9321 | BP Facility #11231 | Sunnyvale | Gasoline Dispensing Facilities |

Solano County

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|--------------------------------------|-------------|--|
| 5/19/2009 | C9662 | Fast & Easy Mart | Benicia | Gasoline Dispensing Facilities |
| 5/04/2009 | B2626 | Valero Refining Company - California | Benicia | Major Facility Review (Title V); Particulate Matter & Visible Emissions; Equipment Leaks |
| 4/21/2009 | C6862 | City of Fairfield-Corporation Yard | Fairfield | Gasoline Dispensing Facilities |
| 6/10/2009 | C4655 | David's Spirit | Fairfield | Gasoline Dispensing Facilities |
| 6/11/2009 | A2284 | Solano Community College | Fairfield | No Authority to Construct/Permit to Operate |
| 4/22/2009 | D0440 | Golden Valero | Vallejo | Gasoline Dispensing Facilities |
| 6/10/2009 | C9229 | Lee's Market | Vallejo | Gasoline Dispensing Facilities |
| 4/29/2009 | C6537 | N & M Market (Arco) | Vallejo | Gasoline Dispensing Facilities |

These facilities have received one or more Notices of Violations
Report period: April 1, 2009 – June 30, 2009

Sonoma County

| Status Date | Site # | Site Name | City | Regulation Title |
|--------------------|---------------|--|--------------|--|
| 5/05/2009 | T5690 | Nagy, Ron | Cotati | Open Burning |
| 5/01/2009 | C4814 | Royal Coach Carwash | Cotati | Gasoline Dispensing Facilities |
| 5/06/2009 | T5755 | Swenson, Larry | Penngrove | Open Burning |
| 4/30/2009 | C0191 | Rohnert Park Tesoro | Rohnert Park | No Permit to Operate; Gasoline Dispensing Facilities |
| | | B & G Gas & Food Mart/Fast Lane Gas & Food | | Gasoline Dispensing Facilities |
| 4/28/2009 | D0029 | | Santa Rosa | Perc & Synthetic Solvent Dry Cleaning Operations |
| 6/29/2009 | B2782 | Empire Cleaners | Santa Rosa | Open Burning |
| 4/23/2009 | S1382 | Mike Birleffi | Santa Rosa | Particulate Matter & Visible Emissions |
| 5/13/2009 | T6063 | Resident at | Santa Rosa | Gasoline Dispensing Facilities |
| 6/29/2009 | C9613 | Bill's Valero | Sebastopol | Gasoline Dispensing Facilities |
| 4/17/2009 | C5069 | North Gate Gas | Sebastopol | Open Burning |
| 5/08/2009 | T5759 | Starkey, Blanche | Sebastopol | Open Burning |
| 4/09/2009 | T5319 | Young, Brad | Sebastopol | Open Burning |
| 5/20/2009 | T5984 | Cornerstone Sonoma | Sonoma | Open Burning |
| 6/05/2009 | T6217 | Frost, Richard | Sonoma | Open Burning |
| | | G W Inskeep dba The Corner Stat | | Gasoline Dispensing Facilities |
| 6/29/2009 | D0199 | | Sonoma | Gasoline Dispensing Facilities |
| 4/17/2009 | C5097 | Jolly Washer Service Station 76 | Sonoma | Open Burning |
| 4/08/2009 | T5311 | Raul Martin | Sonoma | Gasoline Dispensing Facilities |
| 6/10/2009 | C8467 | Redwood Station | Sonoma | Open Burning |
| 6/05/2009 | T6325 | Ron Lakatos | Sonoma | Gasoline Dispensing Facilities |

**Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009**

Alameda

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|---|-----------------|-------------|----------------|------------------------|-------|
| 76 Gas Station #5760 | C9006 | San Lorenzo | \$700 | 1 | June |
| Abrew Construction | T4329 | Dublin | \$750 | 1 | April |
| Alameda Gas & Mart | D0476 | Alameda | \$975 | 1 | June |
| Ashraf Ali #256049 | C9145 | Hayward | \$775 | 1 | June |
| Bancroft 76 | C9936 | San Leandro | \$1,000 | 1 | June |
| Berkeley Petroleum/Econo Gas | C9474 | Berkeley | \$700 | 1 | June |
| Berkeley Touchless Carwash | C0070 | Berkeley | \$700 | 1 | June |
| Cal Gas | C9080 | San Lorenzo | \$500 | 1 | June |
| Chevron #0289 | C0055 | Berkeley | \$600 | 1 | April |
| City of Berkeley/Engr Div/Public Works | A3590 | Berkeley | \$1,800 | 3 | June |
| City of Hayward-Waste Water Treatment Plt | C7805 | Hayward | \$600 | 1 | June |
| City of Oakland/Fire Station #1 | C9646 | Oakland | \$500 | 1 | June |
| City of Oakland-Municipal Service Center | C6475 | Oakland | \$500 | 1 | June |
| City of Oakland-Police Admin Bldg | C6473 | Oakland | \$500 | 1 | June |
| ConocoPhillips #251156 | C9208 | Oakland | \$500 | 1 | April |
| ConocoPhillips #2611128 | C9353 | Livermore | \$650 | 1 | April |
| Fremont Unified School District | C7595 | Fremont | \$650 | 1 | June |
| Grafc0 Station | C8260 | Livermore | \$500 | 1 | June |
| Grand Gas Station | C9070 | San Leandro | \$700 | 1 | June |
| Grand Mandana Gas Station | C0686 | Oakland | \$775 | 1 | June |
| Granite Construction Co. | B3443 | Pleasanton | \$1,000 | 1 | May |
| Hayward Chevron | C9149 | Hayward | \$700 | 1 | June |

Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009
Continued

Alameda Continued

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|-------------------------------------|-----------------|-------------|----------------|------------------------|-------|
| Hayward Gas | C0764 | Hayward | \$700 | 1 | June |
| Livermore Gas | C9893 | Livermore | \$650 | 1 | June |
| Martin Chitwood | T4174 | Hayward | \$350 | 1 | June |
| New Haven School District-Corp Yard | C9618 | Union City | \$500 | 1 | June |
| Pacific Drywall/Home 360 | S7887 | Patterson | \$10,000 | 4 | April |
| Parthian Chevron | C9920 | Livermore | \$1,000 | 1 | June |
| Pleasanton (Coast) Station | C9211 | Pleasanton | \$700 | 1 | June |
| Pleasanton Garbage Service, Inc. | C7767 | Pleasanton | \$650 | 1 | June |
| Quick Gas N Shop | C8026 | Hayward | \$700 | 1 | June |
| Richard's Automotive Service | C8083 | San Leandro | \$500 | 1 | June |
| SFWD/Sunol Yard Headquarters | C6695 | Sunol | \$500 | 1 | June |
| Washington Hospital | A0792 | Fremont | \$650 | 1 | April |
| West A Valero | C0056 | Hayward | \$900 | 1 | June |

Totals for 4th Quarter \$33,875 40

Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009
Continued

Contra Costa

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|--|-----------------|--------------|----------------|------------------------|-------|
| ARCO | C7876 | Concord | \$1,000 | 1 | June |
| ARCO | C7876 | Concord | \$300 | 1 | May |
| Brentwood Blvd 76 - Moneshpal S | C5455 | Brentwood | \$1,000 | 1 | June |
| Calpine Pittsburg (LLC) | B1928 | Pittsburg | \$3,000 | 2 | June |
| Chevron Avon Terminal | A0091 | Martinez | \$1,200 | 1 | June |
| Chevron Chemical Company | A0628 | Richmond | \$3,000 | 3 | June |
| Chevron Inc. | A0072 | Richmond | \$500 | 1 | June |
| Conoco Phillips Refinery | A0016 | Rodeo | \$629,500 | 30 | June |
| Contra Costa Newspapers Inc. | A2802 | Walnut Creek | \$5,000 | 1 | May |
| County Asphalt | B0408 | Martinez | \$2,400 | 1 | April |
| Equilon | B1956 | Martinez | \$12,000 | 2 | June |
| General Chemical West, LLC | A2282 | Pittsburg | \$10,000 | 1 | May |
| Imperial 76 #3713 | C7184 | Richmond | \$700 | 1 | June |
| Los Medanos Energy Center (Calpine) | B1866 | Pittsburg | \$6,250 | 1 | June |
| Orinda Unocal 76 #3518 | C9411 | Orinda | \$775 | 1 | June |
| Rhodia Inc. | B1661 | Martinez | \$2,000 | 1 | April |
| Shell Martinez Refinery | A0011 | Martinez | \$650 | 1 | June |
| TRC | B2967 | Antioch | \$900 | 3 | April |
| Trinity Valero Enterprises | C0237 | Antioch | \$400 | 1 | June |
| Unocal #4296 | C1318 | El Cerrito | \$775 | 1 | June |
| Unocal Service Station #3937 | C8950 | Moraga | \$1,250 | 3 | June |
| West Contra Costa County Landfill | A1840 | Richmond | \$44,000 | 12 | May |

**Totals for 4th
Quarter \$726,600 70**

Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009
Continued

Marin

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|------------------|-----------------|------------|----------------|------------------------|-------|
| Bolinas Garage | C9017 | Bolinas | \$500 | 1 | June |
| Fairfax Gas | C8039 | Fairfax | \$850 | 2 | April |
| Gas and Shop | D1935 | San Rafael | \$700 | 1 | June |
| Montecito 76 | C7739 | San Rafael | \$700 | 1 | June |
| Paragraphics | A2898 | San Rafael | \$1,000 | 1 | June |
| Scandia Builders | S0500 | Sausalito | \$3,000 | 2 | June |

Totals for 4th Quarter **\$6,750** **8**

Napa

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|----------------------|-----------------|-----------|----------------|------------------------|-------|
| Ishaq Trading Corp. | D0611 | Napa | \$400 | 1 | April |
| Larkmead Vineyards | T3947 | Calistoga | \$250 | 1 | May |
| Pleasure Cove Marina | D2034 | Napa | \$750 | 2 | May |
| SIGNORELLO vineyards | K4621 | Napa | \$700 | 1 | May |

Totals for 4th Quarter **\$2,100** **5**

San Francisco

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|---|-----------------|---------------|----------------|------------------------|-------|
| 76 Gas Station #3390 | C6579 | San Francisco | \$550 | 1 | June |
| Central Shops City/County SF | C6567 | San Francisco | \$500 | 1 | June |
| City and County of San Francisco | C6153 | San Francisco | \$700 | 1 | June |
| Golden Gate Bridge Hwy and Transit Dist | C7358 | San Francisco | \$500 | 1 | June |
| Laguna Honda Hospital | C6689 | San Francisco | \$500 | 1 | June |
| Mission Chevron | C8313 | San Francisco | \$3,000 | 4 | June |
| Mission Martco | C9507 | San Francisco | \$700 | 1 | June |
| San Francisco Purchasing Department | C6631 | San Francisco | \$500 | 1 | June |
| Sheedy Drayage Co | C8546 | San Francisco | \$650 | 1 | June |

Totals for 4th Quarter **\$7,600** **12**

**Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009
Continued**

San Mateo

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|---|------------------------|---------------------|-----------------------|-------------------------------|--------------|
| City of Belmont | C8258 | Belmont | \$500 | 1 | June |
| City of Burlingame, Waste Water Treatment Plant | A1351 | Burlingame | \$650 | 2 | April |
| El Camino Martco | C9024 | Redwood City | \$700 | 1 | June |
| KAG West, LLC | N1032 | Brisbane | \$8,500 | 2 | June |
| KP Gas | C0272 | South San Francisco | \$700 | 1 | June |
| Pacific Commercial Fueling Inc | C8716 | Redwood City | \$850 | 1 | June |
| San Francisco Water Department | C6250 | Millbrae | \$500 | 1 | June |
| San Mateo Auto Services | C8817 | San Mateo | \$550 | 1 | June |
| San Mateo Gas Co | D0453 | San Mateo | \$700 | 1 | June |
| Shelter Creek Chevron | C3134 | San Bruno | \$700 | 1 | June |
| Valley Market & Gas | D0113 | Redwood City | \$775 | 1 | June |
| Westborough Chevron | C3331 | South San Francisco | \$700 | 1 | June |
| Totals for 4th Quarter | | | \$15,825 | 14 | |

Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009
Continued

Santa Clara

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|---|-----------------|---------------|----------------|------------------------|-------|
| ARCO Facility #02153 – Wasu D P | C5610 | Santa Clara | \$1,000 | 1 | June |
| Avis Rent A Car | C7630 | San Jose | \$1,000 | 2 | April |
| Bird Ave Chevron Inc. | C3871 | San Jose | \$1,000 | 1 | June |
| BP Facility #11231 | C9321 | Sunnyvale | \$700 | 1 | June |
| Chevron Inc #9-0049 | C7583 | Gilroy | \$1,000 | 1 | June |
| Chevron Inc #9-2620 | C7684 | San Jose | \$700 | 1 | June |
| Daniel Valencia | S7145 | San Jose | \$750 | 2 | June |
| Los Esteros Critical Energy Facility, LLC (Calpine) | B3289 | San Jose | \$46,875 | 12 | June |
| Los Gatos Chevron | C3535 | Los Gatos | \$1,000 | 1 | June |
| Los Gatos Union 76 | C9249 | Los Gatos | \$650 | 2 | May |
| Metcalf Energy Center (CalPine) | B2183 | Coyote | \$1,500 | 1 | June |
| Morgan Hill Gas | D1453 | Morgan Hill | \$700 | 1 | June |
| Nordstrom Inc. | B9388 | San Jose | \$2,000 | 2 | April |
| O'Grady paving Inc. | K5765 | Mountain View | \$4,000 | 1 | June |
| San Jose Construction | N2951 | Santa Clara | \$750 | 1 | April |
| San Jose/Santa Clara Water Pollution Control | A0778 | San Jose | \$4,000 | 2 | April |
| Supertex Inc. | B1329 | San Jose | \$500 | 1 | June |
| Unocal #5995 | C8003 | San Jose | \$775 | 1 | June |
| Unocal Service Station #4425 | C9606 | Santa Clara | \$975 | 1 | June |
| Valero of Santa Clara | D0529 | Santa Clara | \$500 | 1 | June |
| Valley Fair Market and Gas | C9705 | San Jose | \$550 | 1 | June |
| West Coast Aggregates Inc. | A5346 | Los Gatos | \$1,000 | 2 | May |
| Yanez Tree Service | T1047 | San Martin | \$450 | 1 | June |

Totals for 4th Quarter \$72,375 40

Closed NOV's with Penalties by County
April 1, 2009 – June 30, 2009
Continued

Solano

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|---|-----------------|-----------|----------------|------------------------|-------|
| A&A Grand Gas | C8800 | Vallejo | \$400 | 1 | April |
| BPG Pacific, LLC - Manouchehr Shahab | D1182 | Vallejo | \$750 | 2 | June |
| Gilroy Energy Center (Wolfskill Energy Center) (Calpine) | B4511 | Fairfield | \$1,000 | 1 | June |
| Sannipoli Corp. | S8942 | Fairfield | \$750 | 2 | June |
| Valero Benicia Asphalt Plant | A0901 | Benicia | \$70,000 | 16 | May |
| Valero Refining Company - California | B2626 | Benicia | \$84,500 | 21 | May |

**Totals for 4th
Quarter \$157,400 43**

Sonoma

| Site Name | Site Occurrence | City | Penalty Amount | # of Closed Violations | Month |
|----------------------|-----------------|------------|----------------|------------------------|-------|
| ARCO Facility #04936 | C6184 | Santa Rosa | \$1,250 | 3 | April |
| Fast & Easy Mart | C7098 | Santa Rosa | \$900 | 1 | June |
| Larry Swenson | T5755 | Pengrove | \$500 | 1 | June |
| Raul Martin | T5311 | Sonoma | \$1,500 | 1 | April |
| Redwood Station | C8467 | Sonoma | \$900 | 1 | June |
| Royal Coach Carwash | C4814 | Cotati | \$700 | 1 | June |

**Totals for 4th
Quarter \$5,750 8**

ACRONYMS AND TERMINOLOGY

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

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

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 23, 2009

Re: Report of the Stationary Source Committee Meeting of July 13, 2009

RECOMMENDED ACTION

Receive and file.

BACKGROUND

The Stationary Source Committee met on Monday, July 13, 2009.

The Committee received the following reports and presentations:

- A) Update on Selected Bay Area Facilities/Projects
- B) Update on CARE Program and Associated Regulatory Initiatives

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

Chairperson, John Gioia will give an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Lisa Harper
Approved by: Jennifer Chicconi

Attachment(s)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Gioia and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 6, 2009

Re: Update on Selected Bay Area Facilities/Projects

RECOMMENDED ACTION:

Receive and file.

BACKGROUND

In recent months, public interest has focused on six Bay Area facilities or projects that are under the Air District's regulatory authority. These facilities/projects are as follows:

1. Lennar Bay View Hunters Point Shipyard Parcel A' Redevelopment Project (San Francisco)
2. Pacific Steel Casting Company (Berkeley)
3. Custom Alloy Scrap Sales, Incorporated (Oakland)
4. Lehigh Southwest Cement Plant (Cupertino)
5. Russell City Energy Center (Proposed Project in Hayward)
6. Marsh Landing and Willow Pass Generating Stations (Proposed Projects in Antioch and Pittsburg)

DISCUSSION

Staff has prepared Fact Sheets for each of these facilities/projects that provide background information, a summary of public comments/issues, and an update on current project status. These Fact Sheets are attached. Staff will also provide the committee with a brief summary of these materials at the meeting on July 13, 2009.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Brian Bateman
Reviewed by: Jeffrey McKay



FACT SHEET

June 24, 2009

Background

- In 2005, the Board of Supervisors of the City and County of San Francisco and the San Francisco Redevelopment Agency approved the transfer of Parcel A' of the Bay View Hunters Point Shipyard to Lennar BVHP, LLC ("Lennar") for a redevelopment project in which Lennar plans to construct approximately 1,600 attached single family homes.
- Parcel A' is located in an area that contains naturally occurring asbestos (NOA), which is a term used for several types of fibrous minerals found in ultramafic and serpentine rock. Grading and construction activities at the site are subject to requirements of CARB's Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations ("the ATCM"), which is intended to limit the public's exposure to NOA.
- The ATCM requires that construction and grading operations be conducted in accordance with an Asbestos Dust Mitigation Plan (ADMP) that has been approved by the local air district. ADMPs must contain dust mitigation measures addressing topics such as the control of dust tracked out from the construction site, and the limitation of dust emissions from the offsite transportation of excavated soil. The ATCM also allows air districts to require that an ADMP provide for ambient air monitoring for asbestos.
- On October 7, 2005, the Air District approved the ADMP, which Lennar submitted pursuant to the ATCM. The ADMP includes all the dust mitigation measures the ATCM mandates, and further requires Lennar to conduct air monitoring for asbestos and establishes specific action levels based on air monitoring results. The ADMP includes, among other mitigation measures, measures to suppress dust during earth moving activities; prevent track-out of dust onto public roads; limit the emission of dust from soil storage piles and during offsite soil transport; and stabilize the ground after construction.
- In order to protect public health, the District incorporated into the ADMP requirements that Lennar take action to reduce the concentration of asbestos in the air around Parcel A' when the ADMP-required air monitors indicate asbestos concentrations

Lennar Bay View Hunters Point Fact Sheet

June 24, 2009

have reached either of two action levels. The District based the action levels on health risk assessment protocols established by the State Office of Environmental Health Hazard Assessment (OEHHA). The first action level in the ADMP is set at 1,600 asbestos structures per cubic meter and requires that Lennar notify the District and implement more stringent dust control measures. The second action level in the ADMP is set at 16,000 asbestos structures per cubic meter and requires Lennar to stop work until asbestos levels decline.

- Two events of ambient monitoring levels above the second action level were recorded recently in late December and late April/early May. To address possible activities contributing to these elevated readings, the District required Lennar to implement additional dust mitigation measures in an eight (8) point action plan and six (6) point action plan, respectively.
- The District considers the action levels established in the approved ADMP to be conservative and health protective because they are based on annual average concentrations and assume continuous exposure over a 70-year lifetime. Exceeding the action levels on an occasional basis will not cause any significant increase in health risk.
- Based on ambient asbestos monitoring data, and using risk assessment protocols established by OEHHA, in June 2009 the District estimated the cancer health risk associated with NOA released by construction and grading activity at Parcel A' by monitoring station as follows: Station HV1 – 1.4 in a million, Station HV2 – 1.2 in a million, Station HV4 – 3.5 in a million, Station HV5 – 0.8 in a million, Station HV6 – 0.6 in a million. These risk estimates are well below established significance levels for projects.
- The District issued the following two Notices of Violation (NOVs) to Lennar alleging violations of the ADMP: NOV#A46068, issued 9/9/06, alleges a failure to properly conduct air monitoring for a period of time, and a failure to provide a gravel truck wheel wash bed at an exit road. NOV#A46075, issued 10/26/07, alleges the overfilling of trucks with material and a failure to maintain wheel wash beds free of accumulated material. Both NOVs were settled on August 12, 2008, without litigation, in accordance with California Health and Safety Code section 42403(b), for a civil penalty of \$515,000. The District received full payment of the civil penalty in early September 2008.
- The District is proceeding with a public process to solicit ideas and suggestions for these funds to be spent on BVHP community projects.
- The District issued a Notice to Comply to Lennar in January 2009 for inadequate track-out prevention and control.

Lennar Bay View Hunters Point Fact Sheet

June 24, 2009

Public Comments/Issues

- Bay View Hunters Point (BVHP) community members have expressed concerns over health effects resulting from construction activities at the Parcel A' site. District staff met with Minister Christopher Mohammad and other representatives of BVHP to discuss issues and concerns surrounding the Parcel A' project on at least eleven (11) occasions between November 2007 and June 2009. Additionally, the District held a community meeting on November 15, 2008 to discuss the Bay Area 2009 Clean Air Plan, the Community Air risk Evaluation Program, and NOA issues in BVHP.

Project Status

- Lennar has completed most of the major grading and earth movement entailed with the redevelopment project. Current construction activity is associated with installation of utilities infrastructure and other related work subject to the ATCM.
- At the District's request, Lennar submitted a revised ADMP on June 2, 2009 that is currently under review for approval. The revised ADMP incorporates additional dust mitigation measures implemented by Lennar that were requested by the District and reorganizes and clarifies language in the ADMP.
- In May 2009, the District invited U.S. EPA Region IX to review the District approved ADMP and associated air monitoring plan to ensure it is appropriately conservative and protective of public health.
- The District continues to conduct daily inspections to verify compliance with the ADMP and the Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.



FACT SHEET

June 24, 2009

Background

- Pacific Steel Casting Company (PSC) is located at Gilman and Second Streets near Highway 80, in Berkeley. PSC produces steel castings for a variety of uses including bridges, truck parts, agricultural equipment, valves for sanitary sewers, public water systems, and the oil and gas industry. The company was founded in 1934 and has grown steadily throughout the years, producing custom castings ranging in various sizes at its three plants as follows:
 - Site #A0187, Plant 1 began operations in the 1930's making medium sized castings using primarily the Green Sand molding process. The binder for green sand molds is a combination of clay, water, and cornstarch compacted to form the molds.
 - Site #A0703, Plant 2 began operations in 1975. This plant uses a Shell process for the molding system. This sand molding process uses a binder mixed with the sand and is baked to form the molds and cores for the castings.
 - Site #A1603, Plant 3 began operations in 1981. This plant primarily uses a phenolic urethane binder mixed with the sand.
- Recycled scrap steel and other metals are turned into parts by: (1) creating a mold, which consists of sand bound together in a specific shape (the sand is mixed with binder material for this purpose), (2) melting the metal in an electric arc furnace, (3) pouring the molten metal into the cavity of the mold, and waiting for the metal to cool and harden, (4) removing the cast component by shakeout of the sand mold, and (5) various finishing steps which can include grinding and heat treating of steel parts.
- The District has a long history of regulating PSC's three steel foundry plants. From 1981 to 1991, the District took numerous enforcement actions to resolve odor problems, including obtaining an Order of Abatement in December 1984 from the Hearing Board. PSC installed odor abatement equipment (carbon adsorption units) in Plant 1 in 1985, and in Plant 2 in 1991, and odor complaints dropped off significantly. From 1991 until November 2000, when the District Hearing Board removed the Order of Abatement, the District issued no public nuisance Notice of Violations (NOVs).

Pacific Steel Casting Company Fact Sheet

June 24, 2009

- Starting in 2005, odor complaints began to increase, apparently as a result of increased foundry production in Plant 3, and PSC was issued six NOVs for causing public nuisances for “burnt pot handle” odors, the first on March 23, 2005. Three more NOVs were issued (two for permit condition violations and one for an opacity violation) for a total of nine NOVs that year.
- In December of 2005, the District entered into a settlement agreement to resolve the nine NOVs. The District obtained a commitment from PSC to install odor abatement equipment at Plant 3, and prepare an Odor Management Plan to address odorous emissions from the facility. The Plant 3 odor abatement equipment included the installation of a fugitive emissions enclosure in the pouring and cooling area, a carbon adsorption unit, and continuous monitoring to determine the need for carbon change-out. On October 15, 2006, PSC completed the installation of the Plant 3 carbon adsorption unit. Through this process the District was able to obtain a binding commitment to install abatement equipment on Plant 3 within 10 months, whereas installation of other controls took over 10 years for Plant 1 and Plant 2.
- The increase in Plant 3 production levels also resulted in the requirement for PSC to prepare a facility-wide Health Risk assessment (HRA) under the requirement of the State Air Toxic Hot Spots Program. The District notified PSC of this requirement in April 2005. The HRA was preceded by a comprehensive supplemental emissions testing program for the purpose of refining and improving the facility’s air toxic emissions inventory. In order to provide the community with a public input process, the District provided a public comment period for the HRA, and three preceding documents that establish the technical basis for the HRA (i.e., the HRA protocol, the supplemental emissions testing protocol, and the updated emissions inventory report).

Public Comments/Issues

- Community members have expressed a variety of concerns over odors and health effects from PSC’s emissions. The District held or participated in six community meetings in West Berkeley to discuss these issues over the last four years. The most recent meeting was held on January 9, 2008.
- Community members requested that ambient air monitoring be conducted in the vicinity of PSC. In response, the District installed a comprehensive air monitoring station located near the intersection 6th Street and Camelia Street in Berkeley, which became operational on December 12, 2007. On January 8, 2008, District staff conducted an informational meeting and tour for interested community members. The District also provided funding for the non-profit organization Global Community Monitor to collect air samples for various metals near PSC, but this monitoring provided very limited data and was not conducted in a manner necessary to evaluate health risks associated with PSC.

Pacific Steel Casting Company Fact Sheet

June 24, 2009

- Community members have expressed concern over a USA Today Special Report: "The Smokestack Effect: Toxic Air and America's Schools" which listed three schools in Berkeley as being in the 1st percentile for outdoor air toxics risk. PSC and four of the Bay Area refineries are listed as the polluters most responsible for air toxic risks at these schools. Manganese (85% of total) and nickel (11% of total) are listed as the toxics responsible for the greatest contributions to health risks at these schools. District staff has determined that the USA Today risk figures for the Berkeley schools are in error based on incorrect emissions of manganese and nickel reported by PSC to the Toxics Release Inventory (TRI). PSC has indicated that the correct emissions will be reported to the TRI for their next update due on July 1, 2009. EPA has decided that Berkeley schools will not be included in their plans to monitor the air outside 62 schools in 22 states.
- Some community members, and an environmental advocacy group, have requested that the District lower risk reduction thresholds used for the Air Toxics Hot Spots Program by a factor of ten, to a cancer risk of 10 in a million and a non-cancer hazard index of one. This would require PSC to complete a risk reduction audit, and implement a plan to reduce risks below these thresholds. The commenters indicate that the District should incorporate these more stringent standards into District regulations.

Facility Status

- District inspection staff continues to conduct frequent compliance inspections of PSC. Air pollution complaints from the public have decreased since the installation of the carbon adsorption unit at Plant. 3. The District continues to respond and investigate the public's air pollution complaints.
- District inspection staff issued two public nuisance Notices of Violation, and two permit condition Notices of Violation in 2008. One of the permit violations was discovered during an odor complaint investigation at Plant 1.
- On October 3, 2008, the District approved PSC's Odor Management Plan (OMP), the last requirement of PSC's 2005 Settlement Agreement with the District. District staff continues to track and monitor PSC's OMP to improve the control of odorous emissions from PSC.
- The District approved PSC's final HRA on November 24, 2008. The maximum health risks are below levels that require mandatory risk reduction measures under District policies and procedures. However, public notification of health risks is required, and PSC has begun the required quarterly mailing of notices of health risk results. The notification area includes nearby businesses and one live\work complex which the HRA indicates have risks above notification thresholds.
- Within the last two years, PSC has implemented three significant emission reduction projects, which PSC identifies in their HRA as "Future Controlled Conditions." These

projects are: (1) in Plant 1, the upgrade of capture and control of fugitive emissions from the electric arc furnace tap-out area (the final phase of this project is underway with estimated completion by the end of 2009), (2) in Plant 3, an upgrade project to abate fugitive emissions at the electric arc furnace, and (3) in Plant 3, a switch to a binder containing less volatile organic compounds. As evaluated in the HRA, these projects have collectively reduced maximum cancer risks by 32%. The chronic non-cancer risks at the maximum residential and worker receptor locations have been reduced by 41% and 17%, respectively. The maximum health risks with these control projects in place are as follows: cancer risk = 21 in a million, chronic non-cancer hazard index = 1.5, acute non-cancer hazard index = 0.83. These maximum risks are for adjacent worker receptor sites for the 12 a.m. to 8 a.m. work shift (except for the acute hazard index, which is at an adjacent point of maximum impact). These risks are based on production levels during 2005 – 2006, which are higher than what has occurred since the current economic downturn.

- The District intends on developing a rule delineating risk reduction requirements under the Air Toxics Hot Spots Program, and will consider adopting more stringent thresholds than those that currently exist. This rule would be developed concurrently with upcoming OEHHA revisions to cancer risk assessment procedures that are intended to provide a greater margin of safety for protecting children. Based on discussions with OEHHA staff, it is possible that these revisions could increase calculated residential cancer risks by a factor of three or more from existing risk assessment procedures. OEHHA does not expect that these risk assessment guideline revisions will be finalized for some time, perhaps late in 2010. District staff believes that it may be appropriate to seek reductions in risks from PSC in a more timely manner than could be achieved through adoption of a new risk reduction rule, and is considering the development of a source-category-specific rule to ensure that Bay Area steel foundries use best practices to minimize emissions and reduce health risks. District staff believes that such a rule could be developed and brought to the Board of Directors for consideration of adoption in one year or less.
- On April 14, 2009, District staff completed a summary and analysis of the 2008 West Berkeley Air Monitoring Station data. The summary report included: 1) analysis of criteria pollutants measured at the West Berkeley monitoring site compared to the State and National Ambient Air Quality Standards, 2) toxic air contaminant monitoring results for West Berkeley in comparison to several other sites in the Bay Area and the South Coast AQMD, 3) estimated cancer risk associated with lifetime exposure to the measured levels of toxic air contaminants, 4) estimated chronic non-cancer risk, 5) estimated 8-hour chronic non-cancer risk, and 6) estimated acute non-cancer risk.
- For the year 2008, the Summary and Analysis indicates that West Berkeley air quality met all of the applicable State and National Ambient Air Quality Standards, with the exception of the 24-hour national PM_{2.5} standard and the very stringent annual State PM standards, similar to most other Bay Area locations.

Pacific Steel Casting Company Fact Sheet

June 24, 2009

- West Berkeley air quality was also below all of the acute and chronic Reference Exposure Levels (RELs) established by OEHHA. RELs are concentrations at or below which no adverse non-cancer health effects are anticipated in the general human population. RELs are designed to protect the most sensitive individuals in the population by the inclusion of margins of safety.
- Average concentrations of manganese at the West Berkeley monitoring site were higher than other monitoring sites, most likely due to the proximity of the PSC facility. The observed manganese concentrations were, however, well below the revised RELs adopted by OEHHA on December 19, 2008. These revised RELs explicitly include consideration of possible differential effects on the health of infants, children and other sensitive subpopulations, in accordance with the mandate of the Children's Environmental Health Protection Act.
- District staff calculated cancer risks associated with lifetime exposure to the monitored levels of toxic air contaminants using cancer potency factors established by OEHHA. Although no standards have been set for overall cancer risk associated with exposure to toxic air contaminants, the risk at the West Berkeley site is not elevated above typical levels observed in the Bay Area. The toxic air contaminants that contribute most to cancer risk at the West Berkeley site are diesel PM, benzene, 1,3-butadiene. This is consistent with other monitoring sites. These pollutants are emitted primarily from mobile sources.
- The District will continue operation of the West Berkeley monitoring site for a second year during Calendar Year 2009.
- District staff is preparing revisions to PSC's Synthetic Minor Operating Permit (SMOP) that will provide additional limits and monitoring to assure that the emissions of regulated air pollutants from all three plants do not exceed Major Facility thresholds.



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

CUSTOM ALLOY SCRAP SALES, INC.
(#A0146)
2730 Peralta St.
Oakland, CA 94607

FACT SHEET

June 24, 2009

Background

- Custom Alloy Scrap Sales (CASS) was established in 1970 in Oakland. CASS is a secondary aluminum production and metal recycling facility. The facility recycles a variety of metals, such as brass, copper, stainless steel, and aluminum. The facility is located in an industrial/commercial area, but is adjacent to a residential neighborhood.
- Recycled materials are received and sorted at CASS. Once the sorting process has been completed, the material is prepared for shipment by baling or shredding, or by the smelting operation, where furnaces operate to produce secondary aluminum ingot.
- The facility operates three District-permitted sources of air pollution which are all natural gas-fired furnaces used in the recovery of scrap aluminum. A sweat furnace handles the scrap that may contain impurities (e.g., wheels, engine blocks). A reverberatory furnace handles scrap that is relatively clean (e.g., metals turnings). A holding furnace handles aluminum that has been processed in the sweat furnace prior to being poured into ingot.
- Emissions from the holding and sweat furnaces are abated by two direct afterburners in series, a cyclone, and a lime-injected baghouse, while emissions from the reverberatory furnace are abated by the baghouse. Afterburner temperatures and baghouse leaks are monitored continuously.
- CASS is subject to several different air quality rules and regulations. These include the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, and a State Airborne Toxic Control Measure (ATCM) for Non-Ferrous Metal Melting.
- A NESHAP compliance source test was conducted at CASS in March 2007 with all three furnaces operating. This testing determined emissions of chlorinated dioxins and furans, and a variety of trace metals. Using the source test results, a Health Risk Screening Analysis (HRSA) was conducted by District staff. The results of the HRSA indicate that the maximum cancer risk is 0.3 in a million, the maximum chronic non-

cancer hazard index is 0.002, and the maximum acute hazard index is 0.0002. These health risks are not considered to be significant under District requirements.

- The District received no air pollution complaints related to CASS from 2000 to 2005. Since January 1, 2006, the District has received 72 air pollution complaints alleging CASS. Nearly all of these complaints are for odors. Each complaint was investigated and did not result in the issuance of any violations of applicable requirements.

Public Comments/Issues

- On July 10, 2008, District staff met with community members at a meeting organized by Oakland City Councilmember Nancy Nadel. Concerns were expressed over preliminary ambient air sampling for metals conducted near CASS by the non-profit organization Global Community Monitor. Requests were made for funding additional air monitoring near CASS. Concerns were also expressed about odors and visible emissions from fires and/or other events at the facility. District staff responded in detail to sixteen questions regarding CASS that were submitted as a follow-up to this meeting.
- On August 28, 2008, staff met with representatives of Global Community Monitor, the Rose Foundation, Golden Gate University Environmental Law and Justice Clinic, and a resident who lives adjacent to CASS. At this meeting, the responses to community questions were discussed, and requested permit documents and other public records were provided.
- Concerns have also been expressed over the District's "automatic" renewal of CASS' annual Permit to Operate (PTO) in September 2008. Requests have been made for the District to hold a public comment period prior to the next PTO renewal. A comment has also been made that a more recent source test should be required prior to PTO renewal.

Facility Status

- The District has increased the frequency of inspections at CASS since the July 10 2008, meeting with community members, and continues to monitor CASS activities outside of normal District working hours. The most recent facility inspection on June 3, 2009, indicated that the facility was in compliance with applicable air quality requirements. In addition, District inspectors have continued to respond to air pollution complaints made by individuals in the vicinity of CASS, primarily for odors. In each case, a District inspector contacted the complainant and conducted follow-up investigations at CASS. These inspections did not result in the issuance of any Notices of Violation.

- In a December 4, 2008, letter to Councilperson Nadel, the District explained that the renewal of a facility's PTO is required under State law upon payment of permit fees, except in very limited circumstances. The District may refuse to renew a PTO for a facility only if: (1) the facility has violated applicable air quality rules or regulations in the preceding three year period resulting in excessive emissions, (2) a Notice of Violation was issued for these violations, and (3) the violations demonstrate a recurring pattern of noncompliance or have posed a significant risk to public health or safety, or to the environment. In the case of CASS, the facility was inspected prior to the most recent permit renewal and found to be in compliance with applicable air quality requirements, and the District has not issued the facility any Notices of Violation in the preceding three-year period. In addition, no changes in applicable rules and regulations have been made that would require updating of the existing permit conditions. Due to the limited scope of review for PTO renewals under State law, District regulations do not include provisions for a public comment period prior to permit renewal. Nonetheless, the District has made CASS' permit available to those members of the public that have requested it, and staff would consider any relevant comments submitted prior to PTO renewal.
- Source test requirements for CASS' furnaces are established in the NESHAP, which specify that an initial compliance stack test be completed followed by continuous parametric monitoring of the control devices. More frequent source testing of toxic air contaminant emissions were not triggered under District policy based on the results of the HRSA. There was therefore no requirement for additional source testing to be completed prior to renewing CASS' annual PTO.
- During the summer months of 2008, District staff provided trucking firms at CASS with diesel truck grants information to retrofit older, high emitting diesel trucks with air pollution control equipment.
- District staff has provided a commitment to conduct ambient air quality monitoring in the vicinity of CASS as a part of the larger-scale West Oakland Measurement Study (WOMS), which is being completed under the District's CARE Program. In 2009, the District held three community meetings (on January 22, March 16, and May 11) to present an overview and background on the CARE Program, and to discuss and receive input on the supplemental air monitoring near CASS. The air monitoring study will address the issue of the contribution of CASS to local metals and particulate matter air concentrations (other facilities, such as a nearby concrete batch plant and an art studio that operates ceramic kilns, could also be a source of metals, along with mobile source activity).
- The air sampling is scheduled to begin this summer, and three sites will be established and operated for one year (including an initial assessment of sites and methods during the first three months) to evaluate conditions near the CASS facility. One site will be located west (predominantly upwind) of the facility, likely at Cypress Auto Salvage on Peralta Street. A second site will be east (predominantly downwind)

of the CASS facility, likely at the ASA Academy School on Adeline Street. A third site will be located further east, likely at Excel High School on Myrtle Street. District staff has reviewed each of these locations and are currently negotiating terms of access with site owners. CASS may fund a fourth site upwind of the CASS facility but downwind of the nearby concrete batch plant. District staff is working with CASS to ensure that methods and analysis for this monitoring site are consistent with those of the other three sites.

- MiniVol samplers will be deployed and used to collect particles on filters, which will then be analyzed for more than 50 metals using X-Ray Fluorescence. PM_{2.5} will also be derived from the MiniVol filters. Wind and temperature measurements will be collected at the nearby EBMUD Sewage Treatment Plant. All metals analysis will be conducted by the District's contractor, Desert Research Institute (DRI). The estimated project cost is approximately \$40,000, which includes the cost of samplers and metals analysis by DRI, but does not include costs of District staff time for project management, community meetings, data collection, and data analysis.
- District staff will review the analyzed data and perform quality assurance/quality control. The District will make data summaries and raw data available to the public at least on a quarterly basis. The data analysis phase of this project will use the data collected near CASS to compare with other data in West Oakland (and other Bay Area locations), compare with the results of a prior modeling study, estimate potential contributions from CASS, and assess health risks.
- The WOMS will be carried out during a four-week period in 2009 that will overlap with the CASS measurement project. To the extent possible, the metals and PM sampling efforts near CASS will be coordinated with WOMS to maximize co-benefits of the two sampling programs.



BAY AREA
AIR QUALITY
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LEHIGH SOUTHWEST CEMENT PLANT
(Formerly: Hanson Permanente Cement)
(#A0017)

24001 Stevens Creek Boulevard
Cupertino, CA 94014

FACT SHEET

June 24, 2009

Background

- The Lehigh Southwest Cement Plant (formerly Hanson) is located in unincorporated Cupertino. Mining on the site dates back to the 1880's, and the cement plant was established in 1939.
- The facility excavates limestone from an on-site quarry for use as a raw material in cement manufacturing. The limestone, and other raw materials, are crushed into a fine powder and blended in the correct proportions. This blended raw material is heated in a pre-heater and rotary kiln where it reaches a temperature of about 2,800 degrees Fahrenheit. The material formed in the kiln, known as "clinker", is subsequently grinded and blended with gypsum to form cement.
- Nitrogen oxides (NO_x), sulfur dioxide (SO₂), and particulate matter (PM), are the primary criteria air pollutants emitted from cement manufacturing. Small quantities of volatile organic compounds (VOC), including the toxic air contaminant (TAC) benzene, are also emitted from the kiln. TAC emissions also include trace metals such as mercury, cadmium, chromium, arsenic, nickel, and manganese. The kiln exhaust is equipped with NO_x and SO₂ continuous emissions monitors to determine compliance with applicable emission limitations. PM and metallic TAC emissions are controlled at the facility by fabric filtration, which is used at various material crushing, grinding, and loading operations, and at the kiln, which is the largest source of emissions.
- Lehigh is subject to a variety of District, State, and federal air quality rules and regulations that are delineated in the facility's Title V Permit. A Health Risk Assessment (HRA) completed under the Air Toxics Hot Spots Program indicates that the maximum public health risks associated with the facility's TAC emissions are under thresholds requiring public notification.

Public Comments/Issues

- In November 2007, District staff met with representatives of the West Valley Citizen Air Watch (WVCAW) to discuss the Quarry Reclamation Project, and other air quality issues associated with the facility. The Reclamation Project entails modification of

Lehigh Southwest Cement Plant Fact Sheet

June 24, 2009

the existing Reclamation Plan for mining and reclamation activities at the facility's quarry, which expires in March 2010. The proposed Reclamation Plan Amendment, issued by Santa Clara County, would expand the existing Reclamation Plan area, include a new quarry pit that could potentially be located closer to the nearby residential area, and extend the quarry's termination date by 25 years.

- WVCAW submitted a lengthy set of questions to the District regarding the Reclamation Project and other aspects of the facility's existing operation. The District finalized a response to this information request in March 2008. District staff has subsequently processed a number of public records requests, and answered many additional questions from the public, associated with the Lehigh facility.
- On October 22, 2008, District staff participated in a community meeting organized by the Santa Clara County Office of Planning to answer questions about the facility and the Reclamation Project. A variety of concerns were expressed at this meeting including the use of petroleum coke as a fuel, general dust emissions, mercury emissions, hexavalent chromium emissions, and emissions from truck traffic. District staff also participated in a follow-up community meeting organized by the County and held on June 11, 2009.

Facility Status

- The facility started using 100% petroleum coke as a fuel on May 30, 2007, after receiving a permit from the District for this fuel change. Prior to this project, the typical fuel mix had consisted of 90% coal and 10% coke. Emissions data show that this fuel change has reduced SO₂ and CO emissions, and has had no significant effect on the emissions of other regulated air pollutants. On October 31, 2008, at the request of EPA Region IX, Lehigh submitted a demonstration that the fuel change project did not trigger federal PSD permit requirements. EPA has not yet finalized their review of this submittal.
- Lehigh has withdrawn a permit application that had been submitted to further increase the permitted coke usage at their facility. A separate application for the use of bio-fuels in the kiln has been placed on an inactive status at the request of the applicant. In April 2009, Lehigh was granted a permit to install enhanced vapor recovery equipment on their existing non-retail gasoline dispensing operation due to a regulatory requirement change. The District is currently reviewing Lehigh's application to permit two storage pile areas, and an application to modify an existing permit conditions regarding emissions of toxic air contaminants.
- Lehigh submitted an application to renew their Title V Permit on April 28, 2008. A Title V Permit is a compilation of all existing applicable air quality requirements including emissions limits and standards, monitoring, record keeping, and reporting requirements. Title V Permits cannot be used to establish new emission limits and

Lehigh Southwest Cement Plant Fact Sheet

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standards. Title V Permit renewals are required every five years, and the District has 18 months to act on an application (in the case of Lehigh, by October 28, 2009), or until EPA and public review processes have been completed. The existing Title V Permit will continue in force until the District takes final action on the renewal application. The EPA and public review process is expected to commence in August 2009 for the Lehigh Title V Permit renewal, and a public hearing will also be scheduled in the community to accept comments.

- In May 2009, Lehigh installed six continuous volumetric flow meters (four at the kiln exhausts, and two at the fuel mill exhausts). These meters will enhance the monitoring of criteria pollutant emissions from the calcining process.
- Following an article appearing in the San Francisco Chronicle, District staff provided community members with information regarding the health effects associated with mercury emissions from the Lehigh cement kiln. Based on HRA results, the mercury health risks are well below Reference Exposure Levels (RELs) established by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA). RELs are concentrations at or below which no adverse non-cancer health effects are anticipated in the general human population, and are designed to protect the most sensitive individuals in the population by the inclusion of margins of safety. The mercury RELs were revised by OEHHA on December 19, 2008, to explicitly include consideration of possible differential effects on the health of infants, children and other sensitive subpopulations, in accordance with the mandate of the Children's Environmental Health Protection Act.
- District staff has conferred with staff of MBUAPCD and SCAQMD regarding the reason for elevated levels of hexavalent chromium reported downwind of cement plants located in Davenport and Oro Grande, California. It is believed that these elevated hexavalent chromium levels are the result of the use of steel slag as a raw material and/or the use of uncovered clinker storage piles. The Lehigh facility in the Bay Area uses a naturally occurring iron ore that has much lower chromium levels than steel slag, and also utilizes enclosed silos rather than storage piles for clinker storage.
- The District required that Lehigh collect additional data regarding chromium (as well as mercury, other metallic TACs, and crystalline silica) in fugitive dust, and other sources at the facility in addition to the kiln. This comprehensive TAC emissions inventory update was submitted to the District on March 30, 2009, and is currently under review. The District has performed preliminary air dispersion modeling analyses based on the recently reported emissions. These preliminary analyses indicate that the risk levels are slightly higher than the results of the previous HRA, but the Air Toxics Hot Spots Program action levels are still not exceeded.

Lehigh Southwest Cement Plant Fact Sheet

June 24, 2009

- Because of recent concerns about elevated hexavalent chromium found near some cement plants, the U.S. EPA is working with the District to install ambient air monitoring equipment at Stevens Creek Elementary School, located approximately two miles from Lehigh, to measure hexavalent chromium as part of its School Air Toxics Monitoring Initiative. The EPA will provide the instruments and laboratory analysis, while the District will install and operate the equipment. The monitoring is anticipated to commence later this summer and last a year.
- On October 28, 2008, the District began operating an ambient air monitor in the vicinity of the Lehigh facility adjacent to Stevens Creek Boulevard to determine if truck traffic and road dust associated with the facility were having an adverse impact on particulate matter levels in the nearby community. The air monitor continuously records particulate matter of 10 microns or less (PM10) in the air, and the monitor will remain in place for at least one year. While preliminary monitoring results at this site appear to be similar to other communities, the District needs to collect a full year's data before drawing conclusions. Real-time data collected are available for review on the District website.
- Since October 2008, there have been four visible emissions violations at the Lehigh facility that resulted in Notices of Violation, all documented in March 2009. The plant corrected the violations immediately. Plant operations that month included a plant restart after a two and a half month shutdown, and a plant upset condition due to a utility outage. The violations occurred following each of these events.
- On April 28, 2009, District staff conducted outreach to South Bay trucking companies, including those that service Lehigh, to educate them about Air District grants available for truck retrofits to reduce diesel emissions from on-road trucks. Several interested firms have contacted the District to take advantage of the program.
- Santa Clara County has indicated that the Lehigh Quarry Reclamation Plan Amendment is on hold pending additional geologic studies.
- Proposed EPA rule amendments to the existing 40 CFR 63, Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry, were published on May 6, 2009. If finalized, these rule amendments would require Lehigh and other cement plants in the United States to significantly reduce emissions of mercury and other toxic air contaminants. The EPA proposal is based on a review of Maximum Achievable Control Technology (MACT).
- Staff is evaluating a potential control measure for inclusion in the 2009 Clean Air Plan that would establish more stringent standards for NO_x and/or SO₂ emissions at the Lehigh cement kiln.



BAY AREA
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RUSSELL CITY ENERGY CENTER (PROPOSED)
(#B8136)
3862 Depot Road
Hayward, CA 94545

FACT SHEET

June 24, 2009

Background

- The Russell City Energy Center (RCEC) is a proposed 600-MW natural gas fired combined cycle power plant to be located in Hayward. The initial project, proposed by an affiliate of Calpine Corporation, was licensed by the California Energy Commission (CEC) in 2002. The project description was amended in 2006 to move the site about ¼ mile from the original proposed site, and an application for an amended Certification was submitted to the CEC, and a new permit application was submitted to the District.
- The RCEC includes two gas turbines and two heat recovery boilers. In accordance with District rules, this combustion equipment must use the Best Available Technology (BACT) to minimize emissions. BACT requirements for the project are met with the use of selective catalytic reduction (SCR) systems, oxidation catalysts, the exclusive use of natural gas fuel, and modern combustion controls. The project is also subject to emission offset requirements, Prevention of Significant Deterioration (PSD) analysis requirements, and health risk screening analysis (HRSA) requirements.
- On June 19, 2007, the District issued a Final Determination of Compliance (FDOC) for the amended RCEC, concluding that the project, with appropriate permit conditions, could comply with all applicable air quality requirements.
- On September 26, 2007, the CEC approved the RCEC and granted a power plant license. The District subsequently issued an Authority to Construct (ATC) for the RCEC on November 1, 2007. This ATC also served as the federal PSD permit under a District/EPA PSD delegation agreement.

Public Comments/Issues

- The District held a public comment period at the time of issuance of the Preliminary Determination of Compliance for the amended project. Members of the public made no comments on the project during the District's public comment period.

Russell City Energy Center Fact Sheet

June 24, 2009

- Requests were made to the CEC by several parties to intervene and reopen the administrative proceedings and evidentiary record for the RCEC project after the amended power plant license was issued. The CEC issued an order to deny petitions for intervention and reconsideration on November 11, 2007. The CEC order was appealed to the California Supreme Court, and the Court subsequently declined to hear the case.
- A resident of Hayward filed an appeal of the Authority to Construct for the RCEC with the District's Hearing Board, and a hearing was held on March 6, 2008. The Hearing Board dismissed the appeal.
- The resident also filed an appeal with the EPA's Environmental Appeals Board (EAB) regarding the PSD permit issued by the District. On July 29, 2008, the EAB issued a remand order for the District to re-notice the PSD permit for public review using the federal notice requirements in 40 CFR Section 124.10. The EAB remand was based entirely on public noticing procedures, and not on substantive air quality issues. Up to this point, based on input from EPA Region IX staff, the District had been following the noticing requirements in District regulations for PSD permits.

Project Status

- Following the EAB remand, District staff prepared the PSD permit re-notice. This task was time consuming, as the federal noticing requirements are considerably more detailed than the District requirements and involve both general noticing for the purpose of maintaining a PSD mailing list as well as project-specific noticing.
- The general noticing was completed in November 2008, and included: (1) publication in 18 periodicals/newspapers with coverage in each of the nine Bay Area counties, (2) issuance of a press release to numerous newspapers and other news outlets and posted on the District website, (3) creation of a comprehensive agency mailing list including local city, regional, state, and federal agencies, the Native American Heritage Commission, and the departments within these agencies that may have permit interest, and (4) creation of a comprehensive interested parties list including California Energy Commission mailing lists used for several Bay Area power plant projects including the RCEC, and all parties in District records that have previously commented on, or attended public meetings held for, Title V, Major NSR and/or PSD permits.
- The District began the project-specific re-noticing on December 8, 2008. Approximately 1900 notices were mailed-out. The public notice was also published in The Hayward Daily Review, The Oakland Tribune, and El Mensajero (in Spanish). A Public Hearing on the project was held on January 21, 2009, at Hayward City Hall. The District accepted written public comments on the project through February 6, 2009.

Russell City Energy Center Fact Sheet

June 24, 2009

- Since the end of the public comment period, District staff has reviewed and evaluated the numerous comments received on the project, has conducted additional analyses, and has made a number of changes to the draft permit. The additional analyses included a revision to the project's air quality impact analysis related to particulate matter impacts. This revision was required due to an April 24, 2009 EPA action that stayed a provision allowing PM2.5 impacts to be addressed under a PM10 Surrogate Policy. The revised analysis demonstrates that PM2.5 emissions from the proposed project would not interfere with attainment or maintenance of PM2.5 National Ambient Air Quality Standards.
- The District is planning to provide an additional formal public comment period on the revised PSD Permit and will publish an additional Statement of Basis to support the revised draft at that time, most likely in late July 2009. Another public hearing will also be scheduled during the comment period (tentatively set for September 2) to provide additional opportunities for input. In order to enhance the opportunities for public review, a draft of the additional Statement of Basis that is planned to be published in late July was posted on the District website on June 23, and previous commenters and other interested individuals were notified of this action.



BAY AREA
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MARSH LANDING GENERATING STATION (PROPOSED)
(#B9169)

Adjacent to 3201 Wilbur Ave.
Antioch, CA 94509

WILLOW PASS GENERATING STATION
(PROPOSED)

(#B9203)
696 West 10th St.
Pittsburg, CA 94565

FACT SHEET

June 24, 2009

Background

- Affiliates of Mirant Corporation have submitted permit applications to the District for two new power plants in Contra Costa County that would be located at existing power plant sites.
- The Marsh Landing Generating Station (MLGS) is a proposed natural gas fired power plant. It includes two gas turbines with heat recovery boilers and steam turbines (combined cycle), and two simple cycle gas turbines. The MLGS would have a net output of approximately 930-MW. The plant would be sited adjacent to the existing Contra Costa Power Plant in unincorporated Contra Costa County near the City of Antioch.
- The Willow Pass Generating Station (WPGS) is a proposed natural gas fired power plant. It includes two gas turbines with heat recovery boilers and steam turbines (combined cycle). The WPGS would have a net output of approximately 550-MW. The plant would be sited adjacent to the existing Pittsburg Power Plant in the City of Pittsburg.
- In accordance with District rules, the proposed combustion equipment for these projects must use the Best Available Technology (BACT) to minimize emissions. BACT requirements for the project are met with the use of selective catalytic reduction (SCR) systems, oxidation catalysts, the exclusive use of natural gas fuel, and modern combustion controls. The projects are also subject to emission offset requirements, Prevention of Significant Deterioration (PSD) analysis requirements, and health risk screening analysis (HRSA) requirements.

Marsh Landing and Willow Pass Generating Stations Fact Sheet

June 24, 2009

Public Comments/Issues

- No public comments have been received to date, but it is expected that many of the issues raised with other recent proposed power plants may also be raised for these plants when public comment periods are initiated.

Project Status

- Both projects are subject to facility certification by the California Energy Commission (CEC). An Application for Certification (AFC) was filed with the CEC for the MLGS on May 30, 2008, and an AFC was filed for the WPGS on June 30, 2008. The first required District action associated with the CEC process is a Preliminary Determination of Compliance (PDOC).
- The District had initially expected that the PDOCs for the two projects could be completed in the second quarter of 2009, but this timeframe became infeasible due to an unexpected change in PSD requirements made by EPA. On April 24, 2009, EPA took action to stay a provision allowing PM_{2.5} impacts to be addressed under a PM₁₀ Surrogate Policy. Since the applicant's PSD analyses had used the PM₁₀ Surrogate Policy, their ambient air quality impact analyses no longer meets federal requirements and must be revised to directly address PM_{2.5}. Revising the analyses is difficult because EPA has not yet finalized regulations establishing the details of how PSD analyses for PM_{2.5} must be completed, nor has EPA finalized PM_{2.5} non-attainment designations (PSD requirements do not apply in non-attainment areas). The applicant is considering a permitting option that involves providing PM_{2.5} emission reduction credits, but this option would require that EPA take final action to designate the District as being non-attainment for the 24-hour PM_{2.5} National Ambient Air Quality Standard, and EPA has not indicated when this may occur.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Gioia and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 6, 2009

Re: Update on CARE Program and Associated Regulatory Initiatives

RECOMMENDED ACTION:

Receive and file.

BACKGROUND

The Community Air Risk Evaluation (CARE) Program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor toxic air contaminants (TACs) in the Bay Area. The program examines cumulative TAC emissions from point sources, area sources and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The main objectives of the program are to:

- Characterize and evaluate potential cancer and non-cancer health risks associated with exposure to TACs from both stationary and mobile sources throughout the Bay Area.
- Assess potential exposures to sensitive receptors including children, senior citizens, and people with respiratory illnesses.
- Identify significant sources of TAC emissions and prioritize use of resources to reduce TACs in the most highly impacted areas (i.e., priority communities).
- Develop and implement mitigation measures - such as grants, guidelines, and regulations - to achieve cleaner air for the public, focusing initially on priority communities.

The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high densities of sensitive populations. Regional maps of these areas have been produced and are currently being used to focus grant and incentive programs to reduce TAC exposures.

DISCUSSION

Staff believes that the CARE Program technical analysis has advanced sufficiently so that the results can begin to be used in regulatory programs. Staff has developed a regulatory concept for

creating more stringent permitting requirements for new/modified sources of TACs located in priority communities determined under the CARE Program. This concept has been discussed with the CARE Task Force, the CARE Program Cumulative Impacts Working Group, and several industry groups, and it has been included as a component of the Bay Area Clean Air Communities Initiative. Staff also believes that it is appropriate to consider whether more stringent requirements for TAC emissions from existing facilities should be established under the Air Toxics Hot Spots Program. Additional background and discussion regarding these regulatory programs follows.

AIR TOXICS NEW SOURCE REVIEW PROGRAM

BACKGROUND

In California, air districts have the primary responsibility for the control of air pollution from non-vehicular stationary sources of air pollution. Existing District rules require that permit applications be submitted for a wide variety of new and modified stationary sources prior to construction so that District staff can complete a review of compliance with applicable air quality requirements. Applicable air quality requirements include rules and regulations adopted by the District, the California Air Resources Board, and the U.S. Environmental Protection Agency. Certain rules, known as New Source Review (NSR), require that new/modified sources utilize the Best Available Control Technology to minimize air pollution impacts. Additional NSR requirements include emission offsets, air quality impact analysis for criteria air pollutants and their precursors, and health risk screening analysis for TACs. The existing District NSR rules are Regulation 2, Rule 2: New Source Review, and Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.

Since 1987, the District's preconstruction permit review has included an analysis of potential health risks resulting from emissions of TACs. The goal of this program is to ensure that the health risks associated with TAC emissions from proposed projects are acceptable. In addition, net health risk benefits are realized when older, more highly polluting, sources are replaced or modified and must meet more stringent control requirements. This program is implemented under District Regulation 2, Rule 5.

The requirements of Regulation 2, Rule 5, are based on the results of a site-specific Health Risk Screening Analysis (HRSA), which is an assessment that describes the possible adverse health effects which may result from public exposure to routine and predictable emissions of TACs. All permit applications for new and modified sources are screened for emissions of TACs. If any TAC is emitted in amounts that exceed specified de minimus levels, District staff completes an HRSA using computer-modeled estimates of atmospheric dispersion. An HRSA may be a conservative screening-level analysis, or a more refined analysis involving the use of various site-specific data. Procedures used for completing HRSAs are based on guidelines adopted by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) for use in the Air Toxics Hot Spots Program.

Where the predicted health risks from a proposed project exceed specified threshold levels, the new/modified source(s) must use the Best Available Control Technology to minimize TAC

emissions (TBACT). If the residual health risks, after TBACT is applied, result in risks that exceed project risk standards, then other risk reduction measures may be required, or the permit(s) for the proposed source(s) may be denied. In the vast majority of cases, the use of emissions control technology and other available risk reduction measures are successful in reducing the health risks associated with the proposed project's emissions to acceptable levels. The TBACT and Project Risk standards in Regulation 2, Rule 5, are uniformly applied throughout the District's jurisdiction.

DISCUSSION

District staff has recently proposed to increase the stringency of the standards of Regulation 2, Rule 5, by a factor of two for new and modified sources located in priority communities established under the CARE Program. The new project risk limits would be a maximum cancer risk of 5 in a million, and a non-cancer hazard index of 0.5. This proposal addresses the higher cumulative impacts from TACs in these communities, and establishes a greater margin of safety for protecting public health.

The District's proposal also includes a health risk-tracking provision for each priority community. Under this provision, the District will track the maximum cumulative health risks associated with permitted stationary source projects over time. The results will be reported on the District website as follows: (1) list of projects including project location and emission rates, (2) location and magnitude of maximum incremental project health risks, and (3) location and magnitude of maximum cumulative health risks for all projects from the date the requirement is established.

The District is also considering whether more stringent permitting requirements for TACs should be established for sources that are located in proximity to sensitive receptors, even if these sources are not located in priority communities. Procedures for assessing health risks are intended to protect sensitive individuals such as children, and individuals with pre-existing health conditions. The Children's Environmental Health Protection Act (Senate Bill 25) established specific requirements for OEHHA to determine whether existing health risk assessment procedures are adequate to protect infants and children from the harmful effects of air pollution. OEHHA has already acted under SB 25 to revise certain procedures for assessing non-cancer health risks to provide a greater margin of safety for children, and revisions to cancer risk assessment procedures are expected to be proposed before the end of the year. District staff expects that these OEHHA changes to risk assessment procedures will be adequate to protect sensitive individuals without further changes to Regulation 2, Rule 5 standards. Nonetheless, staff is considering setting more stringent standards for school sites as an interim measure until the OEHHA guideline revision process is finalized.

When the District's non-attainment designation for the 24-hour PM_{2.5} National Ambient Air Quality Standard is finalized by EPA, the District will have a period of time to amend Regulation 2, Rule 2, NSR requirements to address PM_{2.5}. At that time, District staff will consider whether more stringent permitting requirements should be established for sources of PM_{2.5} locating in priority communities.

AIR TOXICS HOT SPOTS PROGRAM

BACKGROUND

Assembly Bill 2588, the Air Toxics “Hot Spots” Information and Assessment Act, was enacted by the State legislature in 1987. AB 2588 requires companies throughout California to provide information to the public about emissions of TACs, and the impact that those emissions may have on public health. The Act was amended in 1992 by SB 1731, which provided the air districts with the authority to require facilities with significant risks to implement a site-specific risk reduction audit and plan. There are five steps to implementing the Air Toxics Hot Spots (ATHS) Program as follows.

- (1) In the first step, an air toxics emissions inventory is prepared for each facility. This inventory lists the emissions of TACs from each source based upon information supplied to the District by the affected facility and reviewed by District engineers. These inventories are updated through the District’s Annual Update procedures.
- (2) In the second step, the District prioritizes facilities for additional scrutiny. The prioritization procedure considers the quantity and toxicity of pollutants emitted, and the proximity of persons that may live or work nearby. Each facility is categorized as high, medium or low priority.
- (3) The third step requires high priority facilities to prepare a facility-wide Health Risk Assessment (HRA). The HRA must be completed in accordance with detailed guidelines adopted by OEHHA.
- (4) In the fourth step, exposed persons must be notified regarding the results of an HRA if, in the judgment of the District, the calculated risks warrant such notification.
- (5) In the final step, health risks determined by the District as being significant must be reduced below significance levels within a five year timeframe, with an additional five year period allowed based on considerations of technological feasibility and economic practicability. The facility may be required to complete and implement a risk reduction audit and plan for this purpose.

The State legislature provided each air district with the authority to establish health risk thresholds for public notification and risk reduction requirements. In the Bay Area, four levels of risk thresholds were established (Level 0, 1, 2, and 3), each with increasingly more stringent requirements. Level 1 or higher facilities (i.e., maximum cancer risk greater than or equal to 10 in a million, and/or maximum non-cancer hazard index greater than 1) require public notification. Level 2 or higher facilities (i.e., maximum cancer greater than or equal to 100 in a million, and/or maximum non-cancer hazard index greater than 10) require risk reduction.

Although public notification thresholds set for the ATHS Program are generally uniform throughout the State, risk reduction thresholds may vary from one air district to the next. The air districts that have established the most stringent risk reduction thresholds are generally smaller

districts with relatively few large industrial facilities. Unlike the Bay Area, most of these air districts also do not apply their risk reduction thresholds to facilities that have been designated in an “industry-wide” category. Industry-wide facilities are comprised predominately of small businesses, and are in a class that can be generically characterized. Facilities that may have Level 1 risks that are typically designated in an industry-wide category include gas stations and perchloroethylene dry cleaners, although several other source categories have also been designated in an industry-wide category by some air districts (e.g., metal platers, furniture stripping/refinishing).

Through a combination of both voluntary and mandatory risk reduction measures, District staff has worked with facilities to reduce risks that have been identified as Level 1 or higher under the ATHS Program. In 1991, 30 Bay Area facilities (excluding gas stations and dry cleaners) were identified as having Level 1 risks or greater. In 1992, the number of Level 1 or greater facilities was reduced to 16. All Level 2 and 3 facilities (100 in one million cancer risk or greater) were reduced to Level 1 or lower by 1993. Continued efforts to reduce emissions and to refine estimates of risk reduced the number of Level 1 facilities to nine in 1993, to five in 1994, to two in 1995, and to one in 1999. The last of the original Level 1 facilities became Level 0 in 2001.

In 1994, the District adopted Regulation 11, Rule 16, Perchloroethylene and Synthetic Solvent Dry Cleaning Operations, which incorporated the risk reduction requirements of SB 1731. All Level 2 dry cleaners were reduced to Level 1 or lower under this rule by October 1, 1998. CARB revised the State dry cleaning Airborne Toxic Control Measures (ATCM) in January 2007 to phase-out Perc as a dry cleaning solvent. Under the terms of the ATCM, about half of the remaining Perc dry cleaners in the Bay Area must remove their Perc machines by 2010, and the remaining machines will be removed over the subsequent 13 years. At the direction of the Board of Directors, District staff is preparing amendments to Regulation 11, Rule 16, that will accelerate the phase-out of Perc in Bay Area dry cleaners from what the ATCM requires.

Several State programs have significantly reduced risks from gas stations. Risks were reduced by about 50 percent in 1996 when more stringent standards limiting the benzene content of gasoline became effective. All Bay Area gas stations with Level 2 risks were reduced to Level 1 at that time. In 2000, CARB approved their Enhanced Vapor Recovery (EVR) Program, which included a series of required improvements in vapor recovery equipment at gas stations implemented over a 10 year timeframe. The District estimates that 5 to 10 percent of Bay Area gas stations will have Level 1 risks after full EVR implementation.

The District has recently completed a multi-year project in which emission inventory information was established for thousands of stationary diesel engines operating in the Bay Area (diesel PM is the most recently adopted TAC in California). District staff is currently assessing the emission reductions that have resulted from implementation of a State ATCM for stationary diesel engines to determine maximum health risks from these sources. It is expected that some facilities with diesel engines will have Level 1 risks following ATCM implementation.

In 2008, an HRA for an additional Bay Area industrial facility (Pacific Steel Casting [PSC] Company in Berkeley) was approved by the District. The results of this HRA indicate that PSC is a Level 1 facility requiring public notification. Over the last several years, PSC has

implemented several projects to reduce health risks and odors, but the risks remain above the Level 1 thresholds (based on the 2005 – 2006 production levels used in the HRA).

DISCUSSION

District staff believes that it is appropriate to consider the adoption of more stringent risk reduction thresholds for existing stationary source facilities under the ATHS Program. This could potentially be done for facilities located in priority communities, but it may also be appropriate to consider adopting more stringent requirements throughout the Bay Area. The more stringent requirements would be implemented in a new District rule.

In order to develop this new rule, a number of issues will need to be considered including socioeconomic impacts. The socioeconomic impacts of the rule will be heavily dependent on the number and type of facilities that are expected to trigger risk reduction requirements, and the technological feasibility and economic practicability of required risk reduction measures. This analysis will depend not only on the selected risk reduction thresholds, but also on any significant changes in risk assessment methodologies that may be adopted by OEHHA. As was previously described, OEHHA is considering revising cancer risk assessment procedures to provide a greater margin of safety for protecting children. Based on discussions with OEHHA staff, it is possible that these revisions could increase calculated residential cancer risks by a factor of three or more relative to existing risk assessment procedures. Due to the potential significance of these revisions in risk assessment methodologies, the District believes that it is prudent to develop the District risk reduction rule concurrent with the OEHHA guideline revisions. OEHHA does not expect that these risk assessment guideline revisions will be finalized for some time, perhaps late in 2010.

The District believes that it may be appropriate to seek reductions in risks from foundries such as PSC in a timelier manner than could be achieved through adoption of the new risk reduction rule (PSC is located adjacent to the I-80 freeway and is located in a priority community established under the CARE Program). This could be done through the development of a source-category-specific rule to ensure that Bay Area foundries use best practices to minimize emissions and reduce health risks. District staff believes that such a rule could be developed and brought to the Board of Directors for consideration of adoption in one year or less.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Brian Bateman
Reviewed by: Jeffrey McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 22, 2009

Re: Report of the Ad Hoc Committee on Port Emissions Meeting of July 16, 2009

RECOMMENDED ACTIONS

The Committee considered recommending Board of Directors approval of:

1. An allocation of \$750,000 in funding to support emissions reductions projects at the Port of Oakland Seaport; and
2. Referral to and recommendation by the Budget and Finance Committee to transfer \$750,000 in funding from reserves to the fiscal year 2009/10 budget.

BACKGROUND

The Ad Hoc Committee on Port Emissions met on Thursday, July 16, 2009. The Committee received the following presentations:

- A) Update on Emission Reduction Strategy at the Port of Oakland;
- B) Consideration of Funding Allocation for Near Term Emission Reduction Projects at the Port of Oakland;
- C) Update on Enforcement Strategy for CARB Mobile Source Regulations at the Port of Oakland

Attached are the staff reports presented in the Ad Hoc Committee on Port Emissions Meeting packet.

Chairperson, Nate Miley will provide an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACTS

- A) The following item (Item B) includes a recommendation to transfer funds to support implementation of near term emission reduction projects at the Port of Oakland that are not eligible for the Air District Moyer, I-Bond, TFCA or other usual grants funds.

B) Action by the Board to reallocate these funds from fiscal reserves would require an amendment to the fiscal year 2009/10 budget.

C) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Lisa Harper
Approved by: Jennifer Chicconi

Attachment(s)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Miley and Members
of the Ad Hoc Committee on Port Emissions

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2009

Re: Update on Emission Reduction Strategy for the Port of Oakland

RECOMMENDED ACTIONS:

None.

BACKGROUND

Since the last meeting of the Ad Hoc Committee on Port Emissions, a number of actions have been taken toward reducing harmful emissions from seaport operations at the Port of Oakland, consistent with the green ports initiative adopted by the Board of Directors on November 19, 2008. These actions include, but are not limited to:

Bay Area Air Quality Management District

- Continued Transportation Fund for Clean Air grants (\$5 million) to retrofit drayage trucks
- Resumed I-Bond grants once funds began flowing to the Air District after a hiatus, including funds for drayage truck retrofits (\$10 million) and shore power projects with APL (\$2.8 million)
- Resumed allocation of Port of Oakland funds (\$5 million) for truck retrofits upon reauthorization of funds by the Port of Oakland
- Applied for and received Diesel Emission Reduction Act (DERA) funds (\$2 million) for truck retrofits at the Port of Oakland
- Stepped up outreach to port truckers about the availability of grant funds to retrofit their trucks, including a trucker outreach center at the Port of Oakland
- Board of Directors provided direction to staff on June 2, 2009 to continue evaluating Air District authority regarding Port emissions and to work with Port of Oakland staff on an agreement for near term actions to reduce emissions.

Port of Oakland

- Adopted Maritime Air Quality Improvement Plan (MAQIP)
- Adopted Comprehensive Truck Management Plan
- Adopted a ban on trucks that are not compliant with the ARB drayage truck rule effective January 1, 2010 (The implementing ordinance is scheduled for consideration Fall 2009)

- Reauthorized \$5 million in Port funds for the Air District to use for cleaning up drayage trucks
- Continued working with terminal operations on compliance plans for the ARB shore power regulation, including submittal of applications for state and federal funding

California Air Resources Board

The following regulatory milestones have occurred affecting seaport operations and emissions:

- On July 1, 2009, large marine vessels were required to use low sulfur marine fuels within California waters;
- On July 1, 2009, terminal operators were required to submit compliance plans to ARB for the shore power requirements;
- Terminal operators continued progress in bringing their cargo handling equipment into compliance with the State's diesel PM requirements;
- Trucking firms and terminal operators began complying with the requirements for transportation refrigeration units;
- UP and BNSF railways completed installation of idle limiting devices on California-based locomotives;
- Tug and supply vessel owners submitted compliance plans to ARB in advance of the initial compliance date of December 31, 2009.

U. S. EPA

- Proposed tighter emission limits on new and existing marine diesel engines used for propulsion on ocean going vessels
- Awarded DERA funding to the Air District (see above)

California Assembly

- Held a Select Committee hearing on the Port of Oakland on May 27, 2009
- Follow up hearing anticipated Fall 2009

DISCUSSION

Immediately following the Assembly Select Committee hearing, executive staff and Board representatives from the Air District and the Port met to consider next steps for working together. The discussion resulted in the concept of a joint agreement on near term actions to reduce emissions from port operations.

Staff from the Port of Oakland and Air District are working to identify near term actions to reduce emissions at the Port. Staff met on June 17, 2009 and July 1, 2009, and the next meeting is anticipated the week of July 27th. The work to date is encouraging.

Near term actions under discussion include, but are not limited to, the following list.

Compliance with Regulations

- Port support for Air District enforcement of ARB regulations, including but not limited to rules on drayage trucks, truck idling, low sulfur fuel for ocean going vessels, and transport refrigeration units.

Early Compliance

- Incentives for drayage truck retrofits and replacements
- Incentives for shore power infrastructure
- Incentives for low-emission locomotive switcher engines

Above and Beyond Regulations

- Support/funding for a marine highway project – using barges to transport cargo containers between Ports of Oakland, Stockton, and Sacramento rather than trucks

The Port and Air District will also continue to collaborate on emission inventory updates for the Port of Oakland, as well as other studies such as air monitoring in West Oakland.

We anticipate completing an agreement by Fall 2009.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

The following item for the July 16, 2009 meeting of the Ad Hoc Committee on Port Emissions (Item #5) includes a recommendation to transfer funds to support implementation of near term emission reduction projects at the Port of Oakland that are not eligible for the Air District Moyer, I-Bond, TFCA or other usual grants funds.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Michael Murphy
Reviewed by: Jean Roggenkamp

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Miley and Members
of the Ad Hoc Committee on Port Emissions

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 8, 2009

Re: Consideration of Funding Allocation for Near Term Emissions Reductions
Projects at the Port of Oakland

RECOMMENDED ACTION:

Staff request that:

1. The Committee recommend Board of Directors approval of an allocation of \$750,000 in funding to support emissions reductions projects at the Port of Oakland seaport, and
2. Referral to and recommendation to the Budget and Finance Committee to transfer \$750,000 in funding from reserves to the fiscal year 2009/10 budget.

BACKGROUND

In analyzing projects that could potentially generate significant near-term emissions reductions at the Port, staff prepared and discussed a list of projects with the Port. This discussion was framed by District staff's desire to utilize existing incentives funding streams to get projects up and running as quickly as possible. However, it became clear that traditional sources of grant funding such as the California Goods Movement Bond and Carl Moyer/ Mobile Source Incentive Program did not lend themselves well for use in many of the proposed projects.

This is due to the highly restricted applicability of those funding sources as defined by either California Air Resources Board (ARB) guidelines or the California Health and Safety Code. It should also be noted that the requirements for these incentives are generally tied to ARB regulations. Therefore, in order to achieve emissions reductions above and beyond what is required in those regulations, staff is requesting that the Board of Directors consider using funding from District reserves.

DISCUSSION

As part of the discussions with the Port, staff vetted the following projects:

Table 1 - Projects under Discussion with the Port

| Project | Implementation | Project Description/Benefits |
|-------------------------------|-----------------------|--|
| LNG Fuel Shorepower Generator | Third-quarter 2009 | <ul style="list-style-type: none">• Utilize LNG provided shorepower to eliminate ship idling while at Port.• Reduction in diesel particulate, nitrogen oxides and sulfur oxides. |
| LNG Trucks Fleet | Third-quarter 2009 | <ul style="list-style-type: none">• Establish Bay area LNG drayage fleet.• Reduction in diesel particulates, nitrogen oxides and greenhouse gas emissions. |
| BNSF Railroad Project | Third-quarter 2009 | <ul style="list-style-type: none">• Provide two new switcher engines to the BNSF Railroad at the Port. Port has committed \$1.3 million to the project and the project is eligible for Carl Moyer Funding.• Reduction in diesel particulates and nitrogen oxides. |

Discussion is ongoing regarding the emissions benefits of these projects and what commitments to matching funds can be made by either the Port or private entities. However, both staffs did agree on one project that has the potential to achieve significant emissions reductions quickly. This project, a Marine Highway transportation project, was chosen based on significant commitments of capital from both private and public entities and significant support by both the California Department of Agriculture and the United States Federal Maritime Commission. A more detailed description of this project is as follows:

Eco-Transportation-Marine Highway

This project represents a mode shift from over-the-road truck transportation of cargo containers to a river-based barging system. The California Department of Agriculture estimates that approximately 294,000 containers of agricultural goods are exported annually through the Port from the San Joaquin Valley. The Eco-Transportation project proposes to operate a barge between the Ports of Stockton and Oakland that would at peak capacity account for 50% of that agricultural cargo. In terms of air quality, this project eliminates the need for approximately 4,900 truck trips per week through the West Oakland community and along Bay Area highways. This equates to an almost 15 ton per year reduction in emissions of diesel particulate matter.

The total cost of this project, including infrastructure at the Ports of Stockton and Oakland, barges and tugs is approximately \$40 million. Both the Ports of Oakland and Stockton have applied for US Department of Transportation grants to fund this project. Additionally, due to the regional nature of the project (reducing emissions from trucks traveling between Stockton and Oakland) the San Joaquin Valley Air Pollution Control District has also agreed to provide up to \$750,000 in matching funds contingent on action by the District. The bulk of the additional funding required will be provided by Eco-Transportation. Staff has also had meetings with A.G. Kawamura, the California Secretary for Agriculture and Ray LaHood, the United States Secretary of Transportation, both of whom have expressed interest and support of this project, which may improve the Port of Oakland's prospects of receiving either State or Federal funding.

District funding would be contingent on Eco-Transportation receiving funding from the Port of Oakland, using clean barges and performance-based milestones. This project is expected to commence in summer 2010 and reach peak capacity by summer 2012.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

Action by the Board to reallocate these funds from fiscal reserves would require an amendment to the fiscal year 2009/10 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Damian Breen
Reviewed by: Jack M. Colbourn

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Miley and Members
of the Ad Hoc Committee on Port Emissions

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2009

Re: Update on Enforcement Strategy for CARB Mobile Source Regulations at
the Port of Oakland

RECOMMENDED ACTION:

Informational Report. Receive and file.

BACKGROUND

The goal of this enforcement strategy is to reduce diesel particulate matter health risk in CARE impacted areas, with special focus on the Port of Oakland and West Oakland, by developing a compliance and enforcement program for mobile sources.

Staff has taken a number of steps since March to develop the Mobile Source Compliance Plan, including implementation logistics. In parallel with these actions, staff continues to enforce the state portable equipment registration program (PERP) and the idling requirements for port trucks (AB2650) and diesel locomotives (CARB Railroad MOU). The District has prioritized its current efforts and those proposed at the Port of Oakland based on the overall level of emissions and their contribution to elevated health risk posed by each mobile source category (on-road trucks, off-road equipment, ships, harbor craft, or other diesel equipment).

DISCUSSION

Staff has further evaluated the CARB mobile source regulations, has begun staff training and is currently conducting monthly familiarization inspections alongside CARB staff. At the same time, staff is continuing to coordinate compliance and enforcement program development activities with CARB. A mobile source enforcement partnership agreement with CARB is being developed to clearly delineate the Air District's roles and responsibilities from CARB's. All District inspection staff are obtaining security clearances (known as "TWIC cards") required by Homeland Security to access Ports. Plans are underway for a strong enforcement presence at the Port of Oakland to ensure compliance with the January 1, 2010 Drayage Truck Rule compliance deadline. Staff also continues to inspect all trucks that will receive District grant funds for engine retrofits in advance of the Drayage Truck Rule requirements.

As outlined at the March 2009 meeting of this committee, the following three regulated sources account for the majority of the land-based, diesel emissions at the Port of Oakland:

- Heavy-Duty Drayage Truck Regulation (“DTR”) - Engine emissions requirements.
- Mobile Cargo Handling Equipment - Requires engines that meet specified emission standards.
- In-Use Construction Equipment - Establishes idling limits on commercial trucks and construction equipment.

However, shipping and commercial harbor craft also represent significant emission sources. Therefore, regulations that require cleaner fuels and other requirements for ocean-going vessels, commercial harbor craft, and transport refrigeration units are undergoing further staff evaluation for inclusion in the Mobile Source Compliance Plan. Regulations for these categories will address the largest emission sources at the Port of Oakland that adversely affect health risk for the surrounding community.

Staff will provide an update on the enforcement strategy and present the steps taken since March 2009, including training, logistics, coordination efforts with CARB, plans to enforce upcoming key rule deadlines, and other actions underway to fully develop the enforcement strategy and Mobile Source Compliance Plan.

A draft Mobile Source Compliance Plan will be provided to the Committee in Fall 2009.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Barbara Coler
Reviewed by: Kelly Wee

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson, Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 30, 2009

Re: Report of the Executive Committee Meeting of June 29, 2009

RECOMMENDED ACTION

None

BACKGROUND

The Executive Committee met on Wednesday, July 29, 2009. The Committee received the following reports and updates:

- A) Quarterly Report of the Hearing Board – April 2009 – June 2009
- B) Production System Update
- C) Overview of Strategic Facility Planning Process
- D) Update on the Air District Foundation
- E) Consideration of Board of Directors' Policy on California Air Resources Board Appointments
- F) Update on the Indirect Source Rule (deferred to the next Executive Committee meeting).

Attached are the staff reports presented in the Executive Committee packet of July 29, 2009.

Chairperson Pamela Torliatt will give an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None
- B) None
- C) Funding for consulting services for this project is included in Program 702 of the approved FY 2009/2010 Air District budget.
- D) Under evaluation; staff will report on fiscal impact at a future meeting.

E) None.

F) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Lisa Harper
Reviewed by: Jennifer Chicconi

Attachment(s)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 Memorandum

TO: Chairperson Pamela Torliatt and Members of the Executive Committee

FROM: Chairperson Thomas M. Dailey, M.D., and Members of the Hearing Board

DATE: July 6, 2009

RE: Hearing Board Quarterly Report – APRIL, 2009 – JUNE, 2009

RECOMMENDED ACTION:

This report is provided for information only.

DISCUSSION:

| <u>COUNTY/CITY</u> | <u>PARTY/PROCEEDING</u> | <u>REGULATION(S)</u> | <u>STATUS</u> | <u>PERIOD OF VARIANCE</u> | <u>ESTIMATED EXCESS EMISSIONS</u> |
|--------------------|---|--|---------------|---------------------------|-----------------------------------|
| Alameda/Oakland | SCHNITZER STEEL PRODUCTS (OAKLAND) – Regular Variance – Docket No. 3567 – Application for Variance from regulation requiring compliance with permit conditions and Volatile Organic Compounds Emissions. (APCO not opposed) | 2-1-307 | Withdrawn | 5/18/09 – 10/14/09 | === |
| Contra Costa/Rodeo | CONOCOPHILLIPS COMPANY (RODEO) – Short Term Variance – Docket No. 3568 – Application for Short Term Variance from regulation to provide an orderly procedure for the review of new sources of air pollution; and from regulation requiring compliance with permit conditions and from conditions of the Major Facility Review Permit. (APCO not opposed). | 2-1-307 2-6-307 (Major Facility Review Permit) | Withdrawn | 6/29/09 – 7/3/09 | === |

| | | | | | |
|----------------------|--|-----------------------------------|--|-----|-----|
| Santa Clara/San Jose | APCO vs. HIEP VO, individually and d/b/a MCKEE BEACON SERVICE - Site No. C9809 (SAN JOSE) - Accusation – Docket No. 3535 – Accusation and Request for Order for Abatement from regulation requiring to provide an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources, and of associated air pollution control devices, through the issuance of authorities to construct and permits to operate – Matter Closed at request of APCO and approval by Hearing Board. | 2-1-302 | Matter Closed; pending Small Claims Court action | === | === |
| Solano/Benicia | VALERO REFINING COMPANY (BENICIA) – Appeal – Docket No. 3531 – Appeal of Valero Refining Company from the Issuance of a Further Revised Major Facility Review Permit for Facility No. B2626 (Valero Benicia Refinery). Further Status Report | (Major Facility Review Permit) | Further status report due by May 1, 2010 | === | === |

NOTE: During the second quarter of 2009, the Hearing Board processed and filed a total of two (2) applications: one (1) Short-Term Variance and one (1) Regular Variance. Both applications were scheduled for hearing on June 25, 2009 but both were withdrawn and the hearings not held. The Hearing Board received a further status report on an Appeal which was continued to May 1, 2010 and received and approved a request from the APCO to close a Docket (Accusation). A total of \$3,224.42 was collected as Hearing Board fees (applications and public noticing) during the second quarter of 2009.

EXCESS EMISSION DETAILS

| <u>COMPANY NAME</u> | <u>DOCKET NO.</u> | <u>TOTAL EMISSIONS</u> | <u>TYPES OF EMISSIONS</u> | <u>PER UNIT COST</u> | <u>TOTAL AMT COLLECTED</u> |
|---------------------|-----------------------|------------------------|-------------------------------|-----------------------------|----------------------------|
| | | | | | \$ 0 |
| | | | | TOTAL COLLECTED: | <u>\$ 0</u> |

Respectfully submitted,

Thomas M. Dailey, M.D.
Chair, Hearing Board

Prepared by: Lisa Harper
Reviewed by: Jennifer Chicconi

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 19, 2009

Re: Production System Project Update

RECOMMENDED ACTION:

Receive and File.

DISCUSSION

Staff will present the current status for this multi-year project, and a brief description of the next milestones. In December of 2006 staff presented the plan for implementation of the new production system. At that time, staff indicated that execution of the plan would be accompanied by detailed reports on the status of actual costs as compared to projected costs, and by detailed reports on the status of actual accomplishments. The last update was presented in March of this year.

BUDGET CONSIDERATION/FINANCIAL IMPACT:

No impact.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: John Chiladakis
Reviewed by: Jeffrey McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 16, 2009

Re: Overview of Strategic Facility Planning Process

RECOMMENDED ACTION:

Receive and file.

BACKGROUND

The Budget and Finance Committee at its April 29, 2009 meeting received a presentation on assigning Capital Facility Planning responsibilities to the Committee. The Committee at its April 29th meeting discussed a Request for Proposal that was initiated in 2008 with a scope of work to analyze existing and future space needs, cost, and various options. Staff agreed to return to the Committee to provide a presentation on vendor selection of the Request for Proposal for Strategic Facility Planning.

The assigning of Capital Facility planning responsibilities to the Budget and Finance Committee was approved by the Board of Directors' at its May 6, 2009 meeting.

A majority of the members of the Budget and Finance Committee are on the Executive Committee. It is not anticipated that the Budget and Finance Committee will meet until after the State budget has been approved.

DISCUSSION

Staff's initial Request for Proposal for a Strategic Facilities Planning process has been revised. The revised RFP has been scaled back and will include a Phase I: Visioning process and Phase II: Data Gathering.

Staff has selected Hellmuth, Obata + Kassabaum, Inc. (HOK) Advanced Strategies in a competitive bid process in an amount not to exceed \$35,000.

Staff will provide a presentation on the scope of work to be conducted by HOK Advanced Strategies and receive direction from the Committee.

BUDGET/FINANCIAL IMPACT:

Funding for consulting services for this project is included in Program 702 of the approved FY 2008/2009 Air District budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Mary Ann Goodley

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 22, 2009

Re: Update on Air District Foundation

RECOMMENDED ACTION:

None, for information only.

BACKGROUND

The Board's Executive Committee directed staff at its May 18, 2009 meeting to research options for how the Air District's Bay Area Clean Air Foundation would fund climate protection activities in the Bay Area. At its May 20, 2009 meeting, the Air District Board approved the Executive Officer/APCO, the CFO and former members of the Board of Directors to serve as Interim Officers and Directors to the Foundation.

DISCUSSION

Staff will present options to the Executive Committee on how the Foundation might be structured and what kinds of activities it could fund.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

Under evaluation, staff will report on fiscal impact at a future meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Abby Young
Reviewed by: Henry Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 20, 2009

Re: Board of Directors' Policy on California Air Resources Board Appointments

RECOMMENDED ACTION:

Consider adopting a policy outlining the process for endorsing a Board member to be appointed to the California Air Resources Board.

BACKGROUND

By California statute, one member of the California Air Resources Board is to be appointed from the Board of Directors of the Bay Area Air Quality Management District. The Governor makes the appointment. The Senate Rules Committee considers confirmation of the appointment within one year.

Board member Ken Yeager has been appointed by the Governor to the CARB Board. The Senate Rules Committee will be considering confirmation of the appointment soon. The issue of Board of Directors support for appointments to the CARB Board was discussed at the Executive Committee meeting on June 29, 2009. At that Committee meeting, the Committee directed staff to include discussion of a process regarding support for CARB appointments on the next Executive Committee agenda.

DISCUSSION

Currently, no policy exists regarding support for a member of the Bay Area Air Quality Management District Board of Directors to be appointed to the California Air Resources Board. If such a policy were to be adopted by the Board of Directors, it could include the following elements:

Applicability

The policy would be applicable when the Bay Area Air Quality Management District seat on the CARB Board becomes vacant. The policy could be applicable to:

- Governor's appointment only
- Governor's appointment as well as the Senate Rules Committee confirmation.

Call for Interested Board members

The Chair of the Board of Directors could issue a call for Board members to express their interest in being appointed to the CARB Board. Interested Board members would:

- Express their interest within a designated timeframe.
- Provide key information relevant to his/her appointment to the CARB Board.

Committee consideration and recommendation to the Board of Directors

The Chair of the Board of Directors could direct the Executive Committee to:

- Consider the information provided by interested Board members and
- Decide whether to make a recommendation to the Board of Directors for support of one of the candidates.

Format for endorsement

If the Board of Directors decides to support one of the candidates, such support could take the form of:

- Letter to the Governor expressing support for the appointment
- If the candidate is appointed to the CARB Board by the Governor, a letter could also be sent to the Senate Rules Committee expressing support for the confirmation of the appointment

If a different candidate is appointed to the CARB Board by the Governor, the Executive Committee could consider recommending that the Board of Directors send a letter of support to the Senate Rules Committee for the appointed candidate.

Staff can bring draft policy language to the next Executive Committee meeting based on the discussion of the Committee on July 29, 2009.

BUDGET/FINANCIAL IMPACT:

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jennifer Chicconi
Reviewed by: Jean Roggenkamp

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 21, 2009

Re: Indirect Source Review Rule Update

RECOMMENDED ACTION:

None. For information only.

BACKGROUND

Air District staff were directed at the Board retreat in January 2009 to commence work on an Indirect Source Review (ISR) rule. Since that time, staff has created a stakeholder work group to provide input on this rule development effort. The work group is comprised of representatives from cities and counties, regional agencies, government agencies, environmental, business and community organizations, and other interested parties. The District hosted the first stakeholder group meeting on May 28th where participants provided valuable insight on various broad issues associated with the rule. The next meeting of the stakeholder group is tentatively planned for September 2009.

DISCUSSION

Staff is developing an Indirect Source Review Rule concept paper. Staff will provide an update to the Executive Committee on the outcomes of the stakeholder meeting, preliminary concepts for the ISR, and a draft timeline for development of the ISR.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sigalle Michael
Reviewed by: Henry Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Pamela Torliatt and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 28, 2009

Re: Public Hearing to Consider Proposed Amendments to Regulation 8, Rule 32:
Wood Products Coatings, and Manual of Procedures, Volume 1, Number 6:
Emissions Averaging Procedure; and Adoption of a Negative Declaration
pursuant to the California Environmental Quality Act

RECOMMENDED ACTION:

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

- Adopt proposed amendments to Regulation 8, Rule 32: Wood Product Coatings;
- Adopt proposed amendments to Manual of Procedures, Volume 1, Number 6: Emissions Averaging Procedure; and
- Adopt a Negative Declaration pursuant to the California Environmental Quality Act (CEQA) for this rule-making activity.

BACKGROUND

Regulation 8, Rule 32: Wood Products Coatings (Rule 8-32) regulates volatile organic compound (VOC) emissions from the wood products manufacturing industry by setting standards for application techniques and the amount of VOC in coatings that can be used in surface preparation, coatings application, and cleanup for the manufacture of wood products, including furniture, bathroom vanities, kitchen cabinets, picture frames, outdoor speakers, architectural millwork, and other wood products. VOCs are a precursor to ozone, and the District is not in attainment of the federal 8-hour or state one-hour or 8-hour ozone standards. The proposed amendments implement Control Measure SS-5 in the 2005 Ozone Strategy.

DISCUSSION

The proposed amendments to Rule 8-32 will reduce VOC limits for some types of coatings used on the three types of wood products subject to VOC limitations in the rule: general wood products; wood furniture, custom cabinetry and custom architectural millwork; and custom furniture. The lower VOC limits would become effective July 1, 2010, and provide for alternative standards for each type of high-solids coating based on grams VOC per gram of coating solid. Effective July 1, 2010, the proposed amendments also set a 25 gram/liter VOC limit for solvent used for surface preparation and clean-up, require that VOC content be stated on labels of coatings and solvents manufactured on or after that date, and specify compliance information to be included on product data sheets. Effective July 1, 2012, each wood products coating manufacturer will be required to estimate formaldehyde emissions generated by drying

or curing of their coatings in the Bay Area. Other proposed amendments revise definitions and clarify compliance determination procedures. Proposed amendments to the Emissions Averaging procedure incorporate EPA policies and update the procedure to coincide with the proposed amendments to the rule. As specified in the proposed rule language, various elements of the amendments are effective upon adoption, July 1, 2010, and July 1, 2012.

The proposed amendments will reduce VOC emissions by at least 0.45 tons per day, representing a 30 percent reduction in current emissions. The most significant costs of implementation are higher coating costs. A few manufacturers may need to add additional drying trays or ventilation during damp and cool winter months. Cost effectiveness of the proposed amendments is estimated to range in costs from \$7,000 to \$26,000 per ton of VOC reduced; \$7,000 to \$22,000 per ton depending on the costs of new coatings only, and up to \$26,000 if additional drying facilities are required.

A socioeconomic analysis by Bay Area Economics of Emeryville, California has found that the costs of the rule would not create significant economic dislocation, loss of jobs, or impact small business. Pursuant to the California Environmental Quality Act (Public Resources Code § 21080(c) and CEQA Guidelines 15070 et seq.), 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. A negative declaration pursuant to CEQA is proposed for adoption.

RULE DEVELOPMENT PROCESS

The process to bring this proposal to the Board of Directors has been a comprehensive process involving discussions with wood products manufacturers, coating suppliers and trade associations, and consultation with other regulatory agencies such as ARB, EPA, and other California air districts. In the development of this proposal, District staff:

- Met with representatives of five wood products manufacturing facilities, and two wood coating manufacturers;
- Held meetings and conference calls, and met and corresponded via telephone calls, emails and letters with eight additional wood products manufacturers, seven additional coating suppliers, solvent manufacturers, and coating and solvent manufacturing association representatives;
- Consulted with staff members from the ARB, South Coast AQMD, Sacramento Metropolitan AQMD, San Joaquin Valley Unified APCD and EPA.
- Developed the economic analysis based on cost information from coating suppliers provided to the South Coast and Central Valley regions; and the experience of wood product manufacturers in the Bay Area who have tested low VOC and water-based wood coatings.
- Hosted a public workshop to inform and solicit comments from the affected industries and interested public on the proposed amendments to Rule 8-32. The workshop was held at the District office on May 18, 2009. Stakeholders included wood products manufacturers, coating industry representatives, and staff members from ARB, who attended in person or via conference call.

Final proposed amendments to Regulation 8, Rule 32, a staff report, a CEQA initial analysis and Negative Declaration, and a socioeconomic analysis were posted for public review and comment on July 2, 2009. Public comments on the proposed amendments, and staff responses, are attached as Appendix A.

BUDGET CONSIDERATIONS/FINANCIAL IMPACTS:

None. The District already inspects wood product manufacturers and their coating use. These amendments will not require additional District resources.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Guy Gimlen
Reviewed by: Henry Hilken

Attachments:

- Proposed amendments to Regulation 8, Rule 32: Wood Products Coatings
- Proposed amendments to Manual of Procedures Volume 1, Number 6: Emissions Averaging Procedure
- Staff Report, including Appendices:
 - A. Comments and Responses
 - B. Socioeconomic Analysis
 - C. CEQA Initial Study and Negative Declaration

**REGULATION 8
ORGANIC COMPOUNDS
RULE 32
WOOD PRODUCTS COATINGS**

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**REGULATION 8
ORGANIC COMPOUNDS
RULE 32
WOOD PRODUCTS COATINGS**

(Adopted September 21, 1983)

8-32-100 GENERAL

8-32-101 Description: The purpose of this Rule is to limit emissions of volatile organic compounds from the coating of wood products, including surface preparation, application of coatings ~~to, and cleanup and surface preparation of, any wood products, including furniture, cabinets and custom architectural millwork. This Rule shall not apply to residential noncommercial operations.~~

(Amended April 17, 1991)

8-32-110 Deleted October 6, 1993

8-32-111 Exemption, Non-commercial and Small Coating Operations: This Rule shall not apply to residential non-commercial operations or ~~The provisions of this Rule shall not apply to~~ facilities that use a total of less than 20 gallons of coating per year.

(Adopted April 17, 1991)

8-32-112 Exemption, Specific Operations: The provisions of this Rule shall not apply to the following specific coating operations:

112.1 Coatings and adhesives applied to Flatwood Paneling and Wood Flat Stock subject to the provisions of Regulation 8, Rule 23.

112.2 Coating applied to stationary structures and their appurtenances subject to the provisions of Regulation 8, Rule 3. ~~or Rule 48~~

112.3 Coating applied from aerosol cans subject to the provisions of 17 California Code of Regulations, commencing at §94520 ~~Regulation 8, Rule 49.~~

112.4 Adhesive coating subject to the provisions of Regulation 8, Rule 51.

(Adopted 4/17/91; Amended 11/18/92)

8-32-113 Exemption, Refinishing, Replacement and Custom Replica Furniture Operations: The provisions of Sections 8-32-302, 303, 304, 305 and 501 shall not apply to: any refinishing operation necessary for preservation of a wood product or, to return a the wood product or furniture to its original condition; ~~to the production of custom furniture to~~ replace missing items from furniture to produce a matching set; ~~or to the production of produce~~ custom replica furniture.

(Adopted 4/17/91; Amended 6/19/96)

8-32-114 Exemption, Stencil Coatings: The provisions of this Rule shall not apply to the application of coatings by template in order to add designs, letters or numbers to products. The application of stencil coatings is subject to the provisions of Regulation 8, Rule 4.

(Adopted April 17, 1991)

8-32-115 Exemption, Specific Finishes: The provisions of Sections 8-32-301, 302, 303, and 304 shall not apply to coatings used to produce the following finishes, provided records are maintained as specified in Section 8-32-501:

115.1 Crackle lacquers

115.2 Leaf finishes

115.3 Faux finishes

115.4 Imitation wood grain

The application of coatings used to produce these specific finishes is subject to the provisions of Regulation 8, Rule 4.

(Adopted April 17, 1991; Amended June 19, 1996)

8-32-116 Exemption, Musical Instruments: The provisions of this Rule shall not apply to the application of coatings to musical instruments.

(Adopted April 17, 1991)

8-32-117 Limited Exemption, Polyester Resin Application: The application of polyester resin with a VOC content of less than 120 grams VOC per liter (1.0 pound VOC per gallon) shall be exempt from the spray application equipment limitations of Section 8-32-301.

(Adopted April 17, 1991)

8-32-118 Exemption, Patternmaking: The provisions of this Rule shall not apply to the application of coating to wood patterns used as tooling for the foundry industry. The application of such coating is subject to the provisions of Regulation 8, Rule 4.

(Adopted June 19, 1996)

8-32-119 Limited Exemption, Extreme Environmental Conditions: Any wood product that will be subject to extreme environmental conditions shall be exempt from the requirements of Section 8-32-302~~may be coated pursuant to the limits in Section 8-32-303~~, provided that the requirements of Section 8-32-304 and Section 8-32-403 are satisfied.

(Adopted June 19, 1996)

8-32-120 Recordkeeping Exemption, Low VOC Facilities: Any facility subject to this Rule, in which only low VOC coatings thinned exclusively with water are ~~exclusively~~ stored and used shall be exempt from sections 8-32-501.2, 501.4, 502.2, 502.3, and 503. For the purposes of this exemption, low-VOC coatings are high-solids coatings with a VOC content as calculated in 8-32-605 of no more than 275 grams per liter (2.3 lb/gal), as applied (after thinning), and low-solids coatings with a VOC content as calculated in 8-32-604 of no more less than 120 grams per liter (1.0 lb/gal), as applied (after thinning). This exemption shall only apply only if the requirements of Section 8-32-405 are satisfied.

(Adopted June 19, 1996)

8-32-200 DEFINITIONS

~~8-32-201 Deleted April 17, 1994~~

8-32-21601 Air Assisted Airless Spray: Equipment used to apply coatings that uses fluid pressure to atomized the coating and air pressure between 0.1 and 50 psig to adjust the spray pattern.

(Adopted 4/17/91; Amended 7/6/94)

8-32-21502 Airless Spray: Equipment used to apply coatings by use of fluid pressure without atomizing air, including heated airless spray.

(Adopted April 17, 1991)

8-32-2023 Binders: Non-volatile polymeric organic materials (resins) ~~which that~~ form surface film in coating applications.

~~8-32-204 Deleted April 17, 1994~~

8-32-2054 Clear Sealer: A coating containing binders, but not opaque pigments, that seals the wood prior to application of, and provides a sandable surface for, the subsequent coatings.

8-32-2035 Clear Topcoat: ~~The A~~ final coating ~~which that~~ contains binders, but not opaque pigments, and is ~~specifically~~ formulated to form a transparent or translucent solid protective film.

8-32-2056 Single Application Conversion Varnish: A coating comprised of an alkyd or other resin blended with amino resin in a homogeneous liquid that, when acid-catalyzed and applied, hardens upon exposure to air or heat, by evaporation and polymerization, to form a continuous film that imparts protective or decorative properties to wood surfaces. This conversion varnish is used as a combined sealer and topcoat in one coating application.

8-32-2207 Crackle Lacquer: A clear or pigmented topcoat designed to shrink and crack as it dries, creating intended to dry to produce a cracked or crazed appearance.

(Adopted April 17, 1991)

8-32-21308 Custom Architectural Millwork: ~~These in S~~shop-finished wood products including custom designed interiors, the production of which is generally subject to North American Industry Classification System code 337212, which are intended for use as architectural components including panels, doors and trim. ~~and are Custom architectural millwork is~~ individually produced items designed for a specific space and client. Custom trade show exhibits designed for a specific client shall be considered custom architectural millwork.

(Adopted 4/17/91; Amended 6/19/96)

8-32-21309 Custom Cabinetry: Shop-finished wood products including cabinets, vanities and countertops, the production of which is generally subject to North American Industry Classification System code 337110, and which are individually produced items designed for a specific space and client.

8-32-22710 Custom ~~or Contract~~ Furniture: ~~These pieces of Wood~~ furniture individually designed and produced to order for a specific space and client as ordered by that client or a professional architect or designer.

(Adopted June 19, 1996)

8-32-22511 Custom Replica Furniture: Wood fFurniture individually produced for a specific client using methods of construction including materials, joinery and finishes authentic to the period and in keeping with the style of furniture.

(Adopted April 17, 1991)

8-32-2192 Detailing or Touch-up Guns: Small air spray equipment, including air brushes, that operates s at no greater than 5 cfm air flow and no greater than 50 psig air pressure and ~~are~~ is used to coat small products or portions of furniture.

(Adopted April 17, 1991)

8-32-2183 Electrostatic Air Spray: Equipment used to apply coating by charging atomized particles that are deposited by electrostatic attraction.

(Adopted April 17, 1991)

8-32-22814 Extreme Environmental Conditions: Any of the following conditions to which a surface-coated wood product may be exposed during its intended use: ~~coating which during intended use is exposed to one or more of the following conditions:~~

22814.1 Repeated heavy abrasion, mechanical wear, or abrasive agents;

22814.2 Temperature extremes significantly in excess of normal ambient conditions;

22814.3 Chronic exposure to corrosive, caustic or acidic chemicals, solutions or agents.

(Adopted June 19, 1996)

8-32-2215 Faux Finish: A finish intended to simulate a surface other than wood, including stone, sand, slate, marble, metal, metal flake or leather.

(Adopted April 17, 1991)

8-32-2216 Filler: A material whose primary function is to fill voids.

(Adopted April 17, 1991)

8-32-2127 General Wood Products: ~~For the purpose of this Rule, general wood products are those~~ Ssurface coated wooden objects for general sales to multiple customers, the production of which is ~~which are~~ generally subject to North American Industry Classification System codes 321911, 321918, 321999, 337110, 337129, and 337215, Standard Industrial Classification Major Group 24 including cabinets, vanities, shutters, containers, frames, tools and ladders made of solid wood, wood composition or wood material, but excluding Wood Furniture, Custom Cabinetry, Custom Architectural Millwork and Custom Furniture. ~~Custom cabinetry, including vanities, that are individually produced items designed for a specific space and client are not considered general wood products.~~

(Adopted 4/17/91; Amended 6/19/96)

8-32-20518 High-Solids CoatingStains: ~~A coating~~Stains ~~which are formulated to enhance wood grain and change wood color, and protect wood surface but not conceal surface grain. For the purpose of this Rule, high solids stains are stains~~ that contains s at least 120 grams solids per liter (one pound solids per gallon) of coating. High-Solids Coating VOC content shall be calculated by excluding water and exempt compounds in accordance with Section 8-32-605 or 606.

(Amended 4/17/91, 6/19/96)

8-32-21719 High-Volume, Low-Pressure (HVLP) Spray: Equipment used to apply coatings by means of a gun that ~~which~~ operates between 0.1 and 10 atomizing psig air pressure measured dynamically at the center of the air cap and at the air horns.

(Adopted 4/17/91; Amended 10/6/93)

8-32-22420 Imitation Wood Grain: A hand-applied finish that simulates the appearance of a specific natural wood grain.

(Adopted April 17, 1991)

8-32-2261 Key System Operating Parameter: An air pollution abatement equipment operating parameter, such as temperature, flow rate or pressure, that indicates whether ensures operation of the abatement equipment is within manufacturer specifications and/or in compliance with the standards in Sections 8-32-302, 303, and 304.

(Adopted June 15, 1994; Amended June 19, 1996)

8-32-222 Leaf Finish: A finish used in conjunction with metal leaf or foil.

(Adopted April 17, 1991)

8-32-20823 Low-Solids CoatingsStains: ~~A coating~~Stains, ~~dyes and toners which are formulated to enhance wood grain and change surface color, but not to conceal surface grain, and~~

~~include sap stain, toner and non-grain raising stains. For the purpose of this Rule, low solids stains are stains~~ that contains less than 120 grams solids per liter (1 pound solids per gallon) of coating. Low Solids Coating VOC content shall be calculated by including water and exempt compounds in the volume in accordance with Section 8-32-604.

(Amended 4/17/91, 6/19/96)

8-32-224 Multi-Colored Coating: A coating that is packaged in a single container and that is formulated to exhibit more than one color when applied in a single coat.

8-32-20625 Pigmented Coatings: Opaque coatings ~~that which~~ contain binders and colored pigments ~~and which~~ are formulated to hide the wood surface, either as an undercoat or topcoat.

8-32-226 Pigmented Primer, Sealer, and Undercoater: An opaque coating that contains binders and colored pigments formulated to hide the wood surface, that is applied prior to the topcoat to provide a firm bond, level the wood product surface, or seal the wood product surface.

8-32-227 Pigmented Topcoat: A final opaque coating that contains binders and colored pigments, and is formulated to hide the wood surface and form a solid protective film.

8-32-2078 Sanding Sealer: A high-solids wood coating containing binders; ~~formulated for application to bare wood to~~ ~~which~~ seals the wood prior to application of, and provides a sandable surface for, ~~the~~ subsequent coatings.

(Amended April 17, 1991)

8-32-229 Solvent Cleaning Operation: The removal of uncured adhesives, inks, coatings, and contaminants including: dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas.

8-32-230 Stain: A transparent or semitransparent solution or suspension of dyes or pigments formulated to enhance wood grain and change wood color without concealing the surface grain pattern or texture.

8-32-231 Surface Preparation: The cleaning of surfaces prior to coating, further treatment, sale, or intended use. Solvent cleaning operations subject to and in compliance with Regulation 8, Rule 16: Solvent Cleaning Operations, are not subject to this Rule.

8-32-232 Toner: A wash coat that contains binders and dyes or pigments to add tint to a coated surface.

8-32-20933 Transfer Efficiency: The ratio of the weight of coating solids deposited on an object to the total weight of coating solids used in a coating application step, expressed as a percentage.

(Amended April 17, 1991)

8-32-21434 Volatile Organic Compound (VOC): Any organic compound (excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, ~~or~~ metallic carbonates and ammonium carbonate) ~~that which~~ would be emitted during use, application, curing or drying of a solvent or ~~surface~~ coating.

~~21434.1~~ For purposes of calculating the VOC content of a high solids coating ~~subject to subsections 8-32-302.1, 303.1 and 304.1~~, any water or the following compounds:

acetone

parachlorobenzotrifluoride (PCBTF)

cyclic, branched or linear, completely methylated siloxanes (VMS)

shall not be considered a part of the coating. High solids coating VOC content is calculated as specified in 8-32-605 or 606.

~~21434.2~~ For purposes of calculating the VOC content of a low solids coating or solvent ~~subject to subsections 8-32-302.2, 303.2 and 304.2~~, any water or any of the non-precursor organic compounds listed in section 8-32-232.1, shall be considered a part of the volume, but shall not be considered part of the VOC content of the coating or solvent. Low solids coating VOC content is calculated as specified in 8-32-604. ~~The following compounds:~~

~~acetone~~

~~parachlorobenzotrifluoride (PCBTF)~~

~~cyclic, branched or linear, completely methylated siloxanes (VMS)~~

~~shall be considered part of the volume of the coating or solvent but shall not be considered part of the VOC content of the coating or solvent.~~

(Adopted 4/17/91; Amended 12/20/95, 6/19/96)

8-32-21035 Wash Coat: A low-solids coating, containing binders, that which penetrates into and seals wood, prevents undesired staining and seals in wood pitch. ~~For the purpose of this Rule, washcoats shall be considered low-solids coatings and shall contain less than 120 grams solids per liter (1 pound solids per gallon) of coating. Wash coats with greater than 120 grams solids per liter (1 pound solids per gallon) of coating shall be considered sanding sealers.~~

(Amended April 17, 1991)

8-32-21436 Wood Furniture: ~~These~~ Surface-coated wooden room furnishings for general sales to multiple customers, the production of which is generally ~~which are~~ subject to North American Industry Classification System codes 337121, 337122, 337125, 337127, and 337211 Standard Industrial Classification Major Group 25 including tables, chairs, beds, sofas, dressers and standing screens, made of solid wood, wood composition or wood material.

(Amended April 17, 1991)

08-32-300 STANDARDS

8-32-301 Spray Application Equipment Limitations: Any person who utilizes spray application equipment to apply coatings to wood products, ~~furniture and cabinets~~ shall use one or more of the following application methods:

- Airless spray
- Air assisted airless spray
- High Volume Low Pressure (HVLP) spray
- Electrostatic air spray
- Detailing or Touch-up Guns

Other coating application methods demonstrated to the APCO to be capable of achieving at least 65 percent transfer efficiency as determined by the test method cited in 8-32-607, and for which written approval by the APCO has been obtained.

(Amended April 17, 1991)

8-32-302 General Wood Product Limits: ~~No~~A person shall ~~not~~ apply to any general wood product, any coating with a VOC content in excess of the ~~following~~ limits set forth below; expressed as grams VOC per liter (pounds VOC per gallon) of coating or grams VOC per gram of solids, as applied (after thinning), unless emissions to the atmosphere are controlled to an equivalent level by air pollution abatement equipment with an abatement device efficiency of at least 85 percent that meets the requirements of Regulation 2, Rule 1.

~~302.1—High Solids Coatings:~~

| | Effective- July 1, 1992 | Effective July 1, 1995 | <u>Effective July 1, 2010</u> |
|---|--|-----------------------------------|---|
| | | <u>VOC limit g/l (lb/gal)</u> | <u>VOC limit g/l (lb/gal)</u> <u>VOC limit g/g solids</u> |
| <u>Clear Sealer</u> | | | <u>275 (2.3)</u> <u>0.36</u> |
| Clear Topcoat | 550 (4.6) | 275 (2.3) | <u>275 (2.3)</u> <u>0.35</u> |
| Sanding Sealer | 550 (4.6) | 550 (4.6) | <u>See clear or pigmented sealers</u> |
| Pigmented Coating | 600 (5.0) | 275 (2.3) | <u>See pigmented sealers or topcoats</u> |
| <u>Pigmented Primer, Sealer and Undercoater</u> | | | <u>275 (2.3)</u> <u>0.21</u> |
| <u>Pigmented Topcoat</u> | | | <u>275 (2.3)</u> <u>0.25</u> |
| High Solids Stain | 700 (5.8) | 700 (5.8) | <u>350 (2.9)</u> <u>0.42</u> |

| | | | | |
|--|----------------------|------------------|------------------|-------------|
| Filler | 500 (4.2) | 500 (4.2) | <u>275 (2.3)</u> | <u>0.18</u> |
| <u>Low Solids Stain*</u> | | <u>480 (4.0)</u> | <u>120 (1.0)</u> | - |
| <u>Low Solids Toner and Wash-coat*</u> | | <u>480 (4.0)</u> | <u>120 (1.0)</u> | - |

*Low-Solids Coatings VOC content is calculated including water and exempt compounds as set forth in Section 8-32-604. High-Solids Coatings VOC content is calculated excluding water and exempt compounds as set forth in Sections 8-32-605 and 8-32-606.

A person applying a coating subject to the standards effective July 1, 2010 will comply with this Section if the coating satisfies either of the alternative standards. Application of a coating exceeding one of the alternative standards applicable to that coating shall create a rebuttable presumption that the coating was applied in violation of this Section. The applicator may rebut the presumption of violation by demonstrating that the coating satisfies the other alternative standard.

~~302.2—Low Solids Coatings:~~

| | | |
|-----------------------------|--|--|
| | Effective- July 1, 1992 | Effective- July 1, 1995 |
| Low Solids Stain | 480 (4.0) | 480 (4.0) |
| Wash-coat | 480 (4.0) | 480 (4.0) |

(Deleted 4/17/91; Re-adopted 6/19/96)

8-32-303 Wood Furniture, Custom Cabinetry and Custom Architectural Millwork Limits: ~~No~~A person shall ~~not~~ apply to any wood furniture, custom cabinetry or custom architectural millwork, any coating with a VOC content in excess of the ~~following~~ limits set forth below; expressed as grams VOC per liter (pounds VOC per gallon) of coating or grams VOC per gram of solids, as applied (after thinning), unless emissions to the atmosphere are controlled to an equivalent level by air pollution abatement equipment with an abatement device efficiency of at least 85 percent that meets the requirements of Regulation 2, Rule 1.

~~303.1—High Solids Coatings:~~

| | Effective July 1, 1992 | Effective Sept 1, 1996 | <u>Effective July 1, 2010</u> |
|---|---------------------------------------|-----------------------------------|--|
| | | <u>VOC Limit g/l (lb/gal)</u> | <u>VOC Limit g/l (lb/gal)</u> <u>VOC Limit g/g solids</u> |
| <u>Clear Sealer</u> | | | <u>275 (2.3)</u> <u>0.36</u> |
| Clear Topcoat | 550 (4.6) | 550 (4.6) | <u>275 (2.3)</u> <u>0.35</u> |
| <u>Single Application Conversion Varnish **</u> | | | <u>550 (4.6)</u> <u>0.36</u> |
| Sanding Sealer | 550 (4.6) | 550 (4.6) | <u>See clear or pigmented sealers</u> |
| Pigmented Coating | 600 (5.0) | 550 (4.6) | <u>See pigmented sealers or topcoats</u> |
| <u>Pigmented Primer, Sealer and Undercoat</u> | | | <u>275 (2.3)</u> <u>0.21</u> |
| <u>Pigmented Topcoat</u> | | | <u>275 (2.3)</u> <u>0.25</u> |
| <u>Multi-colored Coating</u> | | | <u>275 (2.3)</u> <u>0.33</u> |
| High Solids Stain | 700 (5.8) | 700 (5.8) | <u>350 (2.9)</u> <u>0.42</u> |
| Filler | 500 (4.2) | 500 (4.2) | <u>275 (2.3)</u> <u>0.18</u> |
| <u>Low Solids Stain*</u> | | 480 (4.0) | <u>120 (1.0)</u> - |

Toner and Wash-coat* 480 (4.0) 120 (1.0) :

*Low-Solids Coatings VOC content is calculated including water and exempt compounds as set forth in Section 8-32-604. High-Solids Coatings VOC content is calculated excluding water and exempt compounds as set forth in Sections 8-32-605 and 8-32-606.

**If more than one coating application is used, each sealer application must comply with the sealer VOC limits, and each topcoat application must comply with the topcoat VOC limits.

A person applying a coating subject to the standards effective July 1, 2010 will comply with this Section if the coating satisfies either of the alternative standards. Application of a coating exceeding one of the alternative standards applicable to that coating shall create a rebuttable presumption that the coating was applied in violation of this Section. The applicator may rebut the presumption of violation by demonstrating that the coating satisfies the other alternative standard.

~~303.2—Low Solids Coatings:~~

| | Effective July 1, 1992 | Effective Sept 1, 1996 |
|-----------------------------|---------------------------------------|---------------------------------------|
| Low Solids Stain | 480 (4.0) | 480 (4.0) |
| Wash-coat | 480 (4.0) | 480 (4.0) |

(Adopted 4/17/91; Amended 10/6/93, 7/6/94, 6/19/96)

8-32-304 Custom ~~and Contract~~ Furniture Limits: ~~No~~A person shall ~~not~~ apply to any custom ~~or contract~~ furniture any coating with a VOC content in excess of the ~~following~~ limits set forth below; expressed as grams VOC per liter (pounds VOC per gallon) of coating or grams VOC per gram of solids, as applied (after thinning), unless emissions to the atmosphere are controlled to an equivalent level by air pollution abatement equipment with an abatement device efficiency of at least 85 percent that meets the requirements of Regulation 2, Rule 1.

~~304.1—High Solids Coatings:~~

| | Effective July 1, 1992 | Effective July 1, 1997 | <u>Effective July 1, 2010</u> | |
|---|---------------------------------------|-----------------------------------|--|---------------------------------|
| | | <u>VOC Limit g/l (lb/gal)</u> | <u>VOC Limit g/l (lb/gal)</u> | <u>VOC Limit g/g solids</u> |
| <u>Clear Sealer</u> | | | <u>275 (2.3)</u> | <u>0.36</u> |
| Clear Topcoat | 700 (5.8) | 550 (4.6) | <u>550 (4.6)</u> | <u>0.36</u> |
| Sanding Sealer | 700 (5.8) | 550 (4.6) | <u>See clear or pigmented sealers</u> | |
| Pigmented Coating | 600 (5.0) | 550 (4.6) | <u>See pigmented sealers or topcoats</u> | |
| <u>Pigmented Primer, Sealer and Undercoat</u> | | | <u>275 (2.3)</u> | <u>0.21</u> |
| <u>Pigmented Topcoat</u> | | | <u>275 (2.3)</u> | <u>0.25</u> |
| <u>Multi-colored Coating</u> | | | <u>275 (2.3)</u> | <u>0.33</u> |
| High Solids Stain | 700 (5.8) | 700 (5.8) | <u>350 (2.9)</u> | <u>0.42</u> |
| Filler | 500 (4.2) | 500 (4.2) | <u>275 (2.3)</u> | <u>0.18</u> |
| <u>Low Solids Stain*</u> | | 480 (4.0) | <u>120 (1.0)</u> | : |
| <u>Toner and Wash-coat*</u> | | 480 (4.0) | <u>120 (1.0)</u> | : |

*Low-Solids Coatings VOC content is calculated including water and exempt compounds as set forth in Section 8-32-604. High-Solids Coatings VOC content is calculated excluding water and exempt compounds as set forth in Sections 8-32-605 and 8-32-606.

A person applying a coating subject to the standards effective July 1, 2010 will comply with this Section if the coating satisfies either of the alternative standards. Application of a coating exceeding one of the alternative standards applicable to that coating shall create a rebuttable presumption that the coating was applied in violation of this Section. The applicator may rebut the presumption of violation by demonstrating that the coating satisfies the other alternative standard.

~~304.2—Low Solids Coatings VOC Limits:~~

| | Effective July 1, 1992 | Effective Sept 1, 1996 |
|-----------------------------|---------------------------------------|---------------------------------------|
| Low Solids Stain | 800 (6.7) | 480 (4.0) |
| Wash-coat | 800 (6.7) | 480 (4.0) |

(Adopted 4/17/91; Amended 10/6/93; 7/6/94, 6/19/96)

8-32-305 Prohibition of Specification: No person shall require ~~for the~~ use of or specify the application of a coating subject to this Rule if such use or application results in a violation of any of the provisions of this Rule. The prohibition of this Section shall apply to all written or oral contracts under the terms of which any coating is to be applied to any wood product, ~~furniture or cabinet~~ at any physical location within the District.

(Adopted April 17, 1991)

(Amended November 2, 1994)

~~**8-32-306—Compliance Statement Requirement:**~~

~~Effective August 1, 1991, the manufacturer of coatings subject to this Rule shall provide on the coating container or as an accompanying specification a designation of VOC content (as defined in Section 8-32-214) expressed in grams per liter or pounds per gallon of coating, and expressed as grams VOC per gram solid or pounds VOC per pound solid.~~

(Adopted 4/17/91; Amended 6/19/96)

8-32-307 Alternate Compliance, Section 8-32-302, 303 and 304: ~~In lieu of compliance with~~ Upon written authorization as provided for in Section 8-32-404, a person may establish compliance with Section 8-32-302, 303 or 304, ~~and provided a person is in receipt of the written authorization provided for in Section 8-32-404, compliance with the VOC limits may be achieved~~ by averaging the VOC emissions of any or all coatings and solvent usage related directly to the coating of wood products. Compliance ~~must~~ may be demonstrated by averaging ~~coatings used daily for multiple day periods on a rolling basis for a period of no greater than thirty days.~~ Facilities must limit VOC emissions, when averaged, to 10% less than the VOC emissions of compliant coatings. The procedure for averaging coatings to determine compliance with this provision is specified in 8-32-603.

307.1 Any emissions reductions credited to this plan must not be the result of emissions reduced due to violation of any District rule, or to achieve compliance with a provision of this rule at the effective date of that provision. Reductions achieved prior to the effective date of any standards in this rule may be used until the effective date.

307.2 Any emissions reductions shall not be used as credit pursuant to Regulation 2, Rule 4 or as contemporaneous offsets pursuant to Regulation 2, Rule 2.

307.3 No emissions reductions shall be credited for organic compounds that are adopted as compounds exempt from the Determination of VOC Content as calculated in Section 8-32-604 or 605 if those compounds are present in the coatings or solvents used at the facility prior to the date the compound becomes exempt.

(Adopted June 19, 1996)

8-32-320 Solvent Evaporative Loss Minimization: ~~The requirements of this Section shall apply to a~~ Unless emissions to the atmosphere are controlled by an approved emission control system with an overall abatement efficiency of at least 85%, any person using organic solvent for

solvent for surface preparation and/or cleanup in connection with coating of wood products, and ~~or to~~ any person mixing, using or disposing of coating, adhesive or stripper containing organic solvent in connection with coating of wood products shall comply with the following requirements:

- 320.1 TheA person shall use closed containers for the storage or disposal of cloth or paper used for solvent surface preparation and cleanup.
- 320.2 TheA person shall store fresh or spent solvent in closed containers.
- 320.3 TheA person shall not use organic compounds for the cleanup of mixing, or storage ~~or spray~~ equipment unless equipment for collecting the cleaning compounds and minimizing their evaporation to the atmosphere is used.
- 320.4 The person shall not use organic solvent for the cleanup of spray equipment, including coating lines, with a VOC content in excess of 25 g/l (0.21 lb/gal) unless either
 - (i) the solvent is pressurized through spray equipment with atomizing air off or dispensed from a small non-atomizing container, and collected and stored in a closed container until recycled or properly disposed of offsite, or
 - (ii) a spray gun washer subject to and in compliance with the requirements of Regulation 8, Rule 16 is used.
- 320.45 TheA person shall not leave containers of stripper, coating, adhesive, catalyst, solvent or thinner open to the atmosphere when not in use.

(Adopted April 17, 1991)

8-32-321 Surface Preparation Standards: Effective July 1, 2010, no person shall use a solvent with a VOC content that exceeds 25 g/l (0.21 lbs/gal), as applied, for surface preparation in any operation subject to this Rule unless emissions to the atmosphere are controlled to an equivalent level by an approved emission control system with an overall abatement efficient of at least 85 percent.

8-32-400 ADMINISTRATIVE REQUIREMENTS

8-32-401 Deleted April 17, 1991

8-32-402 Deleted June 19, 1996

8-32-403 Extreme Environmental Conditions Petition: A person seeking an exemption pursuant to Section 8-32-119 shall comply with the following requirements:

- 403.1 TheA person ~~petition~~ shall submit a petition ~~be submitted~~ to the APCO containing the following information, as applicable: environmental conditions and coating performance requirements, volume of coating, and maximum VOC level necessary.
- 403.2 If the APCO finds, based on the petition, that there is good reason to grant an exemption pursuant to Section 8-32-119, the APCO shall grants written approval for an exemption of a period of up to two years. The APCO may impose appropriate conditions on the approval, including limits on the amount and VOC content of coatings that may be used under the exemption, ~~such petition shall be repeated on an annual basis.~~
- 403.3 Upon receipt of written approval from the APCO, the person may use coatings that do not comply with the standards of Section 8-32-302, provided that the coatings comply with the standards of Section 8-32-304. The person must comply with all conditions of approval, and maintain records as required by Section 8-32-501. ~~If the APCO grants written approval, such approval shall contain VOC and volume limit conditions.~~
- 403.4 The person may renew the petition subject to approval by the APCO. ~~Records must be maintained as per Section 501.~~

(Adopted June 19, 1996)

8-32-404 Alternate Compliance Petition And Approval: Any person ~~electing~~ seeking to comply with this Rule pursuant to the averaging provisions of Section 8-32-307 shall submit to the APCO a petition containing information regarding all coatings and solvents to be included in the alternate compliance formula. Such information shall include the VOC content in grams (or pounds) per liter (or gallon), and in grams (or pounds) per gram (or pound) coating solid for high-solids coatings, the VOC content in grams (or pounds) per liter (or gallon) of

coating for low-solids coatings and solvents, the expected quantity of each coating or solvent to be used, ~~and~~ a description of the products or coating line for which the approval is sought. The APCO shall evaluate each petition submitted and will respond to each petition that meets the criteria of Section 8-32-307 with written approval. A petitioner is subject to the limits contained in Section 8-32-302, 303 or 304 until receipt of the written approval. Any change in operations from what is described in the petition terminates approval of the petition. A new petition submittal and written approval are required to continue to be eligible for the alternative compliance provisions of Section 8-32-307. ~~plan is subject to the following conditions:~~

~~404.1 Any emissions reductions credited to this plan must not be the result of emissions reduced due to violation of any District rule, or to achieve compliance with a provision of this rule at the effective date of that provision. Reductions achieved prior to the effective date of any standards in this rule may be used until the effective date.~~

~~404.2 Any emissions reductions shall not be used as credit pursuant to Regulation 2, Rule 4 or as contemporaneous offsets pursuant to Regulation 2, Rule 2.~~

~~404.3 No emissions reductions shall be credited for organic compounds that are adopted as compounds exempt from the definition of VOC found in Section 8-32-214 if those compounds are present in the coatings or solvents used at the facility prior to the date the compound becomes exempt.~~

(Adopted June 19, 1996)

8-32-405 Low VOC Facility Certification: In order to qualify for the recordkeeping exemption in Section 8-32-120, the owner or operator of a facility shall certify in writing to the APCO that all coatings comply with the provisions of Section 8-32-120. Such certification shall be provided annually, and if the facility is required to obtain a renewed permit on an annual basis, the certification shall be provided concurrent with permit renewal.

(Adopted June 19, 1996)

8-32-406 VOC Labeling Requirements: Effective July 1, 2010, any manufacturer, re-packer and retailer of any wood coating, or organic solvent used for thinning, surface preparation or clean up subject to this Rule that is manufactured on or after July 1, 2010 shall identify on the container the VOC content for the coating or solvent expressed in grams per liter (or pounds per gallon), as calculated in Section 8-32-604 or 605.

8-32-407 Compliance Statement Requirement: Effective August 1, 1991, the manufacturer of coatings subject to this Rule shall provide on the coating container or as an accompanying specification a designation of VOC content (as defined in Section 8-32-234) expressed in grams per liter or pounds per gallon of coating, and expressed as grams VOC per gram solid or pounds VOC per pound solid. Effective July 1, 2010, any manufacturer, re-packer and retailer of any wood coating, or organic solvent that is manufactured on or after July 1, 2010, and used for thinning, surface preparation or clean up used by wood products coating facilities subject to this Rule shall provide to users on product data sheets or an equivalent medium, the following information:

407.1 The VOC content of the coating and solvent in grams per liter (or pounds per gallon), as calculated in Section 8-32-604, or 605;

407.2 For high solids coatings, the VOC content of the coating in grams per gram (or pounds per pound), as calculated in Section 8-32-606;

407.3 Any thinning recommendations for a coating, and the VOC content of the coating after thinning in grams per liter (or pounds per gallon) as calculated in Section 8-32-604 or 605, and for high-solids coatings the VOC content of the coating after thinning in grams per gram (or pounds per pound) as calculated in Section 8-32-606.

8-32-408 Formaldehyde Emissions Information Requirement: By July 1, 2012, each manufacturer with at least 1000 gallons of wood coatings sold or distributed into the District shall submit the following information for each of the wood coatings based on 2011 sales:

408.1 The estimated volumes of each wood coating sold or distributed into the Bay Area.

408.2 The estimated formaldehyde emitted during drying or curing (in grams) from each of the wood coatings sold or distributed into the Bay Area.

408.3 The basis for the formaldehyde emissions estimate for each of the wood coatings sold or distributed into the Bay Area.

8-32-500 MONITORING AND RECORDS

8-32-501 Recordkeeping Requirements: Any person subject to Section 8-32-302, 303, 304, or 307 shall:

- 501.1 Maintain a current list of coatings in use which provides all of the data necessary to evaluate compliance, including the following information, as applicable:
 - a. coating, catalyst, ~~or~~ reducer, or other thinner or solvent used
 - b. manufacturer's recommended ~~mix~~ ratio of components
 - c. VOC content of coating as applied after any thinning
 - d. solids content of each high solids coating as applied after any thinning
 - e. thinner or solvent used for cleaning or surface preparation
- 501.2 Record the following information on a daily basis, as applicable:
 - a. coating and mix ratio of components in the coating used
 - b. quantity of each coating applied
 - c. identification of coating category
 - d. type and amount of solvent used for cleanup and surface preparation
 - e. emissions averaging calculations if using the alternate compliance option provided in 8-32-307.
- 501.3 Record air pollution abatement equipment key operating parameters on a daily basis where such equipment is installed to meet the requirements of Sections 8-32-302, 303, and 304.
- 501.4 Retain the records required by sections 501.2 and 501.3 for a period of 24 months and make them ~~Records shall be retained and~~ available for inspection by the APCO upon request~~for the previous 24-month period.~~

(Adopted 4/17/91; Amended 6/15/94, 6/19/96)

8-32-502 Refinishing, Replacement and Custom Replica Furniture Operations Recordkeeping Requirements: Any person refinishing wood products ~~or furniture~~, replacing missing furniture or producing custom replica furniture as described in 8-32-113 shall:

- 502.1 Maintain a current list of coatings in use which provides the following information, as applicable:
 - a. coating, catalyst, ~~or~~ reducer, or other components used
 - b. manufacturer's recommended mix ratio of components
 - c. VOC content and solids content of coating or reducer as applied after any thinning recommended by the manufacturer
- 502.2 Record on a monthly basis the following information, as applicable:
 - a. amount of coating, catalyst, ~~and~~ reducer, or other components used
 - b. type and amount of solvent used for cleanup and surface preparation
 - c. type and amount of stripper used
- 502.3 Retain the records required by sections 502.1 and 502.2 for a period of 24 months and make them ~~Records shall be retained and~~ available for inspection by the APCO upon request~~for the previous 24-month period.~~

(Adopted 4/17/91; Amended 6/15/94)

8-32-503 Custom Furniture, Custom Architectural Millwork and Custom Cabinetry Recordkeeping Requirements: In addition to the requirements of Section 8-32-501, any person producing custom furniture, custom architectural millwork and/or custom cabinetry shall maintain and make available for inspection by the APCO job orders, shop drawings or blueprints, or designer or architectural drawings as necessary to establish the custom nature of the work.

(Adopted 4/17/91; Amended 6/19/96)

8-32-600 MANUAL OF PROCEDURES

8-32-601 Analysis of Samples: For purposes of this Rule, Samples of VOC content of high-solids coatings shall be determined as specified in subsections 8-32-302.1, 303.1 or 304.1 shall be analyzed as prescribed in the Manual of Procedures, Volume III, Method 21 (Determination Of Compliance Of Volatile Organic Compounds For Water Reducible

Coatings) or Method 22 (Determination Of Compliance Of Volatile Organic Compounds For Solvent-Based Coatings, Inks, and Other Related Products). ~~Samples of~~ VOC content of low-solids coatings and surface preparation and clean-up solvents shall be determined ~~as specified in subsections 8-32-302.2, 303.2 or 304.2 shall be analyzed~~ as prescribed in the Manual of Procedures, Volume III, Method 31 (Determination Of Volatile Organic Compounds in Paint Strippers, Solvent Cleaners and Low Solids Coatings), or by South Coast Method 313.91 (Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry (GC/MS)). ~~Samples~~ VOC content of coatings containing parachlorobenzotrifluoride shall be ~~determined~~ ~~analyzed~~ as prescribed in the Manual of Procedures, Volume III, Method 41 (Determination Of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride). The VOC content of coatings containing acetone shall be determined by using ASTM Method D6133-02 (Standard Test Method for Acetone, *p*-Chlorobenzotrifluoride, Methyl Acetate or *t*-Butyl Acetate Content of Solventborne and Waterborne Paints, Coatings, Resins, and Raw Materials by Direct Injection Into a Gas Chromatograph). When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(Amended 4/17/91, 6/19/96)

8-32-602 Determination of Emissions Control Efficiency: ~~Emissions of volatile organic compounds as specified in Sections 8-32-302, 303 or 304 shall be measured as prescribed by any of the following methods: 1) BAAQMD Manual of Procedures, Volume IV, ST-7, 2) EPA Method 25 or 25A. When either EPA Method 25 or 25A is used, control device equivalency shall be determined as prescribed in 55 FR 26865 (June 29, 1990). For the purpose of determining abatement device efficiency, any acetone, PCBTF or VMS shall be included as Volatile Organic Compounds. A source shall be considered in violation if the VOC emissions measured by any of the referenced test methods exceed the standards of this rule. Emissions control efficiency of volatile organic compounds from source operations controlled by an emission control system shall be determined as follows:~~

602.1 Capture efficiency shall be determined as specified in 40 CFR 51, Appendix M, Test Methods 204 – 204F, as applicable.

602.2 Control device destruction efficiency shall be determined as specified in the Manual of Procedures, Volume IV, ST-7 or EPA Method 25 or 25A.

602.3 For the determination of control device destruction efficiency, any non-precursor organic compound specified in Section 8-32-232 shall be included as a volatile organic compound.

602.4 The overall efficiency of an emissions control system, expressed as a percentage, shall be calculated according to the following equation:

$$OE = [CE \times DE]$$

Where:

OE ≡ Overall efficiency

CE ≡ Capture efficiency

DE ≡ Control device destruction efficiency

602.5 A source shall be considered in violation if the VOC emissions exceed the standards of this rule as measured by any of the reference test methods.

(Adopted 4/17/91; Amended 6/15/94, 6/19/96)

8-32-603 Emissions Averaging Procedure: The procedure for averaging VOC emissions of coatings to determine compliance with Section 8-32-307 and sample calculations may be found in the Manual of Procedures, Volume I, Section 6.

(Amended June 19, 1996)

8-32-604: Calculation of Grams of VOC per liter for Low Solids Coatings: The VOC content of Low-Solids Coatings shall be calculated using the following equation:

$$VOC = \frac{W_s - W_w - W_{es}}{V_m}$$

Where:

W_s = Weight of volatile compounds (including water) in grams (or pounds).

W_w = Weight of water in grams (or pounds).

W_{es} = Weight of exempt compounds in grams (or pounds).

V_m = Volume of material in liters (or gallons).

8-32-605: Calculation of Grams of VOC per liter for High Solids Coatings: The VOC content of High-Solids Coatings shall be calculated using the following equation:

$$\text{VOC} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:

W_s = Weight of volatile compounds (including water) in grams (or pounds).

W_w = Weight of water in grams (or pounds).

W_{es} = Weight of exempt compounds in grams (or pounds).

V_m = Volume of material in liters (or gallons).

V_w = Volume of water in liters (or gallons).

V_{es} = Volume of exempt compounds in liters (or gallons).

8-32-606: Calculation of Grams of VOC per gram of solids for High Solids Coatings: The VOC content of High-Solids Coatings (grams per gram) shall be calculated using the following equation:

$$\text{VOC} = \frac{W_s - W_w - W_{es}}{W_r}$$

Where:

W_s = Weight of volatile compounds (including water) in grams (or pounds).

W_w = Weight of water in grams (or pounds).

W_{es} = Weight of exempt compounds in grams (or pounds).

W_r = Weight of coating solids in grams (or pounds).

8-32-607: Determination of Coating Transfer Efficiency: The transfer efficiency of alternative coating application methods shall be determined in accordance with South Coast Air Quality Management District method “Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989.”

Enforcement Procedures

Emissions Averaging Procedure
(Adopted June 19, 1996)

Ref: Regulation 8, Rule 32: Wood Products Coating, Section 307: Alternate Compliance

6.1 Introduction

Regulation 8, Rule 32 limits VOC levels in wood coatings expressed as both grams per liter, and grams per gram of solids for high solids coatings. 8-32 also provides an alternate compliance option of emissions averaging. Emissions averaging is based on the VOC expressed as grams per gram of solids for high solids stains, and on the VOC expressed as grams per liter for low solids stains and solvents. This procedure set forth in this section provides the for a method of averaging emissions on a grams VOC per gram coating solid basis (or pounds of VOC per pound coating solid basis). This approach basis eliminates bias due to relative film thickness' of different coating technologies and those due to different coating containing water or exempt solvents. Low solids coatings and solvents used in the manufacturing process may be included in the average, but are calculated on the basis of grams VOC per gram liter of coating or solvent material (or pounds VOC per pound gallon of coating or solvent material).

Emissions are quantified for all high solids coatings to be averaged from the amount of coating solids used for each coating in grams (or pounds) multiplied by the VOC content in grams VOC per gram coating solid (or pounds VOC per pound coating solid). Emissions are quantified for all low solids coatings and solvents to be averaged from the volume of low solids coatings and solvents multiplied by the VOC content in grams VOC per liter (or gallon). Information on the solids content and the VOC content is obtained from the coating manufacturer, and is required to be provided.

Emissions from all coatings are compared to the emissions allowance that would result from using all compliant coatings. The emissions from compliant coatings are based on the equivalent grams (or pounds) of coating solids used, and VOC content of compliant coatings translated into grams VOC per gram coating solid (or pounds VOC per pound coating solid). This equivalency assumes a 1200-grams/liter (or 10.0 pounds/gallon) density for coating solids and a 880 gram/liter (or 7.33-pounds/gallon) density for coating solvent. Emissions of coatings used must be no greater than emissions allowed from compliant coatings. Emission reductions from solvent usage reduction directly related to any changes in the manufacturing process are based on the density of solvent used prior to the reduction.

For wood coating facilities, the The averaging requirements and this procedure conform with EPA requirements to ensure 8-32 could be included in the SIP if necessary. EPA requires that emissions from coatings used, when averaged, be 10% less than emissions from compliant coatings. This is stated in the EPA document: "Improving Air Quality with Economic Incentive Programs", U. S. EPA-452/R-01-001, (January 2001) Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations", and is considered "quid pro quo" for the flexibility in choice of coatings inherent in an averaging provision. The EPA In addition, each facility that uses averaging must average their emissions each 24 hours (daily) provisions are applicable to facilities with actual or potential emission of 25 Tons VOC/year or greater.

6.2 Compliance Calculation

$$\frac{E_{CT} + E_{SS} + E_{PC} + E_{HS} + E_F + E_{LS} + E_{WC} + E_S}{L_{CT}(Q_{CT1} + Q_{CT2} + \dots + Q_{CTn}) + L_{SS}(Q_{SS1} + Q_{SS2} + \dots + Q_{SSn}) + L_{PC}(Q_{PC1} + Q_{PC2} + \dots + Q_{PCn}) + L_{HS}(Q_{HS1} + Q_{HS2} + \dots + Q_{HSn}) + L_F(Q_{F1} + Q_{F2} + \dots + Q_{Fn})} \leq 0.9$$

$$\begin{aligned}
 & \cancel{(480 \text{ g/l}^*) (Q_{LS1} + Q_{LS2} + \dots + Q_{LSn}) +} \\
 & \cancel{(480 \text{ g/l}^*) (Q_{WC1} + Q_{WC2} + \dots + Q_{WCn}) +} \\
 & \cancel{S_1(Q_{S1}) + S_2(Q_{S2}) + \dots + S_n(Q_{Sn})] }
 \end{aligned}$$

* ~~or 4.0 lb/gal~~

$$\begin{aligned}
 E_{CS} + E_{CT} + E_{CV} + E_{PP,S,U} + E_{PT} + E_{MCC} + E_{HSS} + E_F + E_{LSS} + E_{T,WC} + E_S \leq \\
 0.9 [L_{CS} (Q_{CS1} + Q_{CS2} + \dots + Q_{CSn}) + \\
 L_{CT} (Q_{CT1} + Q_{CT2} + \dots + Q_{CTn}) + \\
 L_{CV} (Q_{CV1} + Q_{CV2} + \dots + Q_{CVn}) + \\
 L_{PP,S,U} (Q_{PP,S,U1} + Q_{PP,S,U2} + \dots + Q_{PP,S,Un}) + \\
 L_{PT} (Q_{PT1} + Q_{PT2} + \dots + Q_{PTn}) + \\
 L_{HSS} (Q_{HSS1} + Q_{HSS2} + \dots + Q_{HSSn}) + \\
 L_F (Q_{F1} + Q_{F2} + \dots + Q_{Fn}) + \\
 L_{LSS} (Q_{LSS1} + Q_{LSS2} + \dots + Q_{LSSn}) + \\
 L_{T,WC} (Q_{T,WC1} + Q_{T,WC2} + \dots + Q_{T,WCn}) + \\
 S_1(Q_{S1}) + S_2(Q_{S2}) + \dots + S_n(Q_{Sn})]
 \end{aligned}$$

where:

- E = VOC emissions in grams (or pounds) for all particular coatings and or solvents used
- Q = quantity of each high solids coating used, expressed in grams (or pounds) of coating solids; or quantity of each low solids ~~stain, washcoat~~ coating or solvent used in liters (or gallons)
- K = grams VOC per gram solid (or pounds VOC per pound solid) for each high solids coating used; or grams VOC per liter of coating or solvent (or pounds VOC per gallon of coating or solvent) for each low solids ~~stain, washcoat~~ coating or solvent used
- L = emission limit from the category of wood products being manufactured (Section 8-302, 303 or 304), expressed in grams (or pounds) VOC per gram (or pound) coating solid for high solids coatings, and grams (or pounds) VOC per liter (or gallon) for low solids coating or solvent. If a facility manufactures more than one category of wood products, emissions averaging is allowed across categories.
- S = solvent VOC in grams per liter (or pounds per gallon) of material for solvents used as part of the manufacturing process prior to averaging
- CS = clear sealers
- CT = clear topcoats
- CV = single application conversion varnishes
- ~~SS~~ = ~~sanding sealers~~
- ~~PC~~ = ~~pigmented coatings~~
- PP,S,U = pigmented primers, sealers, and undercoats
- PT = pigmented topcoats
- MCC = multi-colored coatings
- HSS = high solids stains
- F = fillers
- LSS = low solids stains
- T,WC = toners, wash-coats
- S = solvents

For any category of coating,

$$E = \sum_{i=1}^n (Q_i)(K_i) \quad n = 1, 2, 3 \dots$$

~~Note:—The 0.9 multiplier (above) is only applicable to facilities with actual or potential emissions of at least 25 Tons/year~~

6.3 Regulation 8, Rule 32 Analytical Procedures ~~Equivalency Factors~~

VOC is defined in 8-32-234. VOC content is calculated as shown in 8-32-604, 605, and 606.

The calculations and analytical procedures for quantifying VOC content of coatings are found in the Manual of Procedures, Volume III, Laboratory Policies and Procedures; Methods 21, 22, 31, and 41.

| <u>Volatile Organic Compound Content (VOC)</u> | | |
|--|--------------------------|-------------------------------------|
| <u>Grams VOC/liter</u> | <u>Pounds VOC/gallon</u> | <u>Grams VOC/gram coating solid</u> |
| 275 | 2.3 | 0.33 |
| 500 | 4.2 | 0.96 |
| 550 | 4.6 | 1.22 |
| 600 | 5.0 | 1.57 |
| 700 | 5.8 | 2.85 |

~~Note:—Grams VOC/liter of coating and pounds VOC/gallon of coating is minus water and exempt solvent. The calculations and analytical procedures for quantifying VOC content of coatings are found in the Manual of Procedures, Volume III, Laboratory Policies and Procedures; Methods 21, 22, 31, and 41~~

6.4 Sample Calculations

1) A facility wishes to average a high VOC clear topcoat, a compliant VOC clear sealer, a compliant VOC low solids stain, and a low VOC low solids stain. The operator obtains the VOC content of each coating expressed as grams VOC per liter of coating, and grams of solids per liter of coating from the manufacturer, and estimates the relative usage of each product. The operator also uses some high solids stain and some low VOC topcoat, but the VOC contents of these coatings are at their respective limits, so they have no effect on, and therefore are not included in averaging. ~~The facility has actual and potential emissions of less than 25 Tons/year.~~

| <u>Product</u> | <u>Grams VOC/liter</u> | <u>Grams solid/liter</u> | <u>Vol % exempt or water</u> | <u>Estimated usage</u> |
|---------------------------|------------------------|--------------------------|----------------------------------|----------------------------|
| <u>Clear Topcoat</u> | <u>540*</u> | <u>1500</u> | <u>45</u> | <u>25.0 liters/day</u> |
| <u>Clear Sealer</u> | <u>250*</u> | <u>350</u> | <u>65</u> | <u>60.0 liters/day</u> |
| <u>Low Solids Stain 1</u> | <u>115</u> | <u>130</u> | <u>75</u> | <u>7.5 liters/day</u> |
| <u>Low Solids Stain 2</u> | <u>90</u> | <u>95</u> | <u>60</u> | <u>30.0 liters/day</u> |

* - excluding exempt solvents and water for high solids coatings

The clear topcoat contains 45% exempt solvent by volume, so the actual amount of VOC in a liter of clear topcoat is:

$$\text{VOC (lb/gal less water and exempt) = VOC (grams) / [1 liter - H}_2\text{O (liter) - VOC}_{\text{exempt}} \text{(liter)]}$$

$$540 = X / (1-0.45) \quad X = 297 \text{ grams VOC/liter of material}$$

Clear topcoat VOC in grams per gram of solids is calculated as:

$$297 \text{ grams VOC/liter of material} / 1500 \text{ grams solids/liter of material} = 0.198 \text{ g/g solids}$$

Similarly, the clear sealer contains 65% exempt solvent by volume, so the actual amount of VOC in a liter of clear sealer is:

$$250 = X / (1-0.65) \quad X = 87.5 \text{ grams VOC/liter of material}$$

Clear sealer VOC in grams per gram of solids is calculated as:

$$87.5 \text{ grams VOC/liter of material} / 350 \text{ grams solids/liter of material} = 0.25 \text{ g/g solids}$$

The operator calculates usage (Q) in terms of coating solids for the clear topcoat and the clear sealer and topcoat:

$$Q_{CT} = 25.0 \text{ liters} * 1500 \text{ grams solids/liter} = 37,500 \text{ grams solids/day}$$

$$Q_{CS} = 60.0 \text{ liters} * 350 \text{ grams solids/liter} = 21,000 \text{ grams solids/day}$$

The operator uses the summation equation to calculate total emissions from the use of these coatings:

$$E_{CT} = 0.198 \text{ g VOC/g solid} * 37,500 \text{ g solids} = 7,425 \text{ grams VOC}$$

$$E_{SS} = 0.25 \text{ g VOC/g solid} * 21,000 \text{ g solids} = 5,250 \text{ grams VOC}$$

$$E_{LS} = (115 \text{ g/l} * 7.5 \text{ liters}) + (90 \text{ g/l} * 30.0 \text{ liters}) = 862.5 \text{ g} + 2,700 \text{ g} = 3,562.5 \text{ grams VOC}$$

Using the compliance calculation, the grams of VOC from the high solids coatings plus the grams of VOC from the low solids coatings must be less than the allowance:

$$\frac{7,425 + 5,250 + 3,562.5}{16,237.5 \text{ grams VOC}} \leq 0.9 [(L_{CT} * Q_{CT}) + (L_{CS} * Q_{CS}) + (L_{LSS} * Q_{LSS})]$$

$$\leq 0.9 [(0.35 * 37,500) + (0.36 * 21,000) + (120 * 37.5)]$$

$$16,237.5 \text{ grams VOC} \leq 0.9 (13,125 + 7,560 + 4,500) = 17,563.5 \text{ grams VOC}$$

The total VOC emissions are less than the allowance based on compliant coatings, so the facility is in compliance. The inequality is true, so the facility is in compliance.

1) A facility wishes to average high VOC low solids stain, low VOC low solids stain, low VOC sanding sealer, and a high VOC clear topcoat. The operator obtains the VOC content of each coating—expressed as grams VOC/gram coating solid from the manufacturer and estimates the relative usage for each of these products. The operator also uses some high solids stain and some low VOC topcoat, but the VOC contents of these coatings are at their respective limits, so they are not included in averaging. The facility has actual and potential emissions of less than 25 Tons/year.

| Product | VOC (pounds/gallon) | VOC (pounds/pound solid) | Estimated usage |
|----------------|---------------------|--------------------------|-----------------|
| Clear Topcoat | 6.10 lb/gal | 3.59 lbs/lb solid | 65 gallons/mo. |
| Sanding Sealer | 3.20 lb/gal | 0.60 lbs/lb solid | 155 gallons/mo. |
| Stain 1 | 5.83 lb/gal | Not applicable | 20 gallons/mo. |
| Stain 2 | 1.67 lb/gal | Not applicable | 75 gallons/mo. |

The topcoat contains no water or exempt solvents, and 1.70 pounds solids/gallon.

The sanding sealer contains 25% exempt solvent by volume, so the actual amount of VOC in a gallon of sealer is 2.4 lb. This is because:

$$\text{VOC (lb/gal less water and exempt)} = \text{VOC (lb)} / [1 \text{ gal} - \text{H}_2\text{O (gal)} - \text{VOC}_{\text{exempt}} \text{ (gal)}]$$

The sanding sealer contains 4.0 pounds solid/gallon. The operator calculates usage (Q) in terms of coating solids for the sanding sealer and topcoat:

$$Q_{CT} = 65 \text{ gallons} * 1.70 \text{ pounds solids/gallon} = 110.5 \text{ pounds solids/mo.}$$

$$Q_{SS} = 155 \text{ gallons} * 4.0 \text{ pounds solids/gallon} = 620.0 \text{ pounds solids/mo.}$$

The operator uses the summation equation to calculate total emissions from the use of these coatings:

$$E_{CT} = 3.59 \text{ lb VOC/lb solid} * 110.5 \text{ lbs solids} = 396.69 \text{ lbs VOC}$$

$$E_{SS} = 0.60 \text{ lb VOC/lb solid} * 620.0 \text{ lbs solids} = 372 \text{ lbs VOC}$$

$$E_{LS} = (5.83 \text{ lb/gal} * 20 \text{ gal}) + (1.67 \text{ lb/gal} * 75 \text{ gal}) = 241.85 \text{ lbs VOC}$$

Using the equivalency table, the pounds of coating solids for the high solids coatings, the gallons of product for the low solids stain and the equation, above:

$$\frac{(396.69 + 372 + 241.85)}{1010.54 \text{ lbs VOC}} \leq (L_{CT} * Q_{CT}) + (L_{SS} * Q_{SS}) + (L_{LS} * Q_{LS})$$

$$\leq (1.22 * 110.5) + (1.22 * 620.0) + (4.0 * 95)$$

$$\leq (134.81 + 756.4 + 380) = 1271.21 \text{ lbs VOC}$$

~~The inequality is true, so the facility is in compliance.~~

2) A facility wishes to average ~~low/high~~ VOC low solids stain, low VOC solvent wash, a high VOC ~~sanding clear~~ sealer, a waterborne low VOC clear topcoat and a low VOC pigmented ~~topcoating~~. The operator obtains the VOC contents expressed as grams VOC/grams solid for the coatings and the VOC content of the stain and solvent expressed as grams VOC/liter and estimates the usage of each of these products. ~~The facility has emissions of greater than 25 Tons/year.~~

| Product | VOC (grams/liter) | VOC (grams/gram solid) | Estimated usage |
|---------------------------------|------------------------|--------------------------------|----------------------------------|
| Clear Topcoat | 235 255 g/l | 0.340 g/g solid | 118.0 liters/ day mo. |
| Clear Sanding Sealer | 520 676 g/l | 0.38 2.45-g/g solid | 68.0 liters/ day mo. |
| Pigmented Topcoating | 270 420 g/l | 0.2740 g/g solid | 11.0 liters/ day mo. |
| Low Solids Stain | 90 700 g/l | Not applicable | 57.0 liters/ day mo. |
| Solvent | 400 g/l | Not applicable | 34.0 liters/ day mo. |

The ~~clear~~ topcoat contains 55% water and has ~~315~~60 grams solids/liter. The ~~sanding clear~~ sealer contains ~~1350~~276 grams solids/liter. The pigmented ~~topcoating~~ has ~~390~~4050 grams solids/liter. The solvent wash was reformulated from a methyl ethyl ketone wash at 805 g/l.

The operator calculates usage (Q) in terms of coating solids for the topcoat, sanding sealer and pigmented coating.

$$\begin{aligned}
 Q_{CT} &= 118.0 \text{ liters} * 315 \text{ grams solids/liter} = 37,170 \text{ grams solids/day} \text{mo.} \\
 Q_{CS} &= 68.0 \text{ liters} * 1350 \text{ grams solids/liter} = 91,800 \text{ grams solids/day} \text{mo.} \\
 Q_{PT} &= 11.0 \text{ liters} * 390 \text{ grams solids/liter} = 4,290 \text{ grams solids/day} \text{mo.}
 \end{aligned}$$

The operator uses the summation equation to calculate total emissions from the use of these coatings and solvent:

$$\begin{aligned}
 E_{CT} &= 0.34 \text{ g VOC/g solid} * 37,170 \text{ g solids} = 12,637.8 \text{ grams VOC} \\
 E_{CS} &= 0.38 \text{ g VOC/g solid} * 91,800 \text{ g solids} = 34,884 \text{ grams VOC} \\
 E_{PT} &= 0.27 \text{ g VOC/g solid} * 4,290 \text{ g solids} = 1,158.3 \text{ grams VOC} \\
 E_{LSS} &= 90 \text{ g VOC/liter} * 57.0 \text{ liters} = 5,130 \text{ grams VOC} \\
 E_S &= 400 \text{ g VOC/liter} * 34.0 \text{ liters} = 13,600 \text{ grams VOC}
 \end{aligned}$$

Using the ~~compliance calculation, the grams of VOC from the high solids coatings plus the grams of VOC from the low solids coating and solvent must be less than the allowance equivalency table, the grams of coating solids for the high solids coatings, the liters of product for the low solids stain and solvent, the 0.9 multiplier for larger facilities, and the equation, above:~~

$$\begin{aligned}
 (12,637.8 + 34,884 + 1,158.3 + 5,130 + 13,600) &\leq .9 [(L_{CT} * Q_{CT}) + (L_{CS} * Q_{CS}) + \\
 &\quad (L_{PT} * Q_{PT}) + (L_{LSS} * Q_{LSS}) + (S * Q_S)] \\
 &\leq .9 [(0.35 * 37,170) + (0.36 * 91,800) + (0.25 * 4,290) + (120 * 57.0) + (805 * 34.0)] \\
 67,410.1 \text{ grams VOC} &\leq .9 [(13,009.5 + 33,048 + 1,072.5 + 6,840 + 27,370)] \\
 67,410.1 \text{ grams VOC} &\leq 0.9 [81,340] \text{ grams VOC} = 73,206
 \end{aligned}$$

The total VOC emissions are less than the allowance based on compliant coatings, so the facility is in compliance. ~~The inequality is true, so the facility is in compliance.~~

Bay Area Air Quality Management District

**939 Ellis Street
San Francisco, CA 94109**

**Bay Area Ozone Strategy
Control Measure SS 5**

Regulation 8, Rule 32: Wood Products Coatings Staff Report



July, 2009

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I. EXECUTIVE SUMMARY

This Staff Report summarizes information regarding proposed amendments to Bay Area Air Quality Management District (BAAQMD or the District) Regulation 8, Rule 32: Wood Products Coatings (“Regulation 8-32”). These amendments are proposed to reduce emissions of Volatile Organic Compounds (VOCs) by reducing the VOC content limits for wood product coatings. The District committed to updating this regulation in Control Measure SS-5 in the District’s 2005 Ozone Strategy.

VOCs contribute to the formation of ground-level ozone, which is the principal ingredient in smog. The Bay Area is not in compliance with State and federal ozone standards, and has committed to implement all feasible measures to reduce emissions of ozone precursors, including VOCs. Regulation 8-32 regulates VOC emissions from the wood products manufacturing industry by setting standards for the amount of VOC that can be used in the surface preparation, coatings application, and cleanup for the manufacture of wood products including furniture, bathroom vanities, kitchen cabinets, picture frames, outdoor speakers, architectural millwork, and other wood products.

The proposed rule amendments will reduce the amount of VOC allowed in various types of wood products coatings. District staff is proposing more stringent VOC standards because the performance of low-VOC solvent-based coatings and water-borne wood coating products has improved considerably over the last 10 years, and low-VOC products are now readily available that meet wood products manufacturers’ needs. District staff is proposing reduced VOC limits for sealers, fillers, stains and wash-coats. These proposals are consistent with standards adopted in the Sacramento, San Joaquin Valley, and South Coast air districts in the past few years.

The proposed VOC limits typically require the use of higher solids content and exempt solvents, or water-borne wood coatings to achieve the desired emissions reductions. Compatibility of these coatings to wood substrates has improved significantly since this rule was last amended in 1996. Wood products manufacturers can accommodate the proposed changes with minor adjustments to their manufacturing processes.

VOC emissions from Bay Area wood coating operations are currently estimated to be 1.48 tons per day. The proposed amendments will reduce VOC emissions by 0.45 tons per day, a 30% reduction. The most significant costs of implementation are higher coating costs. A few manufacturers may need to add additional drying trays or ventilation during damp and cool winter months. Cost effectiveness of the proposed amendments is estimated to range in costs from \$7,000 to \$26,000 per ton of reduced VOC, depending on the increased coating costs and if any additional drying facilities are required.

Several amendments are proposed to improve the implementation and enforceability of the rule. These amendments include revisions to the way coatings are classified for purposes of VOC-content regulation, enhanced labeling requirements for wood products coatings, and editorial revisions to the rule language to make it easier for wood coatings users and the public to understand what is required. In addition, amendments to the alternate compliance option of emissions averaging and to the averaging procedure found in the Manual of

Procedures, Volume I are proposed to be consistent with U. S. Environmental Protection Agency policies.

II. BACKGROUND

A. Introduction

The wood products industry in the Bay Area encompasses about 650 businesses in all nine counties, including a wide variety of products, sizes of manufacturing operations, and finishing techniques. These businesses vary from one and two person shops engaged in cabinet making or furniture refinishing to manufacturing facilities employing in excess of 100 people. About 300 businesses in the Bay Area produce millwork and kitchen cabinets. Approximately 200 businesses produce household, office and public building furniture; and cabinetry for electronics, bookcases and display cases. Approximately 400 of these businesses are exempt from the requirements of Regulation 8-32 because they are very small, using less than 20 gallons of wood coatings per year and thus producing very low emissions. Businesses that refinish furniture are also currently exempt because they must use coatings identical or similar to the original coatings used to ensure an appropriate result. More than two thirds of the businesses that manufacture kitchen cabinetry and furniture employ 10 people or fewer.

Businesses in the wood coating industry also vary greatly in the types of coatings they use and the types of finishes they create. Wood coatings encompass a wide variety of materials, and application and finishing techniques, and customers require a significant range in the quality of finishes on products made of wood. A wood product may be coated with no more than a paint or primer or may, as is often the case of high quality furniture finishes, be coated in a multi-step process involving sealer, stain, sanding sealer, more stains and finally topcoats, with surface preparation between many of the steps. Some furniture finishes consist of as many as nine separate application steps. Coating materials must be selected for resistance to common household chemicals for kitchen cabinets, abrasion and "hot print" (hot object) resistance, clarity, color, gloss and film build. The coatings must be compatible, or in some cases, incompatible where the look of the finish depends on different drying rates of solvents. A typical kitchen cabinet will typically have three applications of coatings: stain to color the wood and enhance grain, sanding sealer to seal the wood and build a smooth surface, and a clear topcoat to produce a resistant finish with the desired gloss and clarity. Customer requirements for furniture and custom architectural millwork are different and usually more demanding than those for cabinetry and general wood products. Application techniques vary as well, from spray application to dipping, hand brushing or wiping. Overall, there is a much wider variety of finishing techniques used in the wood coating industry than in any other surface coating industry.

B. Source Description

Wood coating operations present an air quality concern because the coatings contain VOCs, which contribute to the formation of ground-level ozone. Ozone is the primary chemical component in smog, and it creates a health concern for people who breathe it at unhealthy levels, especially in vulnerable populations such as children and people with asthma. Ozone is created when VOCs react with nitrogen oxides in the atmosphere in the presence of heat and sunlight.

Regulation of emissions from coating operations focuses on the amount of VOC present in a coating. The VOCs in the coating evaporate as the coating dries, where they can contribute to the formation of ozone. Coatings regulations therefore impose restrictions on the amount of VOC allowed in various types of coatings, most often stated as a limit on the number of grams of VOC allowed per liter of coating.

Emissions occur when the solvents in the coating evaporate. The process steps may be done in a single spray booth or in a series of booths, separated by flash-off areas and drying ovens. The flash-off area allows a solvent to rise to the surface of the coating before ambient or high temperature curing operations can occur. Typically it is during the flash-off and curing / drying phases that VOC is emitted to the atmosphere. It is reasonable to assume that all of the solvents used in the coating process eventually reach the atmosphere. Very few of the manufacturers in the Bay Area currently use ovens or UV lighting for curing.

Wood coatings are available in two primary categories: high solids coatings and low solids coatings. High solids coatings contain more than 120 grams of solids per liter, and are used to color, protect and beautify the wood. The solids include pigments and resins (binders or film formers, and at times plasticizers) that remain after the coating dries, providing a finished coating and protection. Low solids contain less than 120 grams of solids per liter, and are used to enhance wood grain and provide a slight tint to the wood, but the effects are far more subtle.

Coatings can require only one coat, or several coats, depending on the finished effect needed. Generally, multiple coatings are applied in the following order: stain, wash coat, filler, sealer, and top coat. Each coating typically contains both solids and liquid solvents. The solvent portion may include VOCs, exempt solvents, and water. Conventional (high VOC) coatings normally contain 70 – 80 percent solvent. Water-borne coatings are those that contain water as a solvent or diluent. Merely having water in a coating, however, does not ensure that the coating complies with applicable VOC regulations, as many water-borne coatings also contain VOCs. Coatings with very high content solids (greater than 60%) usually have a reduced VOC content. Exempt solvents are those organic compounds that do not play a significant role in forming ozone. Since they react negligibly with nitrogen oxides in the air to form ozone, they are desirable substitutes for organic compounds that do form ozone (provided they do not have other negative effects, such as toxicity or depletion of stratospheric ozone). The most prominent exempt solvents used in wood coatings are acetone and parachlorobenzotrifluoride. Each of these solvents has played a large role in developing low VOC wood coatings that work effectively to produce the desired wood finishes (although coatings that use acetone as a solvent substitute often require alterations to spray equipment to accommodate the rapid evaporation rate of highly volatile acetone).

Application techniques vary from airless and High Volume Low Pressure (HVLP) spray to hand wiped finishes. This variance in applications can have significant emissions ramifications. Therefore, coating regulations sometimes include requirements regarding application equipment or methods. Coatings applied with compliant application equipment have higher transfer efficiency; consequently, less coating is wasted through overspray. Maximum transfer efficiency and therefore minimum emissions are achieved through hand application methods: brush, wipe, pour and drain or dip and drain. However, the higher transfer efficiency is partially offset by solvent evaporation from open containers used in conjunction with these techniques.

Organic compound emissions from surface preparation and cleanup are easily minimized by good housekeeping practices. Surface preparation of wood products is almost entirely by physical processes such as sanding, and rarely is an organic solvent used. Clean up of equipment can also use a significant amount of solvent. Good housekeeping practices include keeping solvent containers closed when not in use, and using closed solvent recirculation for tool and spray gun cleanup. Strippers are typically only used in furniture refinishing. Most strippers consist of methylene chloride as the active agent, which is toxic, but has been determined to have negligible photochemical reactivity by the US EPA. Exposure to the toxicity of methylene chloride strippers is minimized by the use of gels which reduce evaporation. Nevertheless, refinishers using methylene chloride based strippers are subject to the District's toxic risk assessment requirements before obtaining permits.

C. Current Technology for Reducing VOC Emissions

There are four major categories of control strategies that can be used to reduce VOC emissions from wood coating operations. They are:

1. Low-solvent and water-borne reformulated coatings
2. Add-on control devices
3. Emerging technologies
4. Improved work practices

1. Reformulated Coatings

Nitrocellulose resin lacquer technology had provided the benchmark for expectations of many wood finishers over the last several decades. It was easily applied, inexpensive and provided a beautiful finish. These lacquers also provided the advantage of always being resoluble in their original solvent, so minor "touch-up" repairs to the coating surface could be made easily. However, nitrocellulose resin lacquers were only soluble in large amounts of organic solvent. Reductions in wood coating VOC limits have driven development of alternatives like water-borne technology, and improvement in some solvent-borne technologies like high-solids urethanes and polyester resins. The primary focus for improvement of emissions from wood coatings continues to be development of low VOC coatings, including water based coatings.

Low-solvent Reformulated Coatings

Low-solvent reformulated coatings that contain less solvent will reduce VOC emissions. Currently, low-VOC reformulated coating alternatives are available and can be used for general wood coating applications. The greater challenge is using these coatings for the more demanding applications like furniture and custom wood products manufacture, refinishing, and antiques.

Typically wood finishes must pass a variety of tests to produce an acceptable finish. The first of these tests, and ultimately the most important, is appearance. Conventional nitrocellulose lacquer has unique refractive properties that give richly colored woods a “warm” appearance. Furniture manufacturing in the United States tends to favor this natural appearance. Water-borne finishes have traditionally suffered from an appearance often described as “plastic”, due to the resin systems used. The finishing of fine furniture is different from finishing cabinetry because the desired appearance is different. In furniture, often the intent is to allow the natural beauty of the wood to be accentuated; where cabinetry, particularly kitchen cabinetry, demands a finish that gives the appearance of a protective coat. Some cabinetry is finished to accentuate the natural beauty of the wood, while other finishes conceal the wood.

Secondary but no less important considerations for wood coating concern the protective nature of the coating. Specifically, scratch or mar resistance, hot imprint resistance, and chemical resistance are of concern. Furniture is subject to scrapes and scratches from any object set on a desk, dresser or coffee table. Whereas a deep scratch in any surface coating would be expected to need repair, furniture must be able to withstand minor scratches from everyday use. In addition, since wood is a relatively soft substrate, a coating must be able to have some flexibility. A coating that is overly hard or brittle will shatter from object impact, much like glass. A successful coating must flex slightly to “give” along with the underlying wood. Hot print resistance is the ability of a coating to resist “melting” or softening when a warm object such as a hot cup of coffee comes into contact with the surface. Otherwise, a hot coffee cup will stick to a table or desk. Hot print resistance is not a problem of solvent borne coatings that chemically polymerize, such as urethanes, polyester resins or conversion varnishes. Conventional nitrocellulose lacquers are also heat resistant. However, hot print resistance does tend to be a problem of coatings that form films by coalescence or fusion of adjacent particles as the volatile portion evaporates, which is typical of water emulsified coatings. In addition, coatings must also be resistant to a variety of chemicals, particularly household chemicals such as vinegar (acetic acid), alcohol, water, oils, detergent and ammonia. Products intended for home or office use must meet standardized or company specific tests, often using specific household products, such as hot coffee, cola, grape juice, tomato juice, mustard, lipstick, nail polish remover and ethanol. In addition, a “lipids acid” test has been developed to mimic the effects of human skin oils. All coatings, including the traditional lacquers, show varying degrees of resistance to different chemicals, but many of the water-borne coating have tended to be less resistant to household chemicals than solvent borne coatings.

Low-VOC coatings have been developed that can satisfy these requirements for many wood coating operations. However, even where there are satisfactory low-VOC alternative

coatings available, adopting them is not as simple as just switching to the new coating. Often application processes, drying processes and possibly curing equipment may need to be changed as well.

Water-Borne Reformulated Coatings

Coatings that use water instead of solvent as a medium have also been developed. These water-borne coatings are normally very low in VOC content. The overriding problem water-borne formulations face is the basic interaction between water and the wood. The absorptive nature of wood and the tendency of wood grain to swell when wet is the reason that water-borne technology for wood coatings has been slower to develop than for any other type of substrate. Swelling grain results in the necessity to sand a surface smooth, which in turn removes coating, resulting in the necessity of re-application, and, potentially, renewed swelling. This tends to be a much greater problem with “open grain” woods such as oak, walnut and mahogany than with “closed grain” woods such as birch, cherry and maple. Partial solutions to this problem have been found in modification of application techniques, including humidity control, the use of heat lamps or drying ovens, and control of room air flow. Improvements in the water-borne coatings themselves have made excellent progress over the last several years in greatly reducing, and in some cases eliminating this problem.

Staff discussed the use of coatings with several wood products manufacturers and wood coating suppliers. Some use solvent-based coatings, and some use water-borne (very low-VOC) coatings. The conversion from solvent based coatings to water-borne coatings involves more than simply changing the coating being applied. Water-borne coatings require the use of spray guns designed for spraying water-borne coatings, or existing spray guns must be retrofitted to include stainless steel or plastic parts to prevent rust. Application of water-borne coatings may require additional steps, and new techniques. The greatest concerns expressed are the interaction of the water in the coating with the wood causing grain swelling, and cool and somewhat damp climate in the Bay Area during the winter months which could lead to longer drying times.

While there have been no “breakthrough” improvements in water-borne technology for wood coatings, incremental improvements have enabled several coatings manufacturers to develop water-borne coatings, combined with application and drying techniques that meet the needs of most of their customers.

2. Add-On Abatement Devices

Add-on control devices are incorporated into a process to remove or destroy VOCs after the coating process occurs. There are three add-on control methods: thermal oxidation, catalytic oxidation, and adsorption. Although these add-on controls are effective at eliminating air pollution after it is emitted, the preventive approach of reformulating coatings to reduce VOC content is generally favored because it eliminates the pollution altogether rather than capturing it after the fact. In addition, most abatement devices are relatively costly compared to switching to low-VOC coatings. They also require energy to construct and operate, contributing to the generation of greenhouse gases.

- Thermal oxidation: Thermal oxidation involves incinerating VOCs to prevent them from being emitted. Incinerators are usually operated at a high temperature to efficiently destroy most VOCs found in the exhaust stream. Factors affecting incinerator performance are residence time in the combustion zone and incinerator temperature. Thermal oxidizers can achieve close to 100% VOC destruction for most VOCs. The major concern with thermal oxidation, in addition to capital cost, is that large amounts of fuel (usually natural gas) must be burned to destroy a dilute stream of VOCs, resulting in additional carbon dioxide from use of fuel, as well as the carbon dioxide generated from burning the VOCs. Carbon dioxide is a greenhouse gas, implicated in global warming.
- Catalytic Oxidation: Catalytic oxidation is similar to thermal oxidation, but it introduces a catalyst to dramatically increase the oxidation rate. The catalyst itself is not altered during the reaction. The increased reaction rate can greatly reduce the temperatures required, resulting in significant fuel savings. Catalytic units include higher installation costs and the possibility of catalyst poisoning by sulfur, metals, and phosphorous. Catalytic units can achieve in excess of 95% VOC destruction efficiency. Greenhouse gas emissions are less than with thermal oxidation, but still a concern with this control technology. There is one facility in the Bay Area that uses catalytic oxidation to reduce VOC emissions.
- Adsorption: Adsorption is a mass-transfer operation involving the conversion of VOC from a gas to a liquid or solid. The most common adsorption system uses activated carbon, which is effective in capturing most VOCs through physical adsorption. In addition, activated carbon can be regenerated by steam, nitrogen stripping, or by drawing a vacuum on the carbon. At minimum, two adsorption beds and a regeneration facility are required for an adsorption process. VOC removal efficiency can be as high as 95%. This control technology results in energy consumed in regenerating the activated carbon, as well as creating, transporting, and disposing of the activated carbon – all contributing to greenhouse gas emissions.

3. Emerging Technologies

Emerging technology efforts are underway to improve the techniques that show promise in the wood product coating industry. These developments include advances in spray booth design, new curing methods that involve three dimensional UV curing, and research into bio-filtration that will improve add-on controls. While many of these show potential, there have not been any breakthroughs that revolutionize the development of low VOC coatings, or application or drying techniques.

4. Improved Work Practices

Improved work practices, such as employing high transfer efficiency application methods and reducing the volume of clean-up solvent, can lower VOC emissions by minimizing the quantity of VOC-containing materials used. Most wood product facilities currently employ these practices to minimize VOC emissions.

D. Regulatory History

Regulation 8, Rule 32 was originally adopted in 1983, and has evolved considerably as the technology of low VOC wood coatings has improved. The following describes the significant developments in the rule.

High-Efficiency Application Devices

In 1983, low-VOC technology for wood coatings was not sufficiently developed to incorporate into the rule. Instead, the rule focused on requiring transfer-efficient application equipment. The regulation requires the use of certain coating application equipment to ensure high transfer efficiency. Businesses using spray equipment to coat wood products must use one of the following application methods: airless spray, air-assisted airless spray, electrostatic air spray, or high-volume low-pressure (HVLP) spray. This equipment reduces overspray and thus is more “transfer efficient” than conventional air spray. The use of such equipment reduces VOC emissions because less total coating is required to cover a given object.

VOC-Content Limits for Wood Coatings

The District incorporated VOC content limits into Regulation 8, Rule 32 in 1991. The limits were to be implemented in several stages, culminating in the lowest VOC limits to become effective in 1994 and 1996. The District’s 1991 Amendments to Regulation 8-32 were analogous to South Coast AQMD’s 1988 amendments to its Rule 1136 except for two major aspects.

First, South Coast had exempted 1,1,1 trichloroethane as a VOC, but that resulted in a one ton per day increase in emissions of that stratospheric ozone depleting compound. The 1991 Amendments therefore did not exempt 1,1,1, trichloroethane as a VOC. This approach, although not prohibitory, discouraged the reformulation of coatings using ozone depleters. Although controversial with coating formulators and producers of chlorinated solvents, the rule has been effective in guiding reformulation away from ozone depleting and toxic solvents. Ultimately, this approach was validated when the Clean Air Act Amendments of 1990 required a phase out of ozone depleting solvent production, and production of chlorinated solvents was completely phased out by the end of 1995. Other solvents that have been used in wood coatings were approved as exempt from the VOC limits, based on their very low tendency to form ozone in the atmosphere. Acetone, an example of such a solvent, was exempted from the VOC calculation in late 1995. Some manufacturers used acetone as a substitute for other solvents in lacquers. Other exempted solvents, like parachlorobenzotrifluoride, were also used. The VOC limits that were adopted in 1996 accommodated solvent-borne materials consistent with the existing technology and with use of exempt solvents.

Second, the District created separate regulatory tiers for different types of wood products coating operations to reflect the needs of the various wood product manufacturers and

customers, and the technologies available to meet those needs. The regulation had two tiers applicable to different types of coating operations, in recognition of the fact that different types of wood products have different needs in terms of the quality and durability of their finishes. The most stringent standards apply to general wood products. Somewhat less stringent standards apply to furniture, custom cabinetry and custom architectural millwork in light of the more demanding requirements. In 1996 a sub-category for custom and contract furniture was added. Custom and contract furniture, which typically require the highest quality finishes, was subject to the same VOC limits as furniture, custom cabinetry and custom architectural millwork, but was allowed extra time for implementation to improve both the coatings and application processes. These tiers and the VOC limits established in 1996 remain the VOC limits in the current rule.

As is typical with coating regulations, Regulation 8-32 also allows higher-VOC coatings to be used if the facility captures and controls the emissions from the coatings with an abatement device, such as a thermal oxidizer that incinerates the VOCs before they can be emitted into the atmosphere. One wood product manufacturer in the Bay Area has a thermal oxidizer.

Limited Exemptions for Special Applications

The 1991 Amendments also provided exemptions for refinishing, the production of antique replicas and musical instruments and for certain types of specialty finishes. These exemptions for certain uses do not involve significant emissions and/or are necessary for operations for which suitable low-VOC coatings have not been developed, such as furniture refinishing, crackle lacquers, and leaf finishes. In addition, the following exemptions and limited exemptions are part of Regulation 8, Rule 32.

- Coatings used on wood forms in the foundry industry. The exemption was based on the very small quantity of emissions involved, the exacting tolerances to which the forms must adhere, and the uniquely harsh environment where these coatings must perform.
- General wood products that are subject to extreme environmental conditions such as unusually abrasive or corrosive conditions or temperature extremes. These products, in certain limited circumstances, can be coated with higher-VOC coatings, allowing the use of high solids, hard film-forming coatings such as polyurethanes. Administrative requirements for petitioning for this limited exemption were included.
- Facilities that use and keep on site only low VOC coatings. An exemption from daily recordkeeping requirements was added for these facilities to provide an incentive to fully implement low-VOC technology, and to reduce emissions beyond the regulatory requirements.

Good Surface-Preparation and Cleanup Practices

The regulation also required good housekeeping practices to minimize emissions from solvent storage, surface preparation and cleanup activities.

Averaging VOC Content of Multiple Coatings

More strict VOC content limits can have differing impacts on the wood coating facilities in the Bay Area depending on their specific coating products and finishing techniques. In addition, some companies find low-VOC content coatings are effective with some but not all products. To provide flexibility in achieving compliance, an averaging provision was provided in the rule. Guidance for averaging calculations is included in the Manual of Procedures, Volume I: Enforcement Procedures. A facility can average as many coatings as necessary to achieve compliance. Larger facilities that emit more than 25 tons per year must discount any averaged emissions by 10%. This affects only a few facilities in the Bay Area.

In addition to the flexibility the averaging provision provides, it also encourages the ability to consider different mixtures of coatings that can result in lower emissions. The ability to offset these coatings with higher VOC technologies provides a driving force for facilities to continue experimentation with lower VOC (and water-borne) coatings. Coating systems can be created with overall emissions in mind, rather than compliance with individual categories. This is especially important for products that currently require several steps of surface preparation and several layers of coatings. Many companies continue to support this added flexibility. The Emission Averaging Procedure was included in the District Manual of Procedures to provide the calculation methodology, and provided an enforceable and EPA-approved method to implement averaging. Minor updates are proposed to the Emission Averaging Procedure.

Current Rule

The current rule was adopted in June, 1996 and is a culmination of the improvements described above in application techniques and lower VOC coatings available at that time, exemptions for the truly unique requirements of some wood coatings, and a compliance option of averaging to provide flexibility where needed..

Other District Coatings Rules

In addition to Regulation 8, Rule 32, the District has adopted several other rules applicable to coating operations involving wood products, including:

- Regulation 8, Rule 3, which limits VOC emissions from Architectural Coatings used in on-site coating of buildings or appurtenances (including cabinets finished at the site of installation).
- Regulation 8, Rule 4, which limits VOC emissions from general solvent and surface coating operations. Some minor types of coatings exempt from Rule 32 are subject to Rule 4, such as the stencil coating of wood products.

- Regulation 8, Rule 23, which limits VOC emissions from the application of coating, adhesive and ink to wood flat stock and wood paneling.
- Regulation 8, Rule 51, which limits VOC emissions from Adhesive and Sealant Products by regulating adhesive applied in-shop or on-site (except adhesive used in the manufacture of laminated paneling or other flat stock such as doors).

These rules combine to limit the VOC content of all coatings used on wood, or alternatively, reduce emissions through the use of abatement equipment. The rules also establish standards for abatement efficiency where abatement devices are used, require the use of operating procedures that minimize VOC evaporation, and require recordkeeping to demonstrate compliance.

III. PROPOSED RULE AMENDMENTS

The District proposes the following amendments to Regulation 8, Rule 32.

A. More Stringent Limits for VOC Content

The main purpose of the amendments the District is considering is to reduce the amount of ozone formed as a result of VOC emissions from wood products coatings. The primary mechanism for achieving this goal would be to reduce the amount of VOCs allowed in various types of wood coatings, as several other air districts have done.

The proposed amendments would impose more restrictive VOC limits for wood products coatings. For most coating types, the proposed new limits are 275 g/l (2.3 lb/gal) for high-solids coatings and 120 g/l (1.0 lb/gal) for low-solids coatings. This represents a significant reduction for some coatings. The current limits for most high-solids coatings are 500 or 550 g/l, double the proposed new limits; and the current limit for low-solids coatings is 480 g/l (4.0 lb/gal), four times the proposed new limit.

For three specific types of high-solids coatings where a 275 g/l limit currently would not be feasible, the District is proposing somewhat less stringent limits.

- First, for high-solids stains, the District is proposing a new limit of 350 g/l (2.9 lb/gal). High-solids stains generally require more VOCs to work effectively because solvent is required to provide penetration of the stain into the wood substrate. Four air districts in California have a VOC limit of 240 g/l, but every coating manufacturer has indicated there are on-going adhesion issues with these high solids stains and the subsequent sealing coating. The manufacturing adjustments and subsequent problems with coating adhesion indicate that requiring 240 g/l high solids stains rather than the proposed 350 g/l limit is not technically or economically feasible. Most other air districts in California have set the VOC limit for high solid stains at 350 g/l.
- Second, furniture, custom cabinetry and custom architectural millwork require more demanding finishes in both appearance and durability. Conversion varnish is a

coating that uses a chemical reaction rather than evaporation to adhere to the wood and form a solid protective coating. Conversion varnish has the inherent advantage that it can serve as a sealer as well as a topcoat, so the sealing and topcoat steps can be done in one step. The proposed conversion varnish VOC limit is 550 g/l (4.6 lb/gal) VOC only when used as both a sealer and a topcoat in one coating application. This 550 g/l conversion varnish provides manufacturers more flexibility for coating non-custom furniture, custom cabinetry, and custom architectural millwork. If more than one coating application is used, both the sealer and topcoat must meet the 275 g/l VOC limits. This provides a 550 g/l conversion varnish for a one-step coating process when possible. Staff believes the availability of this 550 g/l conversion varnish will provide a better coating and streamline the manufacturing process with no greater VOC emissions. For general wood products, the conversion varnish VOC limit is proposed to remain at 275 g/l.

- Third, the proposed amendments for clear topcoats used on custom furniture leave the VOC limit at 550 g/l, instead of reducing it to the 275 g/l limit proposed for clear topcoats for other types of wood products. Custom furniture is a very small fraction (~ 4%) of all wood product manufacturing in the Bay Area, and custom furniture must meet very high standards and demanding customer expectations. Staff has found that it is not be feasible at this time to require the use of lower-VOC clear topcoats for custom furniture.

These proposed new VOC-content limits are consistent with limits that have been successfully implemented in other California air districts. Coatings can be manufactured to meet these more restrictive VOC limits by developing solids that are compatible with water, or compatible with the solvency provided by exempt solvents, primarily acetone and perchlorobenzotrifluoride, as well as the solvency provided by the more typical solvents. For the furniture manufacturing industry, which requires very high quality finishes for its products, improvements in topcoats, pigmented coatings, sealers, and stains, coupled with the ability to use a higher VOC conversion varnish, will allow them to meet their customers' demanding requirements while still complying with the more restrictive VOC limits.

B. Revised Regulatory Categorization of Coating Types

The District is also revising the terminology it uses to categorize the various types of coatings. Staff is proposing alternate VOC limits (discussed below, in grams of VOC per gram of solid) to provide flexibility and continue to encourage development of new and innovative low VOC / high solids coatings. These alternate VOC limits require differentiating the broad category of sanding sealers into clear and pigmented sealers. These alternate VOC limits also require differentiating the broad category of pigmented coatings into pigmented topcoats and pigmented primers, sealers, and undercoats. The proposed categories are consistent with South Coast AQMD Rule 1136 that also provides the alternate VOC limits in grams of VOC per gram of solids.

In addition, conversion varnish is a type of coating that had not previously been uniquely identified. Conversion varnish is included as a specific identifiable coating because it can

play an important role in reducing overall VOC emissions because it can serve as both a sealer and topcoat. Multi-colored coatings are also uniquely identified now, because they have a slightly higher VOC limit than pigmented topcoats when expressed as grams VOC per gram of solids, and are becoming somewhat more commonly used. In the general category of low solids coatings, toner was added in with wash-coat to more fully characterize that category of low solids coatings. Definitions for conversion varnish and toner are included in rule.

C. Alternative Compliance Option Based on Solids Content

The District is proposing alternative VOC standards based on the solids content of the coating rather than the overall volume of the coating. The ability to beautify and protect wood is generally dependent on the coating solids content (the resins and pigments that remain after the volatile portion evaporates). The higher the solids content, the less coating is needed to cover the wood. High solids content provides more layer of finished coating (called film build) from a gallon of coating and thereby reduces the total gallons of coating needed, which also reduces the total VOC emissions. Staff is therefore proposing to add an alternative compliance option for high solids coatings in the form of VOC standards expressed as grams of VOC per gram of coating solids. This form of a standard will continue to encourage coating manufacturers to develop high-solids coatings that maximize coverage with minimum solvent evaporation.

To incorporate this alternate compliance option, the proposed amendments would allow coatings to comply with either of the alternative VOC limits, one expressed as grams (or pounds) of VOC per liter (or gallon) of coating, and one expressed as grams (or pounds) of VOC per gram (or pound) of coating solids. The proposed limits for each category of coating are shown in Table 1. The proposed VOC limits are consistent with similar limits in South Coast AQMD Rule 1136, and will not create any unique requirements that could cause a disruption in the coatings industry. The limit for 550 g/l conversion varnish is set at 0.36 grams per gram of solids to ensure only high solids conversion varnish is used as the alternate compliance option, and is more restrictive than similar limit established by Sacramento Metropolitan AQMD Rule 463.

Table 1: Proposed Wood Coating VOC Limits

| Coating Category | Current VOC Limits | Proposed VOC Limits Effective July 1, 2010 | | |
|---|--------------------|--|---|---------------------------------|
| | | General Wood Products | Furniture, Custom Cabinets and Millwork | Custom Furniture |
| High Solids | g/l (#/gal) | g/l (#/gal) or [g/g] | g/l (#/gal) or [g/g] | g/l (#/gal) or [g/g] |
| Clear Sealer | – | 275 (2.3) or [0.36] | 275 (2.3) or [0.36] | 275 (2.3) or [0.36] |
| Clear Topcoat | 275 (2.3) | 275 (2.3) or [0.35] | 275 (2.3) or [0.35] | 550 (4.6) or [0.36] |
| Single Application Conversion Varnish* | – | Considered a sealer or topcoat | 550 (4.6) [0.36]* | Considered a sealer or topcoat |
| Sanding Sealer | 550 (4.6) | See clear or pigmented sealers | See clear or pigmented sealers | See clear or pigmented sealers |
| Pigmented Coating | 275 (2.3) | See clear or pigmented topcoats | See clear or pigmented topcoats | See clear or pigmented topcoats |
| Pigmented Primer, Sealer, and Undercoater | – | 275 (2.3) or [0.21] | 275 (2.3) or [0.21] | 275 (2.3) or [0.21] |
| Pigmented Topcoat | – | 275 (2.3) or [0.25] | 275 (2.3) or [0.25] | 275 (2.3) or [0.25] |
| Multicolored Coating | – | – | 275 (2.3) or [0.33] | 275 (2.3) or [0.33] |
| High Solids Stain | 700 (5.8) | 350 (2.9) or [0.42] | 350 (2.9) or [0.42] | 350 (2.9) or [0.42] |
| Filler | 500 (4.2) | 275 (2.3) or [0.18] | 275 (2.3) or [0.18] | 275 (2.3) or [0.18] |
| Low Solids | g/l (#/gal) | g/l (#/gal) | g/l (#/gal) | g/l (#/gal) |
| Low Solids Stain | 480 (4.0) | 120 (1.0) | 120 (1.0) | 120 (1.0) |
| Toner and Wash-coat | 480 (4.0) | 120 (1.0) | 120 (1.0) | 120 (1.0) |

* When used as sealer and topcoat in one coating application

- g/l = grams VOC per liter of coating
- #/gal = pounds VOC per gallon of coating
- g/g = grams VOC per gram of solids in the coating

Under these proposed limits, a coating would be in compliance if it meets either of the alternative limits. The proposed regulation would create a rebuttable presumption that a coating is in violation if there is evidence that the coating is over either one of the limits. However, the presumption allows the operator to rebut the allegation, that is, show compliance with the alternate standard.

For low-solids coatings, the District is not proposing an alternative standard based on solids content at this time because low solids coatings are used to lightly tint, stain or prepare the surface for further coatings. A thick coating to form a protective film is not the primary objective, so there is no need to establish a VOC limit based on solids content.

D. Enhanced Labeling Requirements

The current rule requires coating manufacturers to designate VOC content on the container or as an accompanying specification expressed as both grams per liter and grams per gram of solids. Effective July 1, 2010, the proposed amendments would require manufacturers, re-packagers and retailers of wood coatings and components to label all containers with the coating VOC content, expressed in grams per liter. These labeling requirements are clarified to provide users the information they need to readily ensure they are using the proper compliant product. These labels will also ensure that District staff inspectors can verify the proper compliant coatings are being used.

In addition, each manufacturer shall provide product data sheets (or an equivalent medium) for their wood coatings and solvents subject to this rule, with sufficient information to determine compliance with the rule. This information shall include VOC contents of each coating and solvent in grams per liter (or pounds per gallon), VOC content in grams per gram (or pounds per pound) of coating solids for high solids coatings, thinning recommendations and VOC content of each coating after thinning.

Any product in the distribution system manufactured before July 1, 2010 may continue to be sold within the District in spite of not meeting the labeling requirements, but the user must meet the new VOC limits for the coating, as applied after manufacturer thinning recommendations.

E. Compliance Option for Other Coating Application Techniques

The current rule provides a list of acceptable coating application techniques and tools. The goal of these techniques and tools is to achieve at least 65% coating transfer efficiency. A concern was raised during the rule development process regarding the surface tension of water-based coatings, which may require different spray equipment or slightly higher air pressure at the air cap for High Volume Low Pressure (HVLP) spray guns. Staff was unable to verify that water-based coatings needed higher air pressure when using HVLP spray guns, but did find that spray equipment technology has improved, and the rule should allow for use of these higher technology spray guns. The proposed amendment establishes the option for other coating application methods that can demonstrate at least 65% transfer efficiency, with written approval by the APCO. The test method for measuring coating transfer efficiency is provided by South Coast Air Quality Management District's test method: "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989." Staff will continue to monitor spray application technology developments to be incorporated into Air District coating rules.

F. Cleanup of Spray Equipment

A proposed amendment establishes new requirements for cleanup of spray equipment and coating supply lines. Facilities must use solvent with less than 25 grams VOC per liter; or

use special practices to clean spray guns that minimize solvent evaporation or have a spray gun washer that meets the requirements of Regulation 8, Rule 16.

G. Emissions Averaging Procedure

Staff proposes amendments to the rule language and revisions to the existing Manual of Procedures, Volume I, Procedure 6 to incorporate requirements the EPA has developed in their guidance document “Improving Air Quality with Economic Incentive Programs” related to emissions averaging. The proposal requires any firm who averages VOC emissions must average to 90% of the VOC level of compliant coatings, and must meet the average for each 24 hour period (daily). Compliance with EPA policies is necessary to include Air District rules into federal State Implementation Plans (SIPs).

H. Exemptions

Staff reviewed the existing exemptions in the rule, and proposes to maintain them without any significant revisions. The exemption for refinishing, furniture replacement and custom replica furniture operations has been retained, because emissions from these activities are relatively minor, and because retention of the finish and look consistent with the original or matching furniture is critical to retaining the value of the furniture.

I. Other Minor Changes

In addition to the substantive revisions outlined above, staff is proposing certain minor editorial changes to the language of the rule and to the way in which the various regulatory provisions are organized within the rule’s overall structure. These include minor language changes to make provisions grammatically consistent; updating SIC codes to NAICS codes; removal of redundant language; moving the provisions establishing the 120 g/l (1.0 lbs/gal) threshold for “high-solids” coatings to stand-alone definitions of “high solids” and “low solids” coatings; and removing redundant language in the definition of “Volatile Organic Compounds” regarding whether VOC-content standards should be applied by including or excluding water and exempt compounds.

IV. EMISSIONS AND EMISSIONS REDUCTIONS

The primary focus of the proposed amendments to 8-32 is the reduction in VOC emissions from wood coatings. These emissions reductions assume the use of transfer-efficient spray application equipment as currently required.

There are approximately 250 business permitted in the District that use a significant amount of wood products coatings. The District inventory is based on information from the 2006

NAICS County Business Patterns sort for the nine Bay Area counties. Emissions estimates include 1.26 tpd estimated VOC emissions from wood coatings, with an additional 0.22 tpd emissions from surface preparation and cleanup. Total emissions from wood coating operations are estimated to be 1.48 tpd.

Emissions expected after implementation of these amendments will total 1.03 tpd, a reduction of 0.45 tpd, or 30%. The most significant reductions come from the proposed reduction of VOC content in sanding sealers. The proposed amendments require both clear and pigmented sealers to reduce VOC content from 550 g/l to 275 g/l for all wood product types. Staff summarized market demand for each category of wood coating based on estimates from several coatings suppliers and distributors. Sealers represent approximately 35% of the wood coatings sold in the Bay Area. The proposed amendments require reductions in high solids stain VOC content from 700 g/l to 350 g/l, and high solids stains are approximately 20% of the coatings market. In addition, use of lower VOC topcoats or conversion varnish for furniture, custom cabinets and custom architectural millwork also will result in a significant reduction in VOC emissions. Additional minor reductions are achieved by reducing the VOC content of low solids stains, washcoats and fillers.

V. ECONOMIC IMPACTS

A. Compliance Costs

The proposed amendments have economic impacts in five potential areas.

1. Higher Coating Costs: Low VOC coatings generally cost more than higher VOC coatings. Coating suppliers and users indicate that low-VOC solvent based and new water based formulations cost approximately 1.3 to 2 times the cost of higher-VOC coatings that comply with the current rule. The higher costs of solvent based coatings come from development of coatings designed to take advantage of solvency from both exempt and conventional solvents. Some of the exempt solvents can be very expensive. The additional cost of water-borne formulations is based on development costs of water-borne resin systems. Using this range of higher coating costs, the cost of reducing VOC emissions appears to range from \$7,000 - \$22,000 per ton.

In high-solids formulations, these costs can be offset by the additional coverage of high-solids materials. Anecdotal information from both coating suppliers and users indicate that higher coating costs can also be offset by reduced costs based on cleanup with water rather than solvent (in some cases), reduced hazardous waste costs, and reduced insurance rates from the reduced storage and use of flammable materials. The cost estimates in this report are conservative, in that they do not integrate any of these potential benefits into the economic analysis, but staff anticipates that such savings will occur.

2. New Spray Application Equipment: In some cases, a facility may need to modify their spray application equipment and manufacturing processes to adapt to the lower VOC coatings. Since all facilities now have compliant spray application equipment, adjustments, modifications or re-configurations of these spray guns when continuing to use solvent based coatings is relatively minor. However, conversion to stainless steel or plastic to accommodate water-borne coatings may be necessary, with costs typically less than \$500 per spray gun.
3. Adjustments to Manufacturing Processes: A facility may have to alter its drying techniques, or adapt to additional sanding and coating steps, when it switches to water-borne or low-VOC solvent based coatings. Some wood manufacturers expressed concern about water-borne coating drying times in the cool damp winter months, but these concerns were expressed by a small minority of the affected parties. Manufacturers of water-borne coatings generally recommend air temperatures of 65-80°F, and less than 80% humidity. These conditions are not common during the winter months in the Bay Area. Additional drying time may have an impact on manufacturing capacity if the facility is constrained by space. Many facilities can modify their production schedules to spray near the end of the day, and dry over-night. Staff polled coatings manufacturers' and distributors' experience in Southern California, and SCAQMD staff, to develop estimates of the impact of these proposed rule amendments on wood products manufacturing here in the Bay Area. Staff estimates that 10% of the wood product manufacturers in the Bay Area will switch to water based coatings, and may have to buy additional drying racks to provide additional drying time. District staff estimates that no more than a few facilities will need to install additional drying equipment, such as enhanced ventilation, ultra-violet lights, or heaters. Estimated costs for additional ventilation fans are \$300 – 500 each, and UV lights or heaters cost \$200 – 300 each. If a facility has extreme space limitations, construction of an additional drying space or room may be necessary. Estimated costs of construction for enhanced drying facilities can range from \$25,000 – \$100,000 in capital costs, with additional costs for electricity and maintenance. Since these facilities use additional energy, they also contribute to greenhouse gas emissions. Although staff does not believe construction of additional drying facilities is likely, staff has included the costs for enhanced drying facilities for two of the larger wood products manufacturing facilities in the economic analysis. Using this range of higher drying costs, the cost of additional drying capacity can add an additional \$1,000 to \$4,000 per ton of VOC reduced.
4. Installation and Operation of Control Equipment: For large facilities where control equipment is feasible based on economy of scale, costs of complying with this rule could include capital to install the control equipment, and then operating and maintenance costs to operate the control equipment. This approach allows the facility to continue to use higher VOC coatings. Although this is an option in the rule, staff does not believe any facility in the Bay Area will choose to install control equipment, rather than adjust their manufacturing processes to use the low-VOC coatings. Discussions with Bay Area users that have already switched to low-VOC

solvent-based or water-borne coatings say they have been pleasantly surprised that the conversion was less troublesome than expected. Cost of capital equipment can be quite high, depending on the size and capacity of the facility. Green Environment, Inc. in San Carlos, a consulting firm to the wood products industry, estimates control equipment costs would range between \$500,000 and \$2 million, and fuel costs to oxidize the VOC is estimated at 0.2 – 1 MMBtu/hr or roughly \$5,000 – \$15,000 per year. Cost effectiveness of this approach to control ranges from \$5000 to \$20,000 per ton of reduced VOC emissions. The costs of control equipment are offset by lower coating costs of high VOC coatings. Staff anticipates that no facility in the Bay Area would need to install control equipment to meet the proposed amendments to this rule.

5. Manufacturers' Labeling Costs. Coatings manufacturers may have to add information to their product labels (or accompanying material). This will be a one-time nominal cost for each specific product.

Costs to comply with the various specific proposed amendments are included in the discussion of the proposed amendments (Section V.A.1-5 above). Cumulatively, the costs for a small (1 – 4 employee) facility switching to low VOC solvent based coatings is less than \$700 per year in extra coating costs. If a small facility switches to low VOC water based coating, the costs are estimated at \$1000 capital, and \$700 per year in extra coating costs. Larger facilities will see proportionally higher increases in coating costs, and capital to upgrade spray equipment. If a large facility needs to set up an additional drying room, capital requirements can total as much as \$100,000 capital, amortized to an impact on operating costs of approximately \$20,000 annually.

B. Incremental Cost Effectiveness

Proposed reductions in the VOC content of wood coatings will require wood product manufacturers to switch to lower VOC solvent based and water based coatings. These coatings cost 1.3 times to twice the cost of the existing high VOC content coatings. Cost of using these higher cost, lower VOC coatings ranges from \$7000 to \$22,000 per ton of reduced VOC emissions. Costs of additional drying capacity can add another \$1,000 to \$4,000 per ton of VOC reduced.

In lieu of converting to lower VOC or water-based coatings, the next increment of VOC reductions can only be achieved by retrofitting control equipment to the existing facilities. As stated above, control equipment is estimated to cost from \$500,000 to \$2,000,000. Amortized capital, fuel and maintenance estimated annual costs range from \$100,000 to more than \$415,000. This approach may be appropriate for the 5 – 8 largest wood products manufacturing facilities in the Bay Area – those that emit more than 5 – 10 tons per year of VOC's. Control equipment is far too expensive, and not cost effective for the remaining 250+ facilities in the Bay Area that emit less than 3 tons per year VOC. Costs are estimated to be \$38,000 per ton of reduced VOC for the largest of these facilities, and \$380,000 per ton of reduced VOC for the average of these facilities. Control equipment is not economically

feasible for 96% of the wood coating facilities in the Bay Area. Consequently, staff has not proposed amendments that require the addition of control equipment.

C. 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.” Bay Area Economics of Emeryville, California has prepared a socioeconomic analysis of the proposed amendments to Regulation 8, Rule 32. The analysis concludes that the affected facilities will not be significantly impacted by costs stemming from the proposed amendments. No impact is expected on small business, or on jobs. Reduction of VOC limits on wood coatings is not expected to have any other adverse impact on the public, or the staff and resources of BAAQMD.

VI. ENVIRONMENTAL IMPACTS

A. CEQA

Pursuant to the California Environmental Quality Act, the District has had an initial study for the proposed amendments prepared by Environmental Audit, Inc. of Placentia, California. The initial study concludes that there are no potential significant adverse environmental impacts associated with the proposed amendments. A negative declaration is proposed for approval by the District Board of Directors. The negative declaration and initial study are available to the public for comment.

B. Greenhouse Gas Emissions

In June, 2005, the District’s Board of Directors adopted a resolution recognizing the link between global climate change and localized air pollution impacts. Climate change, or global warming, is the process whereby emissions of anthropogenic pollutants, together with other naturally-occurring gases, absorb infrared radiation in the atmosphere, leading to increases in the overall average global temperature.

While carbon dioxide (CO₂) is the largest contributor to global climate change, methane, halogenated carbon compounds, nitrous oxide, and other species also contribute to climate change. Gases in the atmosphere can contribute to the greenhouse effect both directly and indirectly. Direct effects occur when the gas itself is a greenhouse gas (GHG). While there is relative agreement on how to account for these direct effects of GHG emissions, accounting for indirect effects is more problematic. Indirect effects occur when chemical transformations of the original compound produce other GHGs, when a gas influences the atmospheric lifetimes of methane, and/or when a gas affects atmospheric processes that alter the radiative balance of the earth (e.g., affect cloud formation).

VOCs have some direct global warming effects; however they may also be considered greenhouse gases due to their indirect effects. VOCs react chemically in the atmosphere to increase concentrations of ozone and may prolong the life of methane. Ultimately, VOCs oxidize to CO₂. The magnitude of the indirect effect of VOCs is poorly quantified and depends on local air quality. Global warming not only exacerbates ozone formation, but ozone formation exacerbates global warming. Consequently, reducing VOCs to make progress towards meeting California air quality standards for ozone will help reduce global warming.

Proposed amendments to Regulation 8, Rule 32 will have very little impact on the wood product manufacturing facilities' overall efficiency, so no significant net change in greenhouse gas emissions is anticipated. The firms that do need fans for extra ventilation or heaters for drying will consume no more than one percent additional energy, and cause slightly higher greenhouse gas generation.

VII. 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 difference between these existing requirements and the requirements imposed by the proposed change.

There are no federal or state air pollution control requirements for wood coatings. Most California air districts currently have VOC emissions requirements for wood product coatings. The proposed amendments to Regulation 8, Rule 32 meet or exceed these other air district standards, with the exception of allowing higher VOC coatings for custom furniture manufacturing, and a VOC limit for high solids stains that is higher than one established in the San Joaquin Valley and three other smaller air districts that has proven to be troublesome during implementation.

VIII. DISTRICT STAFF IMPACTS

Implementation of the proposed amendments is not expected to impose a significant administrative burden for the District, and is expected to clarify and support effective enforcement of these rules. Coating labels with coating VOC limits clearly marked will enable inspectors to more easily verify compliance. However, no net savings in inspector time is anticipated.

IX. RULE DEVELOPMENT PROCESS

The District has developed these proposed amendments and has documented its rationale for them in this staff report. These proposals are based on existing regulations in the Sacramento, San Joaquin Valley, and South Coast air districts. Potential impact on coatings manufacturers and the wood products industry was assessed through e-mail information exchange, discussions with coatings manufacturers, cabinet makers, furniture manufacturers, and antique refinishers, and visits to five different furniture and cabinet coating operations. A public workshop was held at the District office on May 18, 2009. Staff received comments and input during workshop and during the comment period. The following issues were raised, and resolution proposed as follows:

Use of Reactivity in Coating VOC limits

Reactivity refers to a VOCs potential to form ozone once it is released into the atmosphere, which can vary greatly among different types of VOCs. For example, a pound of xylene emitted into the atmosphere has the potential to form up to 7.5 pounds of ozone. By contrast, a pound of acetone emitted to the atmosphere has the potential to form only 0.5 pounds of ozone. Acetone is therefore said to be less reactive than xylene because it has less potential to react to form ozone. The reactivity of a VOC used in a coating therefore provides a much more direct measure of its contribution to ozone formation than does the mass amount of the VOC used. From an air quality perspective, it would be desirable to encourage the use of wood coatings made with low-reactivity VOCs over coatings made with high-reactivity VOCs.

During this rule development process, staff began evaluating the inclusion of a reactivity option into the proposal. Staff solicited input from coating and solvent manufactures, ARB, and US EPA, culminating in the Reactivity Summit hosted by EPA at Research Triangle Park, NC in May, 2009. Staff concluded that developing a reactivity proposal would require more time and resources than were allocated for this rule development process. Near-term emission reductions can be readily achieved by implementing the proposed mass based standards. Staff anticipates including reactivity based coatings rules as a further study measure in the 2009 Clean Air Plan.

Exemption for Tertiary Butyl Acetate (TBAC)

Several wood products coating firms and coating manufacturers recommended including tertiary butyl acetate as an exempt solvent. Staff does not propose to exempt TBAC in the definition of VOC for wood product coatings. This request was evaluated during the recent regulatory development of the December, 2008 amendments to Regulation 8, Rule 45: Motor Vehicle and Mobile Equipment Coating Operations (Rule 8-45). Staff evaluation of the exemption request concluded that because TBAC may potentially pose a cancer risk to humans, and because compliant coatings that do not contain TBAC are already available on the market, TBAC should not be proposed for exemption in the amendments to Rule 8-45. Additional testimony from staff at the California Office of Environmental Health Hazard

Assessment (OEHHA) at the December 3, 2008 hearing regarding Regulation 8, Rule 45 informed the Board's decision not to exempt this compound.

No new toxicological data have been made available to District staff since the adoption of the amendments to Rule 8-45 in December 2008. However, Daniel Pourreau, representing LyondellBasell Chemical Company, the manufacturer of TBAC, referenced a conclusion made by a non-profit group, Toxicology Excellence for Risk Assessment (TERA). Their findings, published April 15, 2009, conclude that a two-year bioassay would be unlikely to add to the understanding of TBAC's toxicity for risk assessment purposes. The panel did state the need for additional research based on existing information to compare the kinetics of TBAC to that of tertiary butyl alcohol, and also to methyl tertiary butyl ether (MTBE), a listed toxic air contaminant.

In 1993, the District Board of Directors adopted a policy directing staff to consider the impacts of negligibly photochemically reactive compounds on a rule-by-rule basis and to not exempt compounds that deplete stratospheric ozone or are toxic. The proposed VOC limits have been in force in some other districts and coatings are available that do not use TBAC to comply.

Staff believes that the precautionary principle applies, which states that when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In addition, an exemption would run contrary to the California Green Chemistry Initiative and proponents of the exemption have not adequately shown that TBAC does not have potentially deleterious health effects. OEHHA staff, whose mission is to protect and enhance public health and the environment by scientific evaluation of risks posed by hazardous substances has not recommended that TBAC be exempted as a VOC.

Limit formaldehyde emissions from wood coatings

During the workshop, and in subsequent comments, it was stated that solvent borne coatings, particularly conversion varnishes and pre-catalyzed lacquers, emit formaldehyde, a listed Toxic Air Contaminant (TAC). One workshop participant suggested the Air District should set limits that allow only water-borne coatings to be used. Formaldehyde (CH₂O) is emitted from many sources, including motor vehicle exhaust, other fuel combustion, smoking, fires, building materials and industrial emissions. It is also an intermediate product in atmospheric chemistry, formed from more complex hydrocarbons and further reacting with oxides of nitrogen to form ozone. Formaldehyde is 22% by weight, or about 14,000 lbs, of the toxic compound emissions in the Air District's Community Air Risk Evaluation inventory (2005). Formaldehyde is 20% of the chronic toxicity-weighted emissions, 4% of the acute toxicity-weighted emissions, but due to relative toxicity of various compounds, only 1% of the cancer-weighted CARE inventory. Over 80% of the cancer-weighted inventory is from diesel particulate matter. Because of the vast number of sources, wood products coating is responsible for no more than 0.05 – 0.2% of formaldehyde emissions.

Conversion varnishes are commonly used on cabinets. Pre-catalyzed lacquers are commonly used on furniture. These types of coatings use resin systems that chemically react and cross-

link during the curing process to provide a strong, hard, chemically resistant coating. During the curing process, these resin systems generate alcohols as a reaction product, and sometimes also generate trace amounts of formaldehyde. The concern for formaldehyde emissions was first recognized in the late 1990's, and has been the focus of two studies conducted by the EPA. Most of the formaldehyde evolves during curing, so the immediate concern is to protect the workers from formaldehyde emissions. A secondary concern is that a minor amount of formaldehyde continues to evolve from the coating for 100 days or more. Consequently, the public could potentially be exposed to some limited formaldehyde emissions from cabinetry or furniture in their homes from the use of these coatings. Such exposure could occur only from conversion varnish or pre-catalyzed lacquer coatings, and only for a limited period of time. In addition, formaldehyde may be emitted from some water-borne wood coatings.

Staff does not have enough information to estimate the extent of formaldehyde emissions from these coating reactions. The proposed amendments are based on achievable VOC limits. Staff does not propose VOC limits that exclude all coatings except water-borne coatings because they are, in staff's view, not yet usable for all types of wood products. Staff has proposed as an administrative requirement (8-32-408) that manufacturers of wood coating products that are used in a significant amount (more than 1000 gallons) in the Bay Area must estimate formaldehyde emissions from their coatings, and provide staff with this information including the rationale behind the estimates. Should the estimates of formaldehyde emissions from these coatings present a significant health risk; staff will work with each coating manufacturer to reduce this risk in a future rulemaking.

Eliminate exemptions for low reactivity solvents, and reduce VOC limits to 250 g/l.

One coating distributor asserts that water based coatings are currently available to satisfy all the needs of the wood products manufacturing industry. This distributor recommends eliminating all exemptions for low reactivity solvents; reducing the VOC limit for general wood products to 200 - 250 g/l effective July 1, 2010; and further reducing the VOC limits to 100 g/l effective July 1, 2012.

Water based wood coatings are effective, and have been used successfully in coating many styles and forms of wood products. Water based wood coating currently represent approximately 10% of the total wood coatings market. However, staff does not believe that water-borne coatings are available for all wood coating operations. Few operators would not switch to water-borne coatings if they were convinced that they were useable for their product line. Water-borne coatings have inherent advantages including less hazardous waste and fewer odors.

A substantial change to eliminate existing exempt coating solvents, and further reduce VOC content limits would be excessively disruptive to the wood products manufacturing industry, and staff is not confident that it is feasible without further study. Staff recommends proceeding with the proposed amendments to Regulation 8-32 to obtain the anticipated VOC reductions while further study is underway.

Raise air pressure on HVLP spray guns to improve transfer efficiency of water based coatings

One coating distributor asserts that water based coatings have higher surface tension, and need higher air pressure at the air cap of High Volume Low Pressure spray guns to improve transfer efficiency. Staff investigated this issue with a spray gun supplier and a spray gun distributor in the area, and found no corroboration of the problem, or that higher air pressure at the HVLP air cap would be the solution. However, staff found that spray gun technology has improved, and additional spray gun types and styles can provide high transfer efficiency. An amendment is proposed to provide the option for other coating application methods that can demonstrate at least 65% transfer efficiency.

Proposed VOC limit for conversion varnish is grams per gram solids is too lenient

One coating supplier pointed out that the proposed VOC alternate limit (stated in grams per gram of solids) for conversion varnishes was higher than necessary. Conversion varnishes tend to be very high in solids content, and the proposed VOC limit would allow very high VOC content. Staff reviewed VOC content per gram of solids data for conversion varnishes and clear topcoats, and established more stringent VOC limits expressed as grams per gram solids.

Proposed emissions averaging requirements do not meet EPA guidelines

EPA – Region 9 staff commented that proposed emissions averaging requirements do not meet EPA guidelines, and would not be adequate to meet the State Implementation Plan (SIP) requirements if 8-32 were submitted for inclusion in the SIP. Emissions averaging requirements have been revised to meet EPA guidelines.

The final proposed amendments, staff report, socio-economic report, CEQA analysis and negative declaration, and public hearing notice are posted for public review.

X. CONCLUSIONS

Pursuant to the California Health and Safety Code Section 40727, before adopting, amending, or repealing a rule the Board of Directors must make findings of necessity, authority, clarity, consistency, non-duplication and reference. The proposal is:

- Necessary to supplement the District's ability to attain the State one-hour and eight-hour ozone standards, and meet the requirements of the Bay Area 2005 Ozone Strategy;
- Authorized by California Health and Safety Code Sections 40000, 40001 and 40702;

- Clear, in that the proposed amended regulation specifically delineates the affected industries, compliance options and administrative and monitoring requirements for industry subject to this rule;
- Consistent with other District 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.

A socioeconomic analysis prepared by Bay Area Economics has found that the proposed amendments would not have a significant economic impact or cause regional job loss. District staff have reviewed and accepted this analysis. A California Environmental Quality Act analysis prepared by Environmental Audit, Inc., concludes that the proposed amendments would not result in adverse environmental impacts. District staff have reviewed and accepted this analysis as well. The CEQA documents have been available for public comments prior to the public hearing. A CEQA Negative Declaration is proposed for adoption by the Board of Directors.

Staff recommends the adoption of the proposed amendments to Regulation 8, Rule 32: *Wood Products Coatings*, and to Manual of Procedures, Volume I, Number 6: Emissions Averaging Procedure; and approval of the CEQA Negative Declaration.

XI. REFERENCES

1. 2006 NAICS County Business Patterns - sorted for the nine Bay Area counties
2. Bay Area Air Quality Management District, Staff Report for Proposed Amendments to Regulation 8, Rule 32: Wood Products Coatings, May 17, 1996
3. Bay Area Air Quality Management District, Staff Report for Proposed Amendments to Regulation 8, Rule 32: Wood Products Coatings, May 1991
4. South Coast Air Quality Management District Rule 1136 - Wood Products Coatings, amended June 14, 1996
5. South Coast Air Quality Management District Rule 442 – Usage of Solvents, amended December 15, 2000
6. South Coast Air Quality Management District, Staff Report for Proposed Amendments to Rule 1136 - Wood Products Coatings, May 23, 1996
7. Sacramento Metropolitan Air Quality Management District, Rule 463 Wood Products Coatings, 09-05-1996
8. Sacramento Metropolitan Air Quality Management District, Rule 463 Wood Products Coatings, Staff Report - Proposed New Rule, September 5, 1996
9. San Joaquin Valley Air Pollution Control District, Rule 4606 Wood Products Coating Operations, amended September 20, 2007
10. Development of Ultra-Low VOC Wood Furniture Coatings, Eddy W. Huang, Center for Emissions Research and Analysis, City of Industry, CA; Larry Watkins, SCAQMD, Diamond Bar, CA; and Robert C. McCrillis, US Environmental Protection Agency, Research Triangle Park, NC., February 1996
11. Assessment, Development and Demonstration of Low VOC Materials for Cleaning Ultraviolet and Electron Beam Curable Coatings and Adhesives, Mike Morris and Katy Wolf, Institute for Research and Technical Assistance, May 2006
12. Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans,” United State Environmental Protection Agency, 40 CFR Part 51.
13. Development of Ozone Reactivity Scales for Volatile Organic Compounds,” William P. L. Carter, Published in the *Journal of the Air and Waste Management Association*, Vol. 44, pages 881-899, January 20, 1994.
14. E-mail and telephone information exchange, and product VOC’s, solvent compositions and compound weighted MIR’s, KaLyn Burmeister, Rudd Company
15. E-mail and telephone information exchange, and product VOC’s, solvent compositions and compound weighted MIR’s, John Crawley, Chemcraft International
16. E-mail and telephone information exchange, and product VOC’s, solvent compositions and compound weighted MIR’s, Madelyn Harding, The Sherwin-Williams Company
17. Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 3, Aerosol Coating Products, Sections 94520-94528.
18. Improving Air Quality with Economic Incentive Programs, United States Environmental Protection Agency, EPA-452/R-01-001, January 2001

Appendix A

Written Comments and Responses

Appendix A: Comments and Responses

Staff received four letters with written comments during the public comment period between July 2 and July 22, 2009:

- One letter from US EPA Region 9, dated July 13, 2009 indicating they had no comments;
- One letter from California ARB, dated July 15, 2009; indicating they had concerns with three specific VOC limits;
- One letter from National Paint and Coating Association, dated July 22, 2009 indicating they had four concerns with required estimation of formaldehyde emissions from wood coatings; and
- One letter from Lyondell Chemical Company, dated July 22, 2009 requesting exemption of tertiary butyl acetate as a volatile organic compound.

California Air Resources Board, July 15, 2009 letter:

- **Comment:** “Section 302: We recommend reducing the Volatile Organic Compounds (VOC) limit for High Solid Stain from 350 grams per liter (g/l) to 240 g/l in order to obtain the same level of stringency as San Joaquin Valley APCD rule 4606.”
- **Response:** Four air districts in California have a VOC limit of 240 g/l for high solids stains. Three of those air districts adopted these requirements in the 1996-1998 timeframe, well before any viable 240 g/l high solid stains were available. San Joaquin Valley air district has recently amended their wood coatings rule, and retained their VOC limit of 240 g/l for high solids stains. Staff review of this VOC limit found that every coating manufacturer contacted has had on-going adhesion issues with these low VOC high solids stains and the subsequent sealer coat. While manufacturing adjustments have been made to mitigate the adhesion problems in San Joaquin Valley, staff does not believe the potential additional VOC emissions of 0.05 tpd justify the manufacturing disruption and trial and error adjustments required to make 240 g/l high solids stains technically feasible. Staff does not find the incremental reduction in VOC content from 350 g/l to 240 g/l to be economically feasible at this time. All other air districts in California have set the VOC limit for high solid stains at 350 g/l. Two of these air districts amended their wood coatings rules in 2008, and retained the high solids stain VOC limit at 350 g/l. Staff will monitor the development of lower VOC high solids stains for possible future rule amendments.
- **Comment:** “Section 303: We recommend reducing the VOC limit for Conversion Varnish from 550 g/L to 275 g/L. This would make the VOC limits in Rule 8-32 comparable to limits in South Coast AQMD rule 1136

and San Joaquin Valley rule 4606. While these rules do not specifically identify a VOC limit for conversion varnishes, this category is covered either under the clear topcoat category or the sealer category which both have a VOC limit of 275 g/l. Additionally, we note that there are low VOC conversion varnishes available that meet the 275 g/l limit.”

- **Response:** Conversion varnish has the inherent advantage that it can serve as a sealer as well as a topcoat, so the sealing and topcoat steps can be done in one step. The proposed conversion varnish VOC limit is 550 g/l (4.6 lb/gal) VOC only when used as both a sealer and a topcoat in one coating application, and only for use in coating furniture, custom cabinetry, and custom architectural millwork. If more than one coating application is used, both the sealer and topcoat must meet the 275 g/l VOC limits. This 550 g/l conversion varnish provides manufacturers more flexibility for coating these more specialized wood products by using a one-step coating process when possible. Staff believes the availability of this 550 g/l conversion varnish will provide a better coating, streamline the manufacturing process, and cause no greater VOC emissions. For general wood products, the 275 g/l limit would apply for conversion varnishes under all circumstances.
- **Comment:** “Section 304: We recommend reducing the VOC limit for Clear Topcoat from 550 g/l to 275 g/l. This would make the VOC limits in Rule 8-32 consistent with South Coast and San Joaquin Valley rules.”
- **Response:** Clear topcoats are generally used on custom furniture. Custom furniture is a very small fraction (~ 4%) of all wood product manufacturing in the Bay Area, and custom furniture must meet very high standards and demanding customer expectations. Customers typically require the warm, clear transparent look of traditional (high VOC) coatings that cannot easily be produced with lower VOC coatings. While other air districts may have chosen to reduce or eliminate such custom furniture manufacturing, the minor reduction in VOC emissions of 0.01 tpd does not justify potentially eliminating this product line from Bay Area manufacturers, or justify the extensive trial and error modification of manufacturing processes to attempt to create custom product finishes with an acceptable look and feel. Staff finds reducing clear topcoat VOC from 550 g/l to 275 g/l products to not be economically feasible at this time, and not consistent with the types of finishes necessary to produce custom furniture. Staff will monitor the development of lower VOC clear topcoats for possible future rule amendments.

National Paint and Coating Association (NPCA), July 22, 2009 letter:

- **Comment:** Formaldehyde Emissions cannot be determined: NPCA raised the concern that formaldehyde emissions cannot be determined from the coating formulation. They claim very elaborate and extremely costly testing would need to be completed for the various environmental conditions (temperature, humidity, time etc.) at the time the coating was

applied and during the cure process. A coating manufacturer does not have this type of information.

- **Response:** Staff is requesting this information to determine the order of magnitude extent of formaldehyde emissions from wood coating curing as a starting point for further investigation to determine if additional measures are required. Staff has found that all coating manufacturers do have information on urea formaldehyde content of their coatings, and most coating manufacturers have conducted testing of formaldehyde emissions during curing. The regulation anticipates a good-faith estimate of formaldehyde emissions based on information readily available. If cure conditions are critical to their estimates, coating manufacturers can estimate either a range of emissions across the variety of application conditions or estimate emissions from a typical application given typical conditions.
- **Comment:** Coating Product usage information is not readily available: NPCA raised the concern that coatings manufacturers may or may not know what products are actually sold and used in the District. This is especially true for coatings that are sold through independent distributors. Manufacturers can really only provide information on what was shipped to the District but this may not reflect the actual use by the ultimate user.
- **Response:** Staff received sales and coating component information from both a national coating manufacturer and a local coating manufacturer based on a simple request of each during the period of proposal development before the workshop. Neither coating manufacturer raised any concern about developing this information. Both were able to provide the information within four weeks. Staff estimates this information is available with less than 8 hours of accounting required, given most businesses enterprise-wide computing systems. While the concern about subsequent redistribution through independent distributors is valid, estimates of this redistribution can be based on population if no better information is available. Manufacturers can work with their distributors to estimate how much of each coating is distributed into the Bay Area air district.
- **Comment:** Conversion Varnishes and Pre-catalyzed Lacquers: NPCA raised the concern that efforts to reduce potential formaldehyde emissions any further (possibly as the result of inaccurate emissions reporting) may result in lower quality conversion varnish and pre-catalyzed lacquer products.
- **Response:** Staff is requesting this information to determine the extent of formaldehyde emissions from wood coating curing. This information will be used to determine what, if any, next steps are required. Should any further investigation be necessary, staff will work with coatings manufacturers to determine next steps and practical alternatives.
- **Comment:** Socio-Economic and CEQA Analysis: "It appears that neither the proposed Final Socio-Economic Impact Study nor the CEQA Negative Declaration include compliance costs/burdens associated with the Wood

Coating Formaldehyde emissions reporting requirement. NPCA believes that the cost/burden associated with estimating and reporting of Formaldehyde emissions is significant and should therefore be included in both the Socio-Economic and CEQA Analysis.”

- **Response:** The request for formaldehyde emission estimates is not related to any physical changes or emissions reductions and therefore will have no environmental impact, so does not need to be addressed in the CEQA analysis. Regarding socioeconomic impacts, staff is requesting readily available product sales information from calendar year 2011, and estimates of formaldehyde emissions based on current technical knowledge of the composition and related emissions information of current products. Staff received similar information from two coatings manufacturers during the workshop period. Staff estimates the one-time cost to obtain and summarize this information is at most two person-days of accounting and technical time, valued at no more than \$2000. Staff is not requesting additional costly formaldehyde emissions testing. Costs for the 15 coatings manufacturers that sell product in the Bay Area will not exceed \$75,000 – far less than the \$1,805,803 estimate for total costs of compliance in the Socio-Economic study that is considered to have no impact on wood coatings manufacturers or small business.

Lyondell Chemical Company, July 22, 2009 letter:

- **Comment:** Include tertiary-butyl acetate as an exempt organic compound: “The purpose of these comments is to request that the AQMD add TBAC (tert-butyl acetate, CAS # 540-88-5) to the list of non-precursor organic compounds in section 8-32-232.” “We would like to ask what additional information the AQMD needs to conclude that TBAC would not pose a “potentially deleterious health effect” if used in wood coatings?” “We respectfully request that the BAAQMD staff conduct its own risk evaluation for the increased use of TBAC in wood coating products and other operations and base its decision to exempt TBAC on this evaluation instead of relying solely on OEHHA.”
- **Response:** The District’s reluctance to exempt TBAC is based on studies suggesting that it may be carcinogenic. Other studies suggest that it is not carcinogenic. There is no consensus on this point. Staff’s view is that the better policy in the face of this uncertainty is to refrain from exempting TBAC, particularly since there are readily available alternative means to produce complying coatings. This issue was addressed during the December 3, 2008 Board Hearing on the adoption of proposed amendments to Regulation 8, Rule 45: Automotive Refinishing and Mobile Equipment Coating Operations.

The District’s position on this issue was again addressed during the Public Hearing on the adoption of proposed amendments to Regulation 8, Rule 3: Architectural Coatings, July 1, 2009. The excerpt below represents the

detailed response to the request to exempt TBAC from the VOC requirements at that time. Staff's position has not changed, and staff does not recommend that TBAC be considered as an exempt VOC in these proposed amendments. The District will continue to follow additional information as it becomes available for TBAC, and when a scientific consensus on its health effects develops, staff will take the appropriate regulatory action.

Excerpt from 8-3: Architectural Coatings Staff Report, Appendix A:

- In January 2006, ARB released a report analyzing potential environmental impacts from a VOC exemption for TBAC. The report includes a thorough discussion of the available data on potential health effects from TBAC as well as responses to comments made by Lyondell and others. In part, the report relies on work done by the California Office of Environmental Health Hazard Assessment (OEHHA). According to OEHHA scientists (Budroe, et al. "Acute Toxicity and Cancer Risk Assessment Values for Tert-Butyl Acetate" *Regulatory Toxicology and Pharmacology, Volume 40, Issue 2, November 2004, Pages 168-176*) "TBAC has been demonstrated to be substantially metabolized to TBA in rats, and a positive TBA genotoxicity study suggests that TBA may cause oxidative DNA damage. TBA has been shown to induce tumors in both rats and mice, and OEHHA has calculated an oral cancer potency factor for TBA. Therefore, TBAC should be considered to pose a potential cancer risk to humans because of the metabolic conversion to TBA." ARB staff evaluated the potential use of TBAC in coatings and concluded that TBAC should not be exempted for architectural and aerosol coatings products based on OEHHA's finding that regarding TBA (the metabolite of TBAC) "...that the data are sufficient to conclude that tert-butanol is an animal carcinogen, and may be considered to pose a potential cancer risk to humans." (ARB, "Staff Report for Proposed Amendments to the Suggested Control Measure for Architectural Coatings," November 2007).

Subchronic studies have identified the kidney as a target organ for TBA in both male and female rats. Some scientific review panels have discounted male rat kidney effects based on the conclusion that the effects result from α -2 μ -globulin accumulation, a mechanism that some say is not relevant to human health. This is true of the NSF International document cited by Lyondell. However, Doi, et al. (Doi, A. et al. " α 2 μ -Globulin Nephropathy and Renal Tumors in National Toxicology Program Studies" *Toxicologic Pathology, Volume 35, Pages 533-540*) looked at the role of α -2 μ -globulin in male rat kidney tumors and concluded, "These results suggest that while α 2 μ -globulin nephropathy may contribute to the renal tumor response, the critical component(s) of the nephropathy most closely associated with the

development of tumors cannot clearly be identified. Thus, reliance on evidence of $\alpha_2\mu$ -globulin-associated nephropathy in determining the potential human hazard from chemicals that cause renal tubular tumor cells in rats may need to be reconsidered.” As a result, it is uncertain whether $\alpha_2\mu$ -globulin nephropathy is the mode of action by which TBA causes tumors in male rats. The NSF document cited by Lyondell recognizes that there is uncertainty, stating that “... based on the chronic studies in rats and mice, ‘the data are inadequate for an assessment of human carcinogenic potential....’”

Some reviewers have also questioned studies showing TBA-related mouse thyroid tumors, again because the tumors may not be relevant to human health. However, according to Budroe et al. (2004), “It should be noted that US EPA has adopted the following science policy positions: 1) it is presumed that chemicals that produce rodent thyroid tumors may pose a carcinogenic hazard for human thyroid, and 2) in the absence of chemical-specific data, humans and rodents are presumed to be equally sensitive to thyroid cancer due to thyroid-pituitary disruption.” (Hill, et al. 1998)

Lyondell previously sought an exemption for TBAC in connection with the Board’s December 2008 adoption of amendments to Regulation 8, Rule 45 (autobody coating). The Board declined to include an exemption in that rule. In its comments on Rule 8-3, Lyondell cites a NSF International document, which dates to 2003 and includes no new information. A Toxicology Excellence for Risk Assessment (TERA) document, however, post-dates the Board’s action on Rule 8-45 and summarizes a January 2009 meeting convened jointly by US EPA and Lyondell to discuss Lyondell-sponsored toxicity studies. The studies were conducted to support Lyondell’s request that EPA exempt TBAC from the US EPA VOC definition. In its comments on Rule 8-3, Lyondell states that the TERA report concludes that the male rat kidney tumors “are not relevant to human risk assessment.” However, Lyondell fails to mention that the report also states that TBA alone may not fully explain the tumor effects and that panelists raised concerns that other active metabolites of TBAC might exist, or that TBAC itself might cause the renal effects. In short, Lyondell’s comments overstate the extent of agreement regarding tumor effects in rats.

Lyondell also argues that even if TBAC has chronic effects, its use in coatings is not likely to result in chronic exposures. In its comments, Lyondell included data on tests performed at the Research Triangle Park Laboratories on the emissions from use of an enamel and a varnish formulated with TBAC on unprimed gypsum and oak, respectively. It is from these data that the statement that the use of TBAC in architectural coatings cannot result in chronic exposure.

However, liver effects have been observed in rats at subchronic exposure levels. These exposure tests also show that the concentrations of TBAC can exceed a recommended acute exposure level (Budroe, et al.(2004)).

The California Health and Safety Code allows each air district the flexibility to decide which compounds from the list of those compounds identified by the US EPA as having negligible photochemical reactivity should be exempted from various District VOC rules. The South Coast AQMD Rule 1113 included a limited exemption for TBAC for industrial maintenance coatings only, which has a VOC limit of 100 g/l in the South Coast. This is because it was believed that the only way to achieve their lower limit was to allow the use of TBAC in the formulation. The VOC limit for the Bay Area for industrial maintenance coatings is 250 g/l, which is currently being achieved without the use of TBAC.

In conclusion, because:

- The available data on of TBAC raise concerns about its health effects;
- The proposed VOC limits in the SCM [ARB's Suggested Control Measure] were developed without reliance on TBAC and the SCM and ARB consumer products rules do not exempt TBAC;
- The staff of OEHHA recommended that we do not exempt TBAC as a VOC¹; and
- There are readily available alternative methods for manufacturing complying coatings.

Staff does not recommend that TBAC be considered an exempt VOC in these proposed amendments.

¹ Testimony provided by John Budroe, Ph.D. of the Office of Environmental Health Hazard Assessment (OEHHA) during the December 3, 2008 Board Hearing on the adoption of proposed amendments to Regulation 8, Rule 45: Automotive Refinishing and Mobile Equipment Coating Operations.

Appendix B

Socio-Economic Analysis

bae



**Socio-Economic Impact Study:
Proposed Amendment to Regulation 8, Rule 32
Wood Products Coatings**

Submitted to:
Bay Area Air Quality Management District

June 3, 2009

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Executive Summary

The Bay Area Air Quality Management District (BAAQMD) regulates emissions from volatile organic compounds (VOC) associated with wood coatings through Regulation 8, Rule 32: Wood Products Coatings (Regulation 8-32). Currently, the BAAQMD is proposing to amend Regulation 8-32, to further reduce VOC emissions from several types of wood coatings to achieve a reduction of 0.45 tons per day (tpd), or about 30 percent, from Bay Area regional wood coating emissions.

Socio-Economic Impacts

In order to estimate the economic impacts of amending Rule 8-32 on the affected industries, this report compares the industry's annualized compliance costs with its profit ratios. The analysis uses data from the BAAQMD, US Census County Business Patterns, the IRS, and Dun and Bradstreet, a private data vendor.

Economic Profile of Affected Industries

The BAAQMD identifies the affected industries as Wood Window and Door Manufacturing (NAICS 321911); Other Millwork (Including Flooring) (NAICS 321918); All Other Miscellaneous Wood Product Manufacturing (NAICS 321999); Wood Kitchen Cabinet and Countertop Manufacturing (NAICS 337110); Upholstered and Non-upholstered Wood Household Furniture Manufacturing (NAICS 337121 & 337122); Institutional Furniture (NAICS 337127); Wood Television, Radio, and Sewing Machine Cabinet Manufacturing (NAICS 337129); Wood Office Furniture Manufacturing (NAICS 337211); Custom Architectural Woodwork and Millwork Manufacturing (NAICS 337212); Showcase Partition Shelving and Locker Manufacturing (NAICS 337215); and Re-upholstery and Furniture Repair (NAICS 811420). According to BAAQMD, there are 647 manufacturers and repairers in the region that would be subject to the proposed amendment. However, as BAAQMD staff indicates that the smallest 389 firms are exempt from the rule, the amendments only affect 258 firms.

Economic Impacts to Affected Industries

IRS data indicate that firms in the wood products coatings sectors, which includes the affected industry, earn 4.9 percent profits on total revenue, resulting in total industry net profits of \$32.7 million. For the 258 firms that use over 20 gallons per year of wood coatings, and will have to comply with the amended regulations, the total profits are \$30.0 million. Compliance costs associated with amending Rule 8-32 were calculated based on data provided by the BAAQMD and California Air Resources Board (ARB), as well as the IRS and Dun & Bradstreet. The total annualized compliance costs will be approximately \$1.8 million. Dividing the compliance costs (\$1.8 million) by annual profits of firms that will have to comply with the amended rules (\$30.0 million) shows that the proposed Rule will result in a 6.1 percent reduction in firm profits, which is below the ARB's 10 percent threshold used to determine cost burden.

Economic Impacts to Consumers

Although the impacts to the industry are not significantly high, consumers will likely bear a portion of the cost burden. Since customers indirectly purchase wood coatings when purchasing cabinets, furniture, and other wood products, they will likely incur higher costs for the goods they purchase that require higher cost coatings. However, as there are currently products on the market in compliance with the proposed amendment, in order to remain competitive, manufacturers may not be able to pass all of the costs on to the consumers and would likely need to absorb some of the associated costs.

Regional Employment, Indirect, and Induced Impacts

Since on average, the proposed amendment to Rule 8-32 would not result in significant economic impacts to firms within the affected industries, and consumers will likely bear some portion of the cost burden, the proposed amendment would not impact affected industry or regional employment.

Impacts to Small Businesses

Using the California Government Code 14835's definition of a small business, approximately 97 percent of all affected firms are small businesses. However, as this analysis projects that compliance costs are small enough not to significantly impact profitability, amending Rule 8-32 would not adversely impact small businesses.

Description of Proposed Rule

Since 1983, the Bay Area Air Quality Management District (BAAQMD) has regulated emissions from volatile organic compounds (VOC) associated with wood coatings through Regulation 8, Rule 32: Wood Products Coatings (Regulation 8-32). Regulation 8-32, which has been amended three times since its adoption, sets VOC limits on all coatings used on wood products, which include furniture, bathroom vanities, kitchen cabinets, picture frames, outdoor speakers, architectural millwork, and others. Regulation 8-32 also establishes standards for wood surface preparation and for the application of coatings.¹

BAAQMD proposes to amend Regulation 8-32 to further reduce VOC emissions from the application of wood coatings by lowering VOC limits for sealers, fillers, wash-coats, and stains to match standards recently set by several other California air districts. In addition to reducing VOC emissions, proposed alternate VOC limits and revised categories allow for flexibility in compliance. The proposed VOC limits for different coating categories are presented in Table 1.

¹ BAAQMD Regulation 8, Rule 32 Workshop Report, 2009.

Table 1: Proposed Coating Categories and VOC Limits

| Coating Category | Proposed VOC Limits | | | | | | | | |
|--|-----------------------|-------|------|--|-------|------|------------------|-------|------|
| | General Wood Products | | | Furniture, Custom Cabinets and Millwork | | | Custom Furniture | | |
| | g/l | #/gal | g/g | g/l | #/gal | g/g | g/l | #/gal | g/g |
| High Solids | | | | | | | | | |
| Clear Sealer | 275 | 2.3 | 0.36 | 275 | 2.3 | 0.36 | 275 | 2.3 | 0.36 |
| Clear Topcoat | 275 | 2.3 | 0.35 | 275 | 2.3 | 0.35 | 550 | 4.6 | 0.70 |
| Conversion Varnish | 275 | 2.3 | 0.60 | 550 | 4.6 | 1.20 | 550 | 4.6 | 1.20 |
| Sanding Sealer | - | - | - | - | - | - | - | - | - |
| Pigmented Coating | - | - | - | - | - | - | - | - | - |
| Pigmented Primer, Sealer, & Undercoater | 275 | 2.3 | 0.21 | 275 | 2.3 | 0.21 | 275 | 2.3 | 0.21 |
| Pigmented Topcoat | 275 | 2.3 | 0.25 | 275 | 2.3 | 0.25 | 275 | 2.3 | 0.25 |
| Multicolored Coating | - | - | - | 275 | 2.3 | 0.33 | 275 | 2.3 | 0.33 |
| High Solids Stain | 350 | 2.9 | 0.42 | 350 | 2.9 | 0.42 | 350 | 2.9 | 0.42 |
| Filler | 275 | 2.3 | 0.18 | 275 | 2.3 | 0.18 | 275 | 2.3 | 0.18 |
| Low Solids | | | | | | | | | |
| Low Solids Stain | 120 | 1.0 | - | 120 | 1.0 | - | 120 | 1.0 | - |
| Toner and Wash-coat | 120 | 1.0 | - | 120 | 1.0 | - | 120 | 1.0 | - |

Notes:

(a) Measurements:

g/l = grams VOC per liter of coating

#/gal = pounds VOC per gallon of coating

g/g = grams VOC per gram of solids in the coating

(b) Coating compliance may met by meeting any alternative limits.

Sources: BAAQMD; BAE, 2009.

In addition to setting VOC limits based on coating volume, the proposed amendments would allow for alternative VOC standards based on the coating solids content. The proposed category revisions, shown above, split the original category of sanding sealers into clear and pigmented sealers; in addition, pigmented topcoats are differentiated from pigmented primers, sealers, and undercoats. Manufacturers would be able to comply with VOC limits by meeting either the limits listed in grams per liter (or pounds per gallon), or the alternative limits listed in grams per gram solid.

These amendments would make Regulation 8-32 consistent with the categories and limits of South Coast AQMD Rule 1136, and manufacturers would need to begin producing compliant products by 2010. Currently, VOC emissions from the application, surface preparation, and cleanup of wood coatings in the Bay Area total 1.48 tons per day (tpd). The proposed amendments to Rule 8-32 would achieve a reduction in VOC emissions of 0.45 tpd or about 30 percent of the Bay Area's wood coating emissions.

Regional Trends

This section provides background information on the demographic and economic trends for the San Francisco Bay Area, which represents the BAAQMD’s District. The San Francisco Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. Regional trends are compared to statewide demographic and economic patterns since 2000, in order to show the region’s unique characteristics relative to the State.

Regional Demographic Trends

Table 2 shows the population and household trends for the nine county Bay Area and California between 2000 and 2009. During this time, the Bay Area’s population increased by 8.7 percent, compared to 13 percent in California. Likewise, the number of Bay Area households grew by 7.7 percent, compared to a 10.7 percent statewide increase.

Table 2: Population and Household Trends, 2000-2009

| Bay Area (a) | 2000 | 2009 (est.) | Total Change 2000-2009 | Percent Change 2000-2009 |
|-------------------------------|-------------|--------------------|-----------------------------------|-------------------------------------|
| Population | 6,784,348 | 7,375,678 | 591,330 | 8.7% |
| Households | 2,465,915 | 2,656,487 | 190,572 | 7.7% |
| Average Household Size | 2.75 | 2.78 | | |
| California | | | | |
| Population | 33,873,086 | 38,292,687 | 4,419,601 | 13.0% |
| Households | 11,504,315 | 12,733,414 | 1,229,099 | 10.7% |
| Average Household Size | 2.87 | 2.94 | | |

Note:

(a) Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

Sources: California, Department of Finance, 2009; BAE 2009.

The slower growth in the Bay Area is related to its relatively built out environment, compared to the state overall. While Central Valley locations, such as the Sacramento region, experienced large increases in the number of housing units, the Bay Area, which was relatively built out before the housing boom, only experienced moderate increases in housing units.

Regional Economic Trends

In the five-year period between the third quarters of 2003 and 2008, the Bay Area's economic base grew by 4.7 percent, increasing from 3.18 million jobs to 3.33 million jobs. This growth closely reflects the slightly slower growth of the State, which grew by 4.6 percent in the same time period.

Manufacturing, Retail Trade, and Professional, Scientific, and Technical Services, the largest private (non-government) sectors in the Bay Area's economy, each constituted 10 percent of the region's total jobs in 2007. Over the five-year period the Manufacturing sector lost three percent of its jobs, while the Retail Trade sector was relatively stagnant, experiencing no growth. However, during this period, the Professional, Scientific, and Technical Services sector grew by 10 percent.

Statewide, the Manufacturing sector declined by seven percent while Retail Trade and Professional, Scientific, and Technical Services grew by three and 19 percent, respectively. Overall, the Bay Area's economic base reflects the state's base, sharing a similar distribution of employment across sectors. Table 3 shows the jobs by sector in 2003 and 2008. The affected industries, consisting of millwork and wood furniture manufacturing, belong to the Manufacturing sector, with some furniture repair jobs categorized under Other Services. While manufacturing represents a relatively large portion of the region's job base, employment contracted between 2003 and 2008.

Table 3: Jobs by Sector, 2003-2008 (a)

| Industry Sector | Bay Area | | | | | California | | | | |
|---|------------------|-------------|------------------|-------------|-----------------------|-------------------|-------------|-------------------|-------------|-----------------------|
| | Q3 2003 (b) | | Q3 2008 (c) | | % Change 2003-2008 | Q3 2003 (b) | | Q3 2008 (c) | | % Change 2003-2008 |
| | Jobs | % Total | Jobs | % Total | | Jobs | % Total | Jobs | % Total | |
| Agriculture, Forestry, Fishing and Hunting | 19,710 | 1% | 20,990 | 1% | 6% | 435,282 | 3% | 448,097 | 3% | 3% |
| Mining | 1,688 | 0% | 1,060 | 0% | -37% | 20,308 | 0% | 26,791 | 0% | 32% |
| Construction | 182,168 | 6% | 181,383 | 5% | 0% | 806,164 | 5% | 793,114 | 5% | -2% |
| Manufacturing | 358,498 | 11% | 346,556 | 10% | -3% | 1,532,370 | 10% | 1,427,559 | 9% | -7% |
| Utilities | 4,805 | 0% | 6,425 | 0% | 34% | 55,648 | 0% | 58,723 | 0% | 6% |
| Wholesale Trade | 124,222 | 4% | 128,846 | 4% | 4% | 647,417 | 4% | 707,968 | 5% | 9% |
| Retail Trade | 331,679 | 10% | 331,971 | 10% | 0% | 1,574,968 | 11% | 1,622,336 | 10% | 3% |
| Transportation and Warehousing | 51,741 | 2% | 54,406 | 2% | 5% | 407,146 | 3% | 430,513 | 3% | 6% |
| Information | 116,002 | 4% | 116,223 | 3% | 0% | 463,621 | 3% | 471,166 | 3% | 2% |
| Finance and Insurance | 149,705 | 5% | 135,911 | 4% | -9% | 615,069 | 4% | 568,835 | 4% | -8% |
| Real Estate and Rental and Leasing | 61,896 | 2% | 58,316 | 2% | -6% | 275,684 | 2% | 276,044 | 2% | 0% |
| Professional, Scientific, and Technical Services | 274,606 | 9% | 346,065 | 10% | 26% | 906,003 | 6% | 1,078,251 | 7% | 19% |
| Management of Companies and Enterprises | 67,300 | 2% | 60,664 | 2% | -10% | 254,353 | 2% | 204,893 | 1% | -19% |
| Administrative and Waste Services | 180,712 | 6% | 187,467 | 6% | 4% | 958,972 | 6% | 958,083 | 6% | 0% |
| Educational Services | 60,980 | 2% | 72,604 | 2% | 19% | 217,082 | 1% | 255,155 | 2% | 18% |
| Health Care and Social Assistance | 282,842 | 9% | 306,056 | 9% | 8% | 1,269,971 | 9% | 1,408,635 | 9% | 11% |
| Arts, Entertainment, and Recreation | 52,850 | 2% | 55,341 | 2% | 5% | 247,286 | 2% | 263,383 | 2% | 7% |
| Accommodation and Food Services | 255,817 | 8% | 287,897 | 9% | 13% | 1,174,673 | 8% | 1,325,229 | 9% | 13% |
| Other Services, except Public Administration | 139,584 | 4% | 160,219 | 5% | 15% | 652,212 | 4% | 745,729 | 5% | 14% |
| Unclassified | 231 | 0% | 11,789 | 0% | 5003% | 46,183 | 0% | 68,657 | 0% | 49% |
| Government (d) | 411,273 | 13% | 419,880 | 13% | 2% | 2,218,003 | 15% | 2,315,150 | 15% | 4% |
| Subtotal | 3,128,309 | 98% | 3,290,069 | 99% | 5.2% | 14,778,415 | 100% | 15,454,311 | 100% | 4.6% |
| Additional Suppressed/Confidential Employment (e) | 53,878 | 2% | 41,338 | 1% | | 1 | 0% | 7 | 0% | |
| Total, All Employment | 3,182,187 | 100% | 3,331,407 | 100% | 4.7% | 14,778,416 | 100% | 15,454,318 | 100% | 4.6% |

Notes:

(a) Includes all wage and salary employment covered by unemployment insurance.

(b) Represents employment for third quarter, 2003.

(c) Represents employment for third quarter, 2008.

(d) Government employment includes workers in all local, state and Federal sectors, not just public administration. For example, all public school staff are in the Government category.

(e) Employment for some industries were suppressed by EDD due to the small number of firms reporting in the industry for a given jurisdiction.

Sources: California Employment Development Department, 2009; BAE, 2009.

Affected Industries

According to the US Census, the Bay Area had 647 firms working in millwork, wood manufacturing, and wood repair in 2006. These firms accounted for a significant number of jobs in the Bay Area, totaling between 6,231 and 7,938 jobs (See Table 4). Wood Kitchen Cabinet and Countertop Manufacturing firms hold the greatest concentration of affected jobs, with over 2,300 jobs in 2006.

Although the proposed amendment could also impact wood coating distributors, furniture retailers, and contractors, this analysis does not consider the impacts to these firms. For distributors, retailers, and contractors, sales from wood products and wood coatings represent a small portion of revenues. Contractors tend to earn the majority of their revenues from labor and materials costs. In addition, distributors and retailers tend to mark up their products using the standard method of charging consumers roughly double their cost, each, so higher costs could translate into higher revenues.

Table 4: Profile of Affected Industries, 2006

| NAICS | Industry Description | Employment | Number of Establishments by Size of Workforce | | | | | | | Total |
|--------|--|----------------------|---|------------|-----------|-----------|-----------|----------|----------|------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250+ | |
| 32191 | Millwork | 567 - 1,260 | 26 | 15 | 18 | 10 | 1 | 0 | 0 | 70 |
| 33711 | Wood Kitchen Cabinet and Countertop Manufacturing | 2,378 - 2,476 | 125 | 51 | 26 | 23 | 3 | 2 | 1 | 231 |
| 337121 | Upholstered Household Furniture Manufacturing | 363 - 458 | 18 | 11 | 5 | 2 | 3 | 0 | 0 | 39 |
| 337122 | Nonupholstered Wood Household Furniture Manufacturing | 528 - 724 | 43 | 11 | 7 | 7 | 1 | 0 | 0 | 69 |
| 337129 | Wood Television, Radio, and Sewing Machine Cabinet Manufacturing | 46 - 103 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 7 |
| 337211 | Wood Office Furniture Manufacturing | 611 - 649 | 5 | 3 | 3 | 1 | 1 | 3 | 0 | 16 |
| 337212 | Custom Architectural Woodwork and Millwork Manufacturing | 607 - 863 | 13 | 6 | 7 | 7 | 3 | 1 | 0 | 37 |
| 337215 | Showcase Partition Shelving and Locker Manufacturing | 480 - 755 | 19 | 4 | 7 | 5 | 2 | 1 | 0 | 38 |
| 81142 | Reupholstery and Furniture Repair | 651 | 98 | 27 | 9 | 6 | 0 | 0 | 0 | 140 |
| | Affected Industries Total | 6,231 - 7,938 | 351 | 129 | 83 | 62 | 14 | 7 | 1 | 647 |

Sources: US Census; BAE, 2009.

Socio-Economic Impacts

This section discusses the methodology, economic profile of the affected industry, annualized compliance costs, and estimates of the economic impacts associated with the proposed amendment to Rule 8-32.

Methodology

In order to estimate the economic impacts of amending Rule 8-32 on the affected industry, this report compares the affected industry's annualized compliance costs with its profit ratios. The analysis uses data from the BAAQMD, US Census County Business Patterns, the IRS, and Dun and Bradstreet, a private data vendor.

The BAAQMD identifies the following industries as affected by the proposed amendments to reduce emissions of Volatile Organic Compounds (VOCs) by reducing the VOC content requirements for wood product coatings: Wood Window and Door Manufacturing (NAICS 321911); Other Millwork (Including Flooring) (NAICS 321918); All Other Miscellaneous Wood Product Manufacturing (NAICS 321999); Wood Kitchen Cabinet and Countertop Manufacturing (NAICS 337110); Upholstered and Non-upholstered Wood Household Furniture Manufacturing (NAICS 337121 & 337122); Institutional Furniture (NAICS 337127); Wood Television, Radio, and Sewing Machine Cabinet Manufacturing (NAICS 337129); Wood Office Furniture Manufacturing (NAICS 337211); Custom Architectural Woodwork and Millwork Manufacturing (NAICS 337212); Showcase Partition Shelving and Locker Manufacturing (NAICS 337215); and Re-upholstery and Furniture Repair (NAICS 811420). According to the 2006 NAICS County Business Patterns, there are 647 manufacturers and repairers in the region; however, BAAQMD records identify approximately 627 wood product coatings firms in the Bay Area that would be subject to the proposed amendment. Of these 627 businesses, about 60 percent (369) consume less than 20 gallons of wood coatings per year and would be exempt from the proposed compliance rules.

Economic Profile of Affected Industries

As shown in Table 5, according to Dun & Bradstreet data, the average firm in the wood products coatings sector has approximately seven employees and average annual sales of approximately \$701,482.

Table 5: Wood Coating Business Sales

| # of Employees | Number of Businesses | Average Annual Sales (a) | Average # of employees | Total Sales | Total Employees |
|-----------------------|-----------------------------|---------------------------------|-------------------------------|----------------------|------------------------|
| 1-4 | 414 | \$147,841 | 2 | \$61,148,307 | 748 |
| 5-9 | 90 | \$505,588 | 6 | \$45,286,261 | 543 |
| 10-19 | 50 | \$1,421,414 | 12 | \$71,148,351 | 577 |
| 20-49 | 55 | \$3,925,295 | 28 | \$217,161,189 | 1,549 |
| 50-99 | 11 | \$10,495,877 | 58 | \$110,603,606 | 606 |
| 100-249 | 5 | \$12,700,000 | 163 | \$66,915,126 | 856 |
| 250+ | 3 | \$35,700,000 | 500 | \$94,050,000 | 1,317 |
| TOTAL | 627 | \$1,062,700 | 10 | \$666,312,839 | 6,196 |

Notes:

(a) Represents a 30 percent sample of the wood coating businesses in the Bay Area.

SIC codes 2431, 2434, 2511, 2512, 2517, 2541, 7641

Sources; BAAQMD, 2009; Dun and Bradstreet, 2009; BAE, 2009.

The majority of wood products coatings firms (414 out of the total 627, or 66 percent) are small businesses, employing between one and four employees. For these firms, the average number of employees is two and the average annual sales are calculated to be \$147,800.

Based on IRS data on total sales and net income for the Manufacturing categories of Wood Product and Furniture and Related Product, firms average a 4.9 percent rate of return on total sales. Table 6 presents the profits for wood products coating manufacturers of varying sizes based on a 4.9 percent rate of return.

Table 6: Profits of Wood Coating Manufacturers

| # of Employees | Number of Businesses | Average Annual Sales per Firm | Avg. Return on Sales | Average Profits per Firm | Total Profits |
|-----------------------|-----------------------------|--------------------------------------|-----------------------------|---------------------------------|----------------------|
| 1-4 | 414 | \$147,841 | 4.9% | \$7,262 | \$3,003,492 |
| 5-9 | 90 | \$505,588 | 4.9% | \$24,834 | \$2,224,378 |
| 10-19 | 50 | \$1,421,414 | 4.9% | \$69,817 | \$3,494,676 |
| 20-49 | 55 | \$3,925,295 | 4.9% | \$192,803 | \$10,666,558 |
| 50-99 | 11 | \$10,495,877 | 4.9% | \$515,538 | \$5,432,646 |
| 100-249 | 5 | \$12,700,000 | 4.9% | \$623,801 | \$3,286,748 |
| 250+ | 3 | \$35,700,000 | 4.9% | \$1,753,518 | \$4,619,563 |
| TOTAL | 627 | \$666,312,839 | 4.9% | \$32,728,060 | \$32,728,060 |

Sources: Dun & Bradstreet; IRS; BAE, 2009.

As Table 6 shows, wood products coatings manufacturers have annual net profits ranging from \$7,300 to \$1.8 million, depending on the firm's size, with total annual profits from all businesses equaling

approximately \$32.7 million.²

Description of Compliance Costs

There are several methodologies to determine the compliance costs associated with amending Rule 8-32. The BAAQMD's Workshop Report specifies that there are a few different ways that different businesses can comply with the new regulation, including switching to low-VOC solvent based or switching to new water based formulated coatings, and modifying spray application equipment, and potentially installing new drying systems.

Ongoing Costs

BAAQMD staff estimate that 80 percent of all affected firms will switch to low-VOC solvent based coatings, while 10 percent will switch to water-based coatings.³ The 90 percent of firms that switch coatings will have annual ongoing compliance costs, as low-VOC coatings typically carry higher costs than higher-VOC coatings. The BAAQMD reports that low-VOC solvent-based and new water-based formulations will cost about 1.3 to two times as much as the currently used higher-VOC coatings. The cost effectiveness of switching coatings to reduce VOC emissions ranges from \$7,000 to \$22,000 per ton of VOCs reduced. Using an average of \$14,500 per firm, the average annual cost per pound of VOC reduced is calculated to be \$7.25.

Capital Costs

Those firms that choose to switch to water-based coatings will also incur capital compliance costs, as they will need to adjust and reconfigure their spray guns to be compatible with water-based coatings. In addition, some firms may determine that they cannot meet the new requirements unless they invest in new drying equipment. However, BAAQMD staff indicated that only a few firms would find purchasing new drying equipment necessary.

Spray Gun Equipment

BAAQMD estimates that five percent of all affected firms will adjust and reconfigure their spray guns in response to Rule 8-32, and that the capital costs for modifying spray equipment will likely range from \$500 per spray gun and total up to \$5,000 per facility. This analysis assumes that the cost to modify spray equipment will increase with firm size (number of employees), and that capitalization of new equipment will occur over the first five years. Thus, the annualized costs of modifying spray equipment would range from \$150 to \$1,000.

Drying Equipment

Finally, a few firms that switch to water-based coatings may find that they also need to experiment with drying equipment in order to meet Rule 8-32 requirements. These firms will comply by reducing their manufacturing capacity or by installing control equipment. Because of the high costs and economy of scale necessary to install this equipment, this compliance method is usually only used by a very few large

² It should be noted that since profit ratios come from the IRS, these profit rates represent the profit rate on net taxable income after depreciating capital equipment and writing down bad debt.

³ According to BAAQMD staff, approximately 10 percent of firms are already compliant, using water-based coatings.

facilities. BAAQMD estimates that only the largest two percent of the affected 258 largest businesses will choose this compliance method. The cost to install new systems will cost approximately \$100,000, in addition to increased utility expenses. Annualizing the equipment over a five year period give an annual compliance cost estimate of \$20,000, plus an additional \$5,000 in increased annual utility costs.⁴ Again, it should be noted that most firms will find that they can meet new regulations without new drying equipment.

Total Compliance Costs

Replacing spray equipment and installing new control equipment account for total capital costs. The total compliance costs for the 258 complying regional firms were calculated by multiplying the number of businesses times their average annual emissions (pounds of VOC) times the average annual cost per pound of VOC reduced (assuming that 95 percent of firms will comply by switching coatings) times the average percentage of VOC reduced (30 percent, according to the BAAQMD). This total is then added to the total annualized capital costs, in this case the additional costs of modifying spray equipment for five percent of all firms, or the cost of new drying equipment for the largest firm.

Table 7 presents a detailed estimate of the compliance costs to manufacturing firms using the methodology described above. As Table 7 shows, the total annualized compliance costs to manufacturing firms would be approximately \$1.8 million.

⁴ BAAQMD staff.

Table 7: Total Annualized Compliance Costs

| ALL AFFECTED FIRMS | | | | |
|---------------------------|-----------------------------|---|---|-------------------------------|
| # of Employees | Number of Businesses | Avg. Annual Emissions per Firm (lbs. of VOC) | Total Annual Emissions (lbs. of VOC) | Total Compliance Costs |
| 1-4 | 45 | 292 | 13,030 | \$26,656 |
| 5-9 | 90 | 978 | 87,631 | \$178,056 |
| 10-19 | 50 | 1,861 | 93,161 | \$190,092 |
| 20-49 | 55 | 4,521 | 250,132 | \$507,605 |
| 50-99 | 11 | 9,285 | 97,841 | \$198,907 |
| 100-249 | 5 | 26,239 | 138,253 | \$280,652 |
| 250+ | 3 | 80,737 | 212,697 | \$455,234 |
| Total | 258 | | 892,746 | \$1,837,203 |

| FIRMS ONLY SWITCHING COATINGS | | | | | |
|--------------------------------------|---------------------------------|--|--|---------------------------------------|---|
| # of Employees | Number of Businesses (a) | Avg. Annual Emissions Reduced (lbs. of VOC) | Avg. Annual Cost per lb. of VOC reduced (a) | Avg. Percentage of VOC reduced | Subtotal: Annual Costs of Switching Coatings |
| 1-4 | 40 | 3,635 | \$7.25 | 31% | \$26,356 |
| 5-9 | 81 | 24,449 | \$7.25 | 31% | \$177,256 |
| 10-19 | 45 | 25,992 | \$7.25 | 31% | \$188,442 |
| 20-49 | 50 | 69,787 | \$7.25 | 31% | \$505,955 |
| 50-99 | 9 | 27,298 | \$7.25 | 31% | \$197,907 |
| 100-249 | 5 | 38,573 | \$7.25 | 31% | \$279,652 |
| 250+ | 2 | 59,343 | \$7.25 | 31% | \$430,234 |
| SUBTOTAL | 232 | 249,076 | | 31% | \$1,805,803 |

| FIRMS SWITCHING COATINGS AND REPLACING CAPITAL EQUIPMENT | | | | |
|---|---------------------------------|--|---|--|
| # of Employees | Number of Businesses (b) | Total Annualized Capital Costs per Firm | Subtotal: Annual Costs of Switching Coatings | |
| 1-4 | 2 | \$150 | \$300 | |
| 5-9 | 4 | \$200 | \$800 | |
| 10-19 | 3 | \$550 | \$1,650 | |
| 20-49 | 3 | \$550 | \$1,650 | |
| 50-99 | 1 | \$1,000 | \$1,000 | |
| 100-249 | 1 | \$1,000 | \$1,000 | |
| 250+ | 1 | \$25,000 (c) | \$25,000 | |
| SUBTOTAL | 15 | | \$31,400 | |

Notes:

- (a) Assumes 90% of all firms will switch to higher cost coatings
- (b) Assumes 5% of all firms will replace spray equipment.
- (c) Assumes the largest firm will install new drying equipment and not switch to higher cost coatings.

Sources: Dun & Bradstreet; IRS; California Air Resources Board; BAAQMD; BAE, 2009.

Affected Industry Economic Impact analysis

In order to determine the impacts of facilities of various sizes, this analysis uses average revenue estimates from Dun & Bradstreet, in conjunction with IRS profit ratios, to determine whether the estimated annualized compliance costs would result in profit reductions of 10 percent or more. The California Air Resources Board (ARB) uses the 10 percent threshold as a proxy for burden, where profit reductions greater than 10 percent indicate a potential for significant adverse economic impacts. Table 8 shows the annualized compliance costs as a share of total profits. This analysis estimates compliance costs using the ARB's methodology.

Table 8: Total Annualized Compliance Costs as a Share of Profits

| # of Employees | Number of Businesses | Total Annual Sales | Total Profits | Total Annualized Compliance Costs | Compliance Costs as a Share of Annual Profits |
|-----------------------|-----------------------------|---------------------------|----------------------|--|--|
| 1-4 | 45 | \$6,595,065 | \$323,937 | \$26,656 | 8.2% |
| 5-9 | 90 | \$45,286,261 | \$2,224,378 | \$178,056 | 8.0% |
| 10-19 | 50 | \$71,148,351 | \$3,494,676 | \$190,092 | 5.4% |
| 20-49 | 55 | \$217,161,189 | \$10,666,558 | \$507,605 | 4.8% |
| 50-99 | 11 | \$110,603,606 | \$5,432,646 | \$198,907 | 3.7% |
| 100-249 | 5 | \$66,915,126 | \$3,286,748 | \$280,652 | 8.5% |
| 250+ | 3 | \$94,050,000 | \$4,619,563 | \$455,234 | 9.9% |
| Total | 258 | \$611,759,597 | \$30,048,506 | \$1,837,203 | 6.1% |

Sources: Dun & Bradstreet; IRS; California Air Resources Board; BAAQMD; BAE, 2009.

Overall, annualized compliance costs represent approximately 6.1 percent of profits for all firms. These costs range from 3.7 percent for businesses with 50 to 99 employees to 9.9 percent for the largest firm that replaces its drying equipment. Overall, compliance costs are well below the 10 percent threshold. However, businesses with 250 or more employees are at the high end of the acceptable range. In addition, to the extent that these firms sell products other than wood products coatings, or that some of their products are currently compliant with the proposed amendment, these impacts could be overstated.

Consumer Impacts

Consumers indirectly purchase most wood coatings when they purchase cabinets, furniture, and other wood products. In order to estimate the potential impacts to consumers, this portion of the analysis assumes that manufacturers would be able to pass along 100 percent of their cost increases to consumers through higher furniture and fixture prices. However, since there are currently products on the market already in compliance with the proposed amendment, manufacturers may not be able to pass all of these costs along to consumers and remain competitive. Those manufacturers would likely need to absorb some portion of their costs.

Affected Industry and Regional Employment Impacts

Since on average, the proposed Rule amendment would not result in significant economic impacts to firms within the affected industries, and consumers could bear some portion compliance cost burden, amending the Rule would not impact the affected industry or regional employment.

Regional Indirect and Induced Impacts

Indirect and induced impacts refer to regional multiplier effects of increasing or decreasing regional economic activity. If the Rule were to significantly impact local businesses, any closures would result in direct regional economic losses. Firms would no longer buy goods from local suppliers, thereby resulting in reduced indirect impacts, or business-to-business expenditures. In addition, firms would no longer employ regional residents, resulting in reduced induced impacts, or household spending.

However, since the proposed amendment to the Rule is not expected to result in significant direct impacts, its adoption would not result in any indirect or induced impacts either.

Impact on Small Businesses

According to California Government Code 14835, a small business is any business that meets the following requirements:

- 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 annual gross receipts of \$10 million or less over the previous three tax years, or
 - A manufacturer with 100 or fewer employees.

Using these definitions, approximately 97 percent of all affected firms are small businesses. This analysis has shown that firms with lower revenues will not experience higher impacts on return on profits as a result of the proposed amendment to the rule.

Appendix C

California Environmental Quality Act Initial Analysis and Negative Declaration

Initial Study/Negative Declaration for the
Amendments to Bay Area Air Quality
Management District Regulation 8, Rule 32:
Wood Products Coatings

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CHAPTER 1

INTRODUCTION

PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed adoption of amendments to Regulation 8, Rule 32 (Regulation 8-32) – Wood Products Coatings by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and in compliance with the state CEQA Guidelines (Title 14 California Code of Regulations §15000 et seq.). A Negative Declaration 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 Negative Declaration because no significant adverse impacts are expected to 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 Negative Declaration 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 of Regulation 8-3, 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.

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CHAPTER 2

DESCRIPTION OF THE PROPOSED RULE

BACKGROUND

The Bay Area Air Quality Management District (District or BAAQMD) regulates emissions of volatile organic compounds (VOC) from wood products coatings through limits contained in Regulation 8, Rule 32: Wood Products Coatings (Regulation 8-32). The District proposes these amendments to Regulation 8-32 to reduce emissions of VOCs by reducing the VOC content requirements for wood product coatings. The District committed to updating this regulation in Control Measure SS-5 in the District's 2005 Ozone Strategy.

Control of VOC emissions from wood products coatings is primarily the responsibility of the BAAQMD in the Bay Area. The proposed amendments to Regulation 8-32 would further limit the amount of VOCs that would be allowed in wood products coatings. The proposed amendments would result in a VOC emission reduction of 0.45 tons per day (tpd). Total emissions from all wood products coating, including solvents for surface preparation and cleanup are estimated to be about 1.48 tpd (BAAQMD, 2009).

VOCs contribute to the formation of ground-level ozone, which is the principal ingredient in smog. The Bay Area is not in compliance with State and federal ozone standards, and has committed to implement all feasible measures to reduce emissions of ozone precursors, including VOC. Regulation 8-32 regulates VOC emissions from the wood products manufacturing industry by setting standards for amount of VOC that can be used in the surface preparation, coatings application, and cleanup for the manufacture of wood products including furniture, bathroom vanities, kitchen cabinets, picture frames, outdoor speakers, architectural millwork, and other wood products.

The proposed rule amendments will reduce the amount of VOC allowed in various types of wood products coatings. District staff is proposing more stringent VOC standards because the performance of low-VOC solvent-based coatings (using exempt solvents) and water-borne wood coating products has improved considerably over the last ten years, and low-VOC products are now readily available that meet an increased number of wood products manufacturers' needs. District staff is proposing to lower VOC limits for sealers, fillers, wash-coats and stains.

Additionally, alternative standards based on a coating's VOC content relative to the amount of coating solids the coating contains are being considered. Coating solids are the binders, pigments, and resins that form the coating on the wood product after the VOCs have evaporated and the coating has dried. If a coating has greater solids content,

less coating may be required to coat a wood product and then fewer VOCs are emitted. In order to encourage manufacturers to use coatings with higher solids content, the proposed amendments provide two alternative compliance options: one based on the VOC content in the entire volume of the coating and one based on the VOC content per unit of coating solids. Wood products manufacturers are then able to choose whichever compliance option best suits their needs.

The proposed amendments also include several related provisions to improve the implementation and enforceability of the rule. These amendments include revisions to the way coatings are classified for purposes of VOC-content regulation, enhanced labeling requirements for wood products coatings, and editorial revisions to the rule language to make it easier for wood coatings users and the public to understand what is required. In addition, the Emission Averaging Procedure found in the Manual of Procedures, Volume 1, is proposed to be updated to be consistent with the proposed rule amendments.

Regulation 8-32, which was adopted in 1983, has evolved considerably since that time. Originally, low-VOC technology for wood coatings was not sufficiently developed to incorporate into the rule. The original rule focused on requiring transfer-efficient application equipment, requiring specified users to apply coating with airless spray, air-assisted airless spray, electrostatic air spray, low-pressure spray, or hand application methods.

VOC-content limits were incorporated into Regulation 8-32 in 1991. The limits were to be implemented in several stages, culminating in the lowest VOC limits to become effective in 1994 and 1996.

In 1994, the District extended the implementation dates for the latter phases of VOC reductions by one year to give the wood coating industry sufficient time to develop compliant coatings that would meet its requirements for adherence, clarity and appearance of finish, chemical and mar resistance, and coating system compatibility. In addition, the amendments included an adjustment to the VOC limit for sanding sealers because it became clear that the VOC limit scheduled for 1994 could not be achieved until 1997.

In 1996, the District amended Regulation 8-32 to establish achievable VOC limits for each of the three different classes of wood products, and a timetable for implementation based on progress that was being made in the development of lower VOC coatings. General wood product facilities have complied with current VOC limits since 1995. Furniture, custom cabinetry and custom architectural millwork facilities have complied with current VOC limits since 1996. The custom and contract furniture manufacturers have complied with current VOC limits since 1997.

Some solvents that had been used in wood coatings were approved as exempt from the VOC limits, based on their very low tendency to form ozone in the atmosphere. Acetone, an example of such a solvent, was exempted from the VOC calculation in late 1995.

Some coatings used acetone substitute lacquers. Other exempted solvents, like parachlorobenzotrifluoride, were also used. The VOC limits that were proposed in 1996 accommodated solvent-borne materials consistent with the existing technology and with use of exempt solvents.

WOOD PRODUCTS COATINGS VOC CHARACTERISTICS

VOC Emissions from Wood Coating Operations

Regulation of emissions from coating operations focuses on the amount of VOC present in a coating. The VOC in the coating evaporates as the coating dries, causing VOC emissions into the atmosphere where they can form ozone. Coatings regulations therefore impose restrictions on the amount of VOC allowed in various types of coatings, most often stated as a limit on the number of grams of VOC allowed per liter of coating.

Emissions occur when the solvents in the coating evaporate. The process steps may be done in single spray booth or in a series of booths, separated by flash-off areas and drying ovens. The flash-off area allows a solvent to rise to the surface of the coating before high temperature curing operations can occur. Typically it is during the flash-off and curing / drying phases that VOC is emitted to the atmosphere. It is reasonable to assume that all of the solvents used in the coating process eventually reach the atmosphere. About 20 percent of the manufacturers in the Bay Area currently use ovens or UV lighting for curing.

Coatings can require only one coat, or several coats, depending on the finished effect needed. Generally, multiple coatings are applied in the following order: stain, wash coat, filler, sealer, and top coat. Each coating typically contains both solids and liquid solvents. The solids portion contains pigments and resins (binders or film formers) and at times plasticizers. The solvent portion may include VOCs, exempt solvents, and water. Conventional (high VOC) coatings normally contain 70 – 80 percent solvent. Water-borne coatings are those that contain water as a solvent or diluent. Merely having water in a coating, however, does not ensure that the coating complies with applicable VOC regulations, as many water-borne coatings also contain VOCs. Coatings with “high solids” content (solids content greater than 60 percent) usually have a reduced VOC content. Exempt solvents are those organic compounds that do not play a significant role in forming ozone. Since they react negligibly with nitrogen oxides in the atmosphere to form ozone, they are desirable substitutes for organic compounds that do form ozone (provided they do not have other negative effects, such as toxicity or depletion of stratospheric ozone). The most prominent exempt solvents used in wood coatings are acetone, and parachlorobenzotrifluoride. Each of these solvents has played a large role in developing low VOC wood coatings that work effectively to produce the desired wood finishes (although coatings that use acetone as a solvent substitute often require alterations to spray equipment to accommodate the rapid evaporation rate of highly volatile acetone).

Application techniques vary from airless and High Volume Low Pressure spray to hand wiped finishes. This variance in applications can have significant emissions ramifications. Coatings applied with compliant application equipment have higher transfer efficiency; consequently, less coating is wasted through overspray. Maximum transfer efficiency and, therefore, minimum emissions are achieved through hand application methods: brush, wipe, pour and drain or dip and drain. However, the high transfer efficiency is partially offset by solvent evaporations from open containers.

Organic compound emissions from surface preparation and cleanup are easily minimized by good housekeeping practices. Surface preparation of wood products is almost entirely by physical processes such as sanding, and rarely is an organic solvent used. Clean up can use a significant amount of the solvent that provides the base solvent in the coating, such as lacquer thinner. Good housekeeping practices include keeping solvent containers closed when not in use, and using closed solvent recirculation for tool and spray gun cleanup. Strippers are typically only used in furniture refinishing. Most strippers consist of methylene chloride as the active agent, which is toxic, but has been determined to have negligible photochemical reactivity by the U.S. EPA. Exposure to the toxicity of methylene chloride strippers is minimized by the use of gels which reduce evaporation. Nevertheless, refinishers using methylene chloride based strippers have to go through the District's risk assessment requirements before obtaining permits.

VOC Control Technologies

The following four major categories of control strategies can be used to reduce VOC emissions from wood coating operations:

- Low-solvent and water-borne reformulated coatings,
- Add-on control devices,
- Emerging technologies, and
- Improved work practices.

Reformulated Coatings

Nitrocellulose resin lacquer technology had provided the benchmark for expectations of many wood finishers over the last several decades. It was easily applied, inexpensive, and provided a beautiful finish. These lacquers also provided the advantage of always being resolvable in their original solvent, so minor "touch-up" repairs to the coating surface could be made easily. However, nitrocellulose resin lacquers were only soluble in large amounts of organic solvent. Reductions in wood coating VOC limits have driven development of alternatives like water-borne technology, and improvement in some solvent-borne technologies like high-solids urethanes and polyester resins. The primary focus for improvement of emissions from wood coatings continues to be development of low VOC coatings, including water-based coatings.

Low-solvent Reformulated Coatings: Low-solvent reformulated coatings that contain less solvent will reduce VOC emissions. Currently, low-VOC reformulated coating alternatives are available and can be used for general wood coating applications. The greater challenge is using these coatings for the more demanding applications like furniture and custom wood products manufacture, refinishing, and antiques.

Typically, wood finishes must pass a variety of tests to produce an acceptable finish. The first of these tests, and ultimately the most important, is appearance. Conventional nitrocellulose lacquer has unique refractive properties that give richly colored woods a “warm” appearance. Furniture manufacturing in the United States tends to favor this natural appearance. Water-borne finishes have traditionally suffered from an appearance often described as “plastic” due to the resin systems used. The finishing of fine furniture is different from finishing cabinetry because the desired appearance is different. Whereas in furniture, often the intent is to allow the natural beauty of the wood to be accentuated; cabinetry, particularly kitchen cabinetry, demands a finish that gives the appearance of a protective coat. Some cabinetry is finished to accentuate the natural beauty of the wood, while other finishes conceal the wood.

Secondary, but no less important consideration for wood coating, concerns the protective nature of the coating. Specifically, scratch or mar resistance, hot imprint resistance, and chemical resistance are of concern. Furniture is subject to scrapes and scratches from any object set on a desk, dresser, or coffee table. Whereas a deep scratch in any surface coating would be expected to need repair, furniture must be able to withstand minor scratches from everyday use. In addition, since wood is a relatively soft substrate, a coating must be able to have some flexibility. A coating that is overly hard or brittle will shatter from object impact, much like glass. A successful coating must flex slightly to “give” along with the underlying wood. Hot print resistance is the ability of a coating to resist “melting” or softening when a warm object such as a hot cup of coffee comes into contact with the surface. Otherwise, a hot coffee cup will stick to a table or desk. Hot print resistance is not a problem of solvent-borne coatings that chemically polymerize, such as urethanes, polyester resins, or conversion varnishes. Conventional nitrocellulose lacquers are also heat resistant. However, hot print resistance does tend to be a problem of coatings that form films by coalescence or fusion of adjacent particles as the volatile portion evaporates, which is typical of water-emulsified coatings. In addition, coatings must also be resistant to a variety of chemicals, particularly household chemicals such as vinegar (acetic acid), alcohol, water, oils, detergent, and ammonia. Products intended for home or office use must meet standardized or company specific tests, often using specific household products, such as hot coffee, cola, grape juice, tomato juice, mustard, lipstick, nail polish remover, and ethanol. In addition, a “lipids acid” test has been developed to mimic the effects of human skin oils. All coatings, including the traditional lacquers, show varying degrees of resistance to different chemicals, but many of the water-borne coatings have tended to be less resistant to household chemicals than solvent-borne coatings.

Low VOC coatings have been developed that can satisfy these requirements for many operations, although even where there are satisfactory low-VOC alternatives, adopting it is not as simple as just switching to a new coating supply. Often application processes and curing equipment need to be changed as well.

Water-Borne Reformulated Coatings: Coatings that use water instead of solvent as a medium have also been developed. These water-borne coatings are normally very low in VOC content. The overriding problem water-borne formulations face is the basic interaction between water and the wood. The absorptive nature of wood and the tendency of wood grain to swell when wet is the reason that water-borne technology for wood coatings has been slower to develop than for any other type of substrate. Swelling grain results in the necessity to sand a surface smooth, which in turn removes coating, resulting in the necessity of re-application, and, potentially, renewed swelling. This tends to be a much greater problem with “open grain” woods such as oak, walnut, and mahogany than with “closed grain” woods such as birch, cherry and maple. Partial solutions to this problem have been found in modification of application techniques, including humidity control, the use of heat lamps or drying ovens, and control of room air flow. Improvements in the water-borne coatings themselves have made excellent progress over the last several years in greatly reducing, and in some cases eliminating this problem.

BAAQMD staff discussed the use of coatings in the manufacture of wood products with several businesses and suppliers. Some use solvent-based coatings, and some use water-borne (very low-VOC) coatings. The conversion from solvent-based coatings to water-borne coatings involves more than simply changing the coating being applied. Water-borne coatings require the use of spray guns designed for spraying water-borne coatings, or existing spray guns must be retrofitted to include stainless steel or plastic parts to prevent rust. Application of water-borne coatings requires additional steps and new techniques. The cool and somewhat damp climate in the Bay Area during the winter months is not conducive to drying water-borne coatings, leading to longer drying times.

While there have been no “breakthrough” improvements in water-borne technology for wood coatings, incremental improvements have enabled several coatings manufacturers to develop water-borne coatings combined with application and drying techniques that meet the needs of most of their customers.

Add-On Abatement Devices

Add-on control devices are incorporated into a process to remove or destroy VOCs after the coating process occurs. There are three add-on control methods: thermal oxidation, catalytic oxidation, and adsorption. Although these add-on controls are effective at eliminating air pollution after it is emitted, the preventive approach of reformulating coatings to reduce VOC content is generally favored because it eliminates the pollution altogether rather than capturing it after the fact. In addition, most abatement devices are relatively costly compared to switching to low-VOC coatings. They also require

considerable amounts of energy to construct and operate, contributing to the generation of greenhouse gases.

- **Thermal oxidation:** Thermal oxidation involves incinerating VOCs to prevent them from being emitted. Incinerators are usually operated at a high temperature to efficiently destroy most VOC's found in the exhaust stream. Factors affecting incinerator performance are residence time in the combustion zone and incinerator temperature. Thermal oxidizers can achieve close to 100 percent VOC destruction for most VOC's. The major concern with thermal oxidation, in addition to capital cost, is that large amounts of fuel (usually natural gas) must be burned to destroy a dilute stream of VOC's, resulting in additional carbon dioxide from use of fuel, as well as the carbon dioxide generated from burning the VOC's. Carbon dioxide is a greenhouse gas, implicated in global warming.
- **Catalytic Oxidation:** Catalytic oxidation is similar to thermal oxidation, but it introduces a catalyst to dramatically increase the oxidation rate. The catalyst itself is not altered during the reaction. The increased reaction rate can greatly reduce the temperatures required, resulting in significant fuel savings. Catalytic units include higher installation costs and the possibility of catalyst poisoning by sulfur, metals, and phosphorous. Catalytic units can achieve in excess of 95 percent VOC destruction efficiency. Greenhouse gas emissions are less than with thermal oxidation, but still a concern with this control technology. There is one facility in the Bay Area that uses catalytic oxidation to reduce VOC emissions.
- **Adsorption:** Adsorption is a mass-transfer operation involving the conversion of VOC from a gas to a liquid or solid. The most common adsorption system uses activated carbon, which is effective in capturing most VOC's through physical adsorption. In addition, activated carbon can be regenerated by steam, nitrogen stripping, or by drawing a vacuum on the carbon. At minimum, two adsorption beds and a regeneration facility are required for an adsorption process. VOC removal efficiency can be as high as 95 percent using the absorption method. The concern with this control technology is the energy consumed in regenerating the activated carbon, as well as creating, transporting, and disposing of the activated carbon – all contributing to the concern about greenhouse gases.

OBJECTIVES

BAAQMD is proposing amendments to Wood Products Coatings meeting a commitment to update Regulation 8-32 in Control Measure SS-5 as part of the District's 2005 Ozone Strategy. The proposed amendments to Regulation 8-32 are aimed at further reducing VOC emissions in the Bay Area by reducing the VOC content requirements for wood products coatings. The Bay Area is a non-attainment area for the state one-hour ozone standard and federal eight-hour ozone standard. The proposed amendments are expected to result in a VOC emission reduction of 0.45 tpd, or approximately 30 percent of the 1.48 tpd inventory for this source category.

PROPOSED AMENDMENTS

More Stringent Limits for VOC Content

The main purpose of the amendments the District is considering is to reduce the amount of ozone formed as a result of VOC emissions from wood products coatings. The primary mechanism for achieving this goal would be to reduce the amount of VOCs allowed in various types of wood coatings, as several other air districts have done.

The proposed amendments would impose more restrictive VOC limits for wood products coatings. For most coating types, the proposed new limits are 275 g/l (2.3 lb/gal) for high-solids coatings, and 120 g/l (1.0 lb/gal) for low-solids coatings. This represents a significant reduction for most coatings. The current limits for most high-solids coatings are 500 or 550 g/l, double the proposed new limits; and the current limit for low-solids coatings is 480 g/l (4.0 lb/gal), four times the proposed new limit.

For three specific types of high-solids coatings where a 275 g/l limit would not be feasible, the District is proposing somewhat less stringent limits. First, for high-solids stains, the District is proposing a new limit of 350 g/l (2.9 lb/gal). High-solids stains generally require more VOCs to work effectively because solvent is required to provide penetration of the stain into the wood substrate. One air district in California has a VOC limit of 240 g/l, but California Air Resources Board (CARB), and every coating manufacturer, has indicated there are on-going implementation issues with these high solids stains. Second, furniture, custom cabinetry, and custom architectural millwork require more demanding finishes in both appearance and durability. Conversion varnish is a coating that uses a chemical reaction rather than evaporation to adhere to the wood and form a solid protective coating. Conversion varnish has the inherent advantage that it can serve as a sealer as well as a topcoat, so the sealing and topcoat steps are done together. The proposed conversion varnish VOC limit is 550 g/l (4.6 lb/gal) VOC when used as both a sealer and a topcoat. This 550 g/l conversion varnish limit provides manufacturers more flexibility for coating custom furniture, custom cabinetry, and custom architectural millwork. For general wood products, the conversion varnish VOC limit would remain at 275 g/l. Third, the proposed amendments for clear topcoats used on custom furniture leave the VOC limit at 550 g/l, instead of reducing it to the 275 g/l limit proposed for clear topcoats for other types of wood products. BAAQMD has found that it is not feasible at this time to require the use of lower-VOC clear topcoats for custom furniture because custom furniture must meet very high standards and demanding customer expectations.

These proposed new VOC-content limits are consistent with limits that have been successfully implemented in other California air districts. Coatings can be manufactured to meet these more restrictive VOC limits by using water or exempt solvents – primarily acetone and parachlorobenzotrifluoride – in place of regulated VOC-based solvents. For the furniture manufacturing industry, which requires very high quality finishes for its products, improvements in topcoats, pigmented coatings, sealers, and stains, coupled with the ability to use a higher VOC conversion varnish, will allow them to meet the

demanding requirements of customers while still complying with the more restrictive VOC limits.

Revised Regulatory Categorization of Coating Types

The District is also revising the terminology it uses to categorize the various types of coatings. BAAQMD is proposing alternate VOC limits (discussed below, in grams of VOC per gram of solid) to provide flexibility and continue to encourage development of new and innovative low VOC / high solids coatings. These alternate VOC limits require differentiating the broad category of sanding sealers into clear and pigmented sealers. These alternate VOC limits also require differentiating the broad category of pigmented coatings into pigmented topcoats and pigmented primers, sealers, and undercoats. The proposed categories are consistent with South Coast Air Quality Management District (SCAQMD) Rule 1136 that also provides the alternate VOC limits in grams of VOC per gram of solids.

In addition, conversion varnish is a type of coating that had not previously been uniquely identified. Conversion varnish is included as a specific identifiable coating because it can play an important role in reducing overall VOC emissions because it can serve as both a sealer and topcoat. Multi-colored coatings have also been uniquely identified. In the general category of low solids coatings, toner was added in with wash-coat to more fully characterize that category of low solids coatings. Definitions for conversion varnish and toner were included in the proposed Rule.

Alternative Compliance Option Based on Solids Content

The District is proposing alternative VOC standards based on the solids content of the coating rather than the overall volume of the coating. The ability to beautify and protect wood is dependent on the coating solids content (the resins and pigments that remain after the volatile portion evaporates). The higher the solids content, the less coating is needed to cover the wood. High solids content provides more layer of finished coating (called film build) in a gallon of coating and thereby reduces the total gallons of coating needed, which also reduces the total VOC emissions. BAAQMD is therefore proposing to add an alternative compliance option for high solids coatings in the form of VOC standards expressed as grams of VOC per gram of coating solids. This form of a standard will continue to encourage coating manufacturers to develop high-solids coatings that maximize coverage with minimum solvent evaporation.

To incorporate this alternate compliance option, the proposed amendments would allow coatings to comply with either of the alternative VOC limits, one expressed as grams (or pounds) of VOC per liter (or gallon) of coating, and one expressed as grams (or pounds) of VOC per gram (or pound) of coating solids. The proposed limits for each category of coatings are shown in Table 2-1. The proposed VOC limits are consistent with similar limits in SCAQMD Rule 1136, and will not create any unique requirements that could cause a disruption in the coatings industry.

Under these proposed limits, a coating would be in compliance if it meets either of the alternative limits. The proposed regulation would create a rebuttable presumption that a coating is in violation if there is evidence that the coating is over either one of the limits.

For low-solids coatings, the District is not proposing an alternative standard based on solids content at this time because low solids coatings, used to lightly tint, stain or prepare the surface for further coatings, do not have sufficient solids to create a meaningful standard.

TABLE 2-1

Proposed Wood Coating VOC Limits

| Coating Category | Current VOC Limits | Proposed VOC Limits | | |
|---|--------------------|---------------------------------|---|---------------------------------|
| | | General Wood Products | Furniture, Custom Cabinets and Millwork | Custom Furniture |
| High Solids | g/l (lb/gal) | g/l (lb/gal) or [g/g] | g/l (lb/gal) or [g/g] | g/l (lb/gal) or [g/g] |
| Clear Sealer | - | 275 (2.3) or [0.36] | 275 (2.3) or [0.36] | 275 (2.3) or [0.36] |
| Clear Topcoat | 275 (2.3) | 275 (2.3) or [0.35] | 275 (2.3) or [0.35] | 550 (4.6) or [0.36] |
| Single Application Conversion Varnish* | - | Considered a sealer or topcoat | 550 (4.6) or [0.36]* | Considered a sealer or topcoat |
| Sanding Sealer | 550 (4.6) | See clear or pigmented sealers | See clear or pigmented sealers | See clear or pigmented sealers |
| Pigmented Coating | 275 (2.3) | See clear or pigmented topcoats | See clear or pigmented topcoats | See clear or pigmented topcoats |
| Pigmented Primer, Sealer, and Undercoater | - | 275 (2.3) or [0.21] | 275 (2.3) or [0.21] | 275 (2.3) or [0.21] |
| Pigmented Topcoat | - | 275 (2.3) or [0.25] | 275 (2.3) or [0.25] | 275 (2.3) or [0.25] |
| Multicolored Coating | - | - | 275 (2.3) or [0.33] | 275 (2.3) or [0.33] |
| High Solids Stain | 700 (5.8) | 350 (2.9) or [0.42] | 350 (2.9) or [0.42] | 275 (2.9) or [0.42] |
| Filler | 500 (4.2) | 275 (2.3) or [0.18] | 275 (2.3) or [0.18] | 275 (2.3) or [0.18] |
| Low Solids | g/l (lb/gal) | g/l (lb/gal) | g/l (lb/gal) | g/l (lb/gal) |
| Low Solids Stain | 480 (4.0) | 120 (1.0) | 120 (1.0) | 120 (1.0) |
| Toner and Wash-coat | 480 (4.0) | 120 (1.0) | 120 (1.0) | 120 (1.0) |

- * When used as sealer and topcoat in one coating application
 - g/l = grams of VOC per liter of coating
 - lb/gal = pounds of VOC per gallon of coating
 - g/g = grams of VOC per gram of solids in coating

OTHER PROPOSED AMENDMENTS

Enhanced Labeling Requirements

Effective July 1, 2010, the proposed amendments would require manufacturers and re-packagers of wood coatings and components to label all containers with the coating VOC content. Any product in the distribution system manufactured before July 1, 2010 may

continue to be sold within the District in spite of not meeting the labeling requirements, but the user must meet the new VOC limits for the coating, as applied after manufacturer thinning recommendations. In addition, each manufacturer shall provide product data sheets (or an equivalent medium) for their wood coatings, and solvents subject to this rule, with sufficient information to determine compliance with the rule. This information shall include VOC content of each coating and solvent in grams per liter (or pounds per gallon), VOC content in grams per gram (or pounds per pound) of coating solids for high solids coatings, and thinning recommendations and VOC content of the coating after thinning.

Cleanup of Spray Equipment

A proposed amendment establishes new requirements for cleanup of spray equipment and coating supply lines. Facilities must use solvent with less than 25 grams VOC per liter; or use special practices to clean spray guns that minimize solvent evaporation or have a spray gun washer that meets the requirements of Regulation 8, Rule 16.

Emissions Averaging Procedure

BAAQMD proposes revisions to the existing Manual of Procedures, Volume 1, Procedure 6, to incorporate the revised categories of wood coatings and incorporate U.S. EPA policies related to emissions averaging.

Exemptions

BAAQMD reviewed the existing exemptions in the rule, and proposes to maintain them without any significant revisions.

Other Minor Changes

In addition to the substantive revisions outlined above, BAAQMD is proposing certain minor editorial changes to the language of the rule and to the way in which the various regulatory provisions are organized within the rule's overall structure. These include minor language changes to make provisions grammatically consistent; updating SIC codes to NAICS codes; removal of redundant language such as in the phrase "custom or contract furniture" (as all contract furniture is custom); moving the provisions establishing the 120 g/l threshold for "high-solids" coatings to stand-alone definitions of "high solids" and "low solids" coatings; and removing redundant language in the definition of Volatile Organic Compounds" regarding whether VOC-content standards should be applied by including or excluding water and exempt compounds.

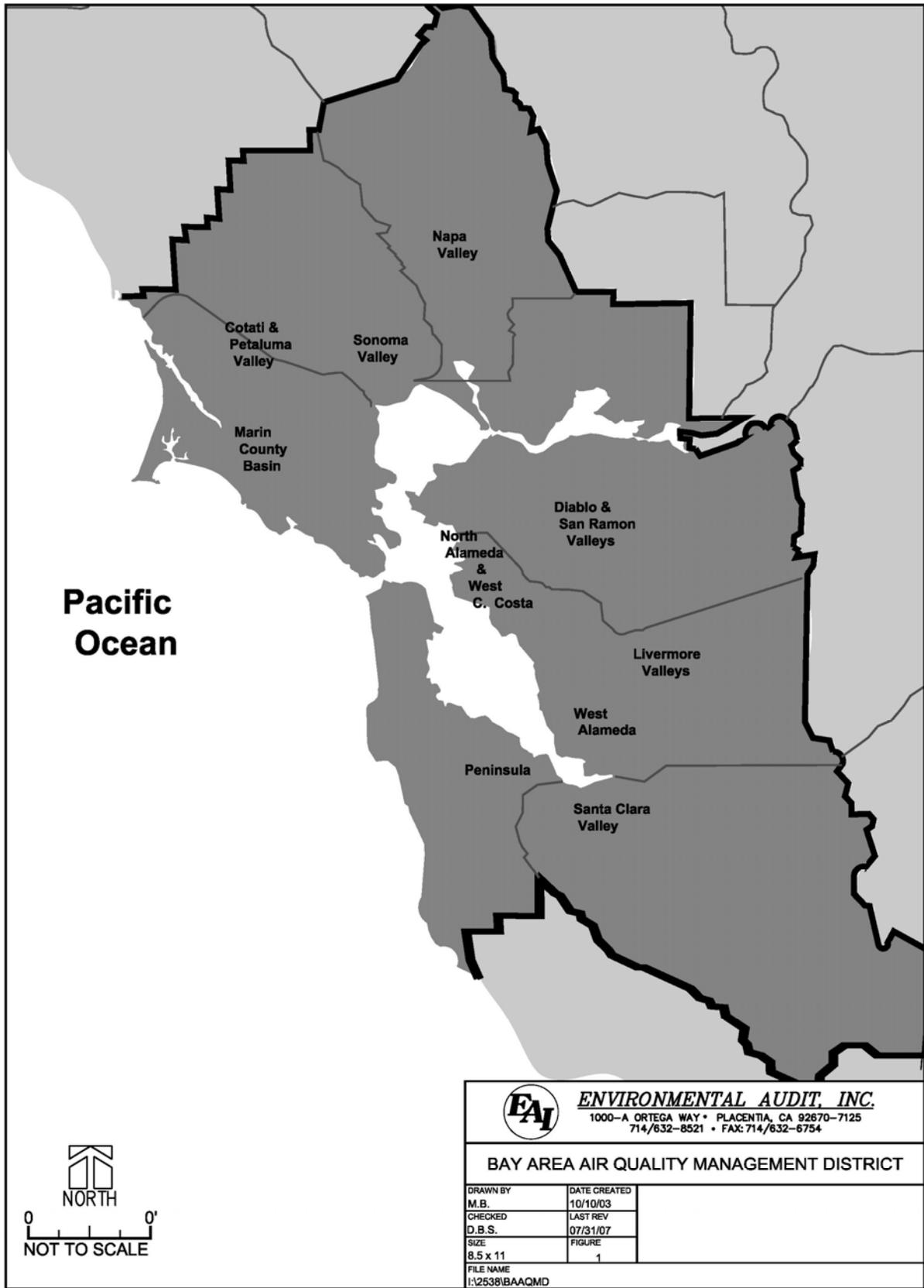
AFFECTED AREA

The proposed rule amendments would apply to facilities under BAAQMD jurisdiction. 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 BAAQMD (see Figure 1).

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CHAPTER 3

ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST FORM

- 1. Project Title: Bay Area Air Quality Management District (BAAQMD) Proposed Amendments to Wood Products Coatings Regulations.
- 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: Guy Gimlen, Air Quality Engineer
415-749-4734 or ggimlen@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: These rule amendments apply to any person who supplies, sells, offers for sale, or manufactures any coating for wood products used within the District, as well as any person who applies or solicits the application of any wood products coating within the District.
- 7. Zoning The rule amendments apply to wood products coatings used or produced within the jurisdiction of the BAAQMD. Wood products coatings are used in all zoning areas throughout the Bay Area, but primarily in industrial and commercial 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.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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.

The proposed rule amendments affect wood products coatings which are applied to general wood products such as cabinets, vanities, shutters, containers, frames, tools and ladders made of solid wood, wood composition, or wood material. Additional wood products include wood furniture, custom cabinetry, custom furniture, and custom millwork. The amendments to Regulation 8-32 limits VOC emissions from wood coating operations by restricting the amount of VOC in the coatings used in such operations, as well as requiring work practices that minimize the amount of coatings needed to coat such products. Scenic highways or corridors are located in areas affected by the proposed amendments within the District. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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 8-32 do not require any changes in the physical environment that would obstruct any scenic vistas or views of interest to the public. Additionally, no major changes to existing wood products coatings operations, or stockpiling of additional materials or products outside of existing facilities, are expected. The explanation for this is that the proposed amendments to Regulation 8-32 are not expected to produce any physical changes as the amendments are only expected to alter the formulation of specific wood products coatings and would further reduce VOC emissions from the use of wood products coatings in the Bay Area. Therefore, no significant adverse impacts to visual resources such as scenic views or vistas are expected.

The proposed amendments are not expected to require the construction of any major new structures, and are not expected to result in any adverse aesthetic impacts. Once implemented, the proposed amendments would not require equipment that would be visible as the amendments primarily impose further limits the amount of VOC's that can be used in wood product coatings. Compliance with the proposed rule amendments are expected through the use of reformulated products since products that comply with the VOC limits have been implemented in other air districts in California. It is generally more cost effective to comply with reformulated products than through the construction of add on control devices. Therefore, although the proposed rule amendments would continue to allow compliance through the use of add on control equipment, such equipment is not expected to be used for compliance purposes.

The proposed amendments to Regulation 8-32 would also not require any new sources of light or glare as they do not require construction of any new buildings or facilities.

Based upon these considerations, no significant adverse aesthetic impacts are expected from the implementation of the amendments to Regulation 8-32.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) | Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coating categories and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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 8-32 would further reduce VOC emissions from wood products coatings used and sold throughout the Bay Area. The proposed amendments are not expected to require the construction of any major new equipment and would not require any additional construction activities. Coatings are expected to be reformulated to comply with the proposed regulations as compliant coatings have already been manufactured in other air districts in California, so no construction activities are expected. Therefore, the proposed amendments would not require the conversion of agricultural land for other uses.

Based upon these considerations, no significant adverse impacts to agricultural resources are expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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, weak 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 (NO₂), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), 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 25 monitoring stations. The 2007 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 (NO_x), and SO₂. The Air District is not considered to be in attainment with the State PM₁₀ and PM_{2.5} standards.

The 2007 air quality data from the BAAQMD monitoring stations are presented in Table 3-2. All monitoring stations were below the state standard and federal ambient air quality standards for CO, NO₂, and SO₂. The federal 8-hour ozone standard was exceeded one day in the District in 2007, while the state standard was exceeded on nine days. 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 4 days in 2007 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 four days in 2007, most frequently in San Jose. The Air District exceeded the federal PM_{2.5} standard on 14 days, most frequently in San Jose, in 2007 (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 | 0.075 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 µg/m ³ , annarithmetic mean > 50 µg/m ³ , 24-hr average> | 50 µg/m ³ , annual arithmetic mean > 150 µg/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 µg/m ³ , annual arithmetic mean> | 15 µg/m ³ , annual arithmetic mean> 35 µg/m ³ , 24-hour average> | Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children. |
| Sulfates | 25 µg/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 µg/m ³ , 30-day avg. >= | 1.5 µg/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 - 2007**

| MONITORING STATIONS | OZONE | | | | | | CARBON MONOXIDE | | | NITROGEN DIOXIDE | | | SULFUR DIOXIDE | | | PM ₁₀ | | | | PM _{2.5} | | | | | |
|--------------------------|----------|---------------|----------|---------------|----------|----------|-----------------|----------|---------------|------------------|---------|---------------|----------------|---------|---------------|----------------------|-----------|----------|----------|----------------------|----------|----------|---------|----------|---|
| | Max 1-hr | Cal 1-hr Days | Max 8-hr | Nat 8-hr Days | Cal 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 Days | Cal Days | Max 24-hr | Nat Days | 3-Yr Avg | Ann Avg | 3-Yr Avg | |
| North Counties | (ppb) | | | | | | (ppm) | | | (ppb) | | | (ppb) | | | (µg/m ³) | | | | (µg/m ³) | | | | | |
| Napa | 74 | 0 | 61 | 0 | 0 | 57 | 3.2 | 2.0 | 0 | 53 | 10 | 0 | - | - | - | 21.4 | 50 | 0 | 0 | - | - | - | - | - | - |
| San Rafael | 72 | 0 | 57 | 0 | 0 | 48 | 2.8 | 1.3 | 0 | 57 | 14 | 0 | - | - | - | 17.5 | 56 | 0 | 1 | - | - | - | - | - | - |
| Santa Rosa | 71 | 0 | 59 | 0 | 0 | 47 | 2.6 | 1.7 | 0 | 46 | 11 | 0 | - | - | - | 17.1 | 37 | 0 | 0 | 32.0 | 0 | 30.4 | 7.6 | 8.1 | |
| Vallejo | 78 | 0 | 66 | 0 | 0 | 54 | 3.3 | 2.7 | 0 | 58 | 11 | 0 | 4 | 1.2 | 0 | 19.0 | 52 | 0 | 2 | 40.8 | 4 | 36.2 | 9.8 | 9.8 | |
| Coast/Central Bay | | | | | | | | | | | | | | | | | | | | | | | | | |
| Richmond | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 1.6 | 0 | - | - | - | - | - | - | - | - | - | - |
| San Francisco | 60 | 0 | 49 | 0 | 0 | 45 | 2.5 | 1.6 | 0 | 69 | 16 | 0 | 6 | 1.5 | 0 | 21.9 | 70 | 0 | 2 | 45.2 | 5 | 29.3 | 8.7 | 9.3 | |
| San Pablo | 74 | 0 | 51 | 0 | 0 | 47 | 2.4 | 1.2 | 0 | 52 | 12 | 0 | 5 | 1.6 | 0 | 20.6 | 57 | 0 | 2 | - | - | - | - | - | |
| Eastern District | | | | | | | | | | | | | | | | | | | | | | | | | |
| Benicia* | 83 | 0 | 71 | 0 | 1 | * | 1.1 | 0.6 | 0 | 39 | * | 0 | 7* | * | 0 | * | 31 | 0 | 0 | - | - | - | - | - | |
| Bethel Island | 93 | 0 | 78 | 0 | 4 | 73 | 1.1 | 0.8 | 0 | 48 | 8 | 0 | 5 | 1.5 | 0 | 18.8 | 49 | 0 | 0 | - | - | - | - | - | |
| Concord | 105 | 1 | 81 | 0 | 4 | 73 | 2.2 | 1.4 | 0 | 49 | 11 | 0 | 5 | 1.3 | 0 | 16.8 | 52 | 0 | 2 | 46.2 | 7 | 34.0 | 8.4 | 8.9 | |
| Crockett | - | - | - | - | - | - | - | - | - | - | - | - | 8 | 9 | 2.0 | 0 | - | - | - | - | - | - | - | - | |
| Fairfield | 89 | 0 | 67 | 0 | 0 | 66 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Livermore | 120 | 2 | 91 | 1 | 3 | 77 | 3.3 | 1.8 | 0 | 52 | 13 | 0 | - | - | - | 19.8 | 75 | 0 | 2 | 54.9 | 3 | 34.8 | 9.0 | 9.3 | |
| Martinez | - | - | - | - | - | - | - | - | - | - | - | - | 8 | 1.7 | 0 | - | - | - | - | - | - | - | - | - | |
| Pittsburg | 100 | 1 | 74 | 0 | 2 | 70 | 2.8 | 1.5 | 0 | 51 | 10 | 0 | 7 | 2.2 | 0 | 19.4 | 59 | 0 | 4 | - | - | - | - | - | |
| South Central Bay | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fremont | 79 | 0 | 68 | 0 | 0 | 58 | 2.5 | 1.6 | 0 | 58 | 14 | 0 | - | - | - | 19.6 | 61 | 0 | 1 | 51.2 | 2 | 30.4 | 8.7 | 9.4 | |
| Hayward* | 75 | 0 | 65 | 0 | 0 | * | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Redwood City | 77 | 0 | 69 | 0 | 0 | 51 | 5.5 | 2.3 | 0 | 57 | 13 | 0 | - | - | - | 19.6 | 56 | 0 | 1 | 45.4 | 1 | 31.0 | 8.3 | 8.9 | |
| San Leandro | 71 | 0 | 54 | 0 | 0 | 52 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Santa Clara Valley | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gilroy* | 91 | 0 | 70 | 0 | 0 | 70 | - | - | - | - | - | - | - | - | - | - | - | - | - | 21.5 | 0 | * | * | * | |
| Los Gatos | 84 | 0 | 65 | 0 | 0 | 68 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| San Jose Central | 83 | 0 | 68 | 0 | 0 | 61 | 3.5 | 2.7 | 0 | 65 | 17 | 0 | - | - | - | 22.0 | 69 | 0 | 3 | 57.5 | 9 | 38.3 | 10.7 | 11.1 | |
| San Jose, Tully Rd* | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 25.6 | 78 | 0 | 3 | - | - | - | - | - | |
| San Martin | 96 | 1 | 73 | 0 | 4 | 75 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Sunnyvale | 77 | 0 | 68 | 0 | 0 | 55 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Total Days over Standard | | 4 | | 1 | 9 | | | | 0 | | | 0 | | | 0 | | | 0 | 4 | | 14 | | | | |

(ppm) = parts per million, (pphm) = parts per hundred million, (ppb) = parts per billion, µg/m³ = micrograms per cubic meter

* PM2.5 monitoring began at Gilroy on March 1, 2007. Since only three complete quarters of data for 2007 are available, annual statistics are not provided for PM2.5.

* The Benicia site was opened on April 1 2007. Since only three complete quarters of data for 2007 are available, annual statistics are not provided for this site.

* The San Jose-Tully site was closed on December 31, 2007.

* The Hayward station was closed part of 2005 due to construction on site. Therefore, three-year average ozone statistics are not available.

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 |
| 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 |
| 2006 | 0 | 18 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 10 |
| 2007 | 1 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 14 |

* PM10 is sampled every sixth day – actual days over standard can be estimated to be six times the numbers listed.
 ** On Dec. 17, 2006, U.S. EPA revised the PM10 standard from 65 to 35 g/m³. PM2.5 exceedance days for 2006 and 2007 reflect the new standard.

Toxic Air Contaminants

Table 3-4 (BAAQMD, 2007) contains a summary of ambient air toxics monitoring data of toxic air contaminants (TACs) measured at monitoring stations in the Bay Area by the District in 2003. One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. A number of VOCs currently used in coating and solvent formulations have also been identified as TACs, such as ethylene-based glycol ethers, trichloroethylene (TCE), and toluene.

Two particular TACs used in some consumer products, methylene chloride and perchloroethylene, are specifically exempted from the VOC definition because of their very low ozone-forming capabilities. As a result, some manufacturers may choose to use methylene chloride or perchloroethylene in the reformulations to reduce the VOC content in meeting future limits. Product liability and regulations such as California’s Proposition 65 are expected to minimize the use of toxic materials because manufacturers would have to provide public notices if any Proposition 65 listed-material is used.

TABLE 3-4

Summary of 2003 BAAQMD Ambient Air Toxics Monitoring Data

| Compound | LOD (ppb) ⁽¹⁾ | % of Samples < LOD ⁽²⁾ | Max. Conc. (ppb) ⁽³⁾ | Min. Conc. (ppb) ⁽⁴⁾ | Mean Conc. (ppb) ⁽⁵⁾ |
|--------------------------------|--------------------------|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Acetone | 0.30 | 0 | 121.4 | 0.6 | 6.80 |
| Benzene | 0.10 | 1.78 | 2.4 | 0.5 | 0.401 |
| 1,3-butadiene | 0.15 | 75.7 | 0.89 | 0.075 | 0.12 |
| Carbon tetrachloride | 0.01 | 0 | 0.16 | 0.09 | 0.108 |
| Chloroform | 0.02 | 62.5 | 1.47 | 0.01 | 0.024 |
| Ethylbenzene | 0.10 | 44.2 | 0.90 | 0.05 | 0.135 |
| Ethylene dibromide | 0.02 | 100 | 0.01 | 0.01 | 0.01 |
| Ethylene dichloride | 0.10 | 100 | 0.05 | 0.05 | 0.05 |
| Methylene chloride | 0.50 | 82.9 | 3.40 | 0.25 | 0.356 |
| Methyl ethyl ketone | 0.20 | 7.7 | 5.80 | 0.1 | 0.496 |
| Metyl tert-butyl ether | 0.30 | 32.9 | 4.80 | 0.15 | 0.532 |
| Perchloroethylene | 0.01 | 42.4 | 0.28 | 0.005 | 0.026 |
| Toluene | 0.10 | 0.2 | 6.0 | 0.05 | 1.062 |
| 1,1,1-Trichloroethane | 0.05 | 72.3 | 2.47 | 0.025 | 0.084 |
| Trichloroethylene | 0.05 | 93.8 | 0.33 | 0.025 | 0.029 |
| Trichlorofluoromethane | 0.01 | 0 | .046 | 0.18 | 0.266 |
| 1,1,2-trichlorotrifluoroethane | 0.01 | 0 | 1.16 | 0.06 | 0.077 |
| Vinyl chloride | 0.30 | 100 | 0.15 | 0.15 | 0.15 |
| m/p-xylene | 0.10 | 2.8 | 3.40 | 0.05 | 0.535 |
| o-xylene | 0.10 | 27.9 | 1.30 | 0.05 | 0.186 |

NOTES: Table 3-4 summarizes the results of the BAAQMD gaseous toxic air contaminant monitoring network for the year 2003. These data represent monitoring results at 19 of the 20 separate sites at which samples were collected. Data from the Fort Cronkhite "clean-air" background site was not included. Data from the Oakland-Davie Stadium site was available from January through March.

- (1) "LOD" is the limit of detection of the analytical method used.
- (2) "% of samples < LOD" is the percent of the total number of air samples collected in 2003 that had pollutant concentrations less than the LOD.
- (3) "Maximum Conc." is the highest daily concentration measured at any of the 19 monitoring sites.
- (4) "Minimum Conc." is the lowest daily concentration measured at any of the 19 monitoring sites.
- (5) "Mean Conc." is the arithmetic average of the air samples collected in 2003 at the 19 monitoring sites. In calculating the mean, samples with concentrations less than the LOD were assumed to be equal to one half the LOD concentration.

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 22-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 per 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.

Targeted Control of TACs Under the Community Air Risk Evaluation Program: In 2004, BAAQMD established the Community Air Risk Evaluation (CARE) program to identify locations with high emissions of TACs and high exposures of sensitive populations to TAC and to use this information to help establish policies to guide mitigation strategies that obtain the greatest health benefit from TAC emission reductions. For example, BAAQMD will use information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation.

Discussion of Impacts

III a. The objectives of the proposed rule amendments are to lower the VOC content limit in wood product coatings used and produced in the Bay Area. The proposed amendments would reduce VOC emissions from facilities that manufacture and use wood products coatings within the jurisdiction of the BAAQMD. Consequently, the proposed rule amendments are expected to reduce exposure to VOCs in the region and reduce ozone formation, providing overall health benefits. The proposed amendments to Regulation 8-32 would implement Control Measure SS-5 in the 2005 Ozone Strategy, the most recent air quality planning strategy for the Bay Area, and is consistent with that plan. Therefore, the proposed rule amendments are not expected to conflict with an Air Quality Plan, but instead would further the objectives of the 2005 Ozone Strategy, ultimately reducing ozone concentrations in the Bay Area.

III b and f. The proposed amendments to Regulation 8-32 are expected to reduce VOC emissions from wood coatings. There are approximately 200 businesses permitted in the District that use a significant

amount of wood products coatings. Total existing emissions from wood coating operations are estimated to be 1.48 tpd.

The proposed amendments to Rule 8-32 are expected to result in a 30 percent reduction in emissions so that VOC emissions from wood coatings are expected to be a total of 1.03 tons per day (a reduction of 0.45 tpd or 30 percent). The largest emission reductions are expected from the proposed reduction of VOC content in sanding sealers. The proposed amendments require both clear and pigmented sealers to reduce VOC content from 550 grams per liter to 275 grams per liter for all wood product types. Sealers represent about 40 percent of the wood coatings sold in the Bay Area. In addition, use of lower VOC topcoats or conversion varnish for furniture, custom cabinets, and custom architectural millwork also make a significant reduction in VOC emissions. Additional VOC reductions are expected from reducing the VOC content of stains and fillers.

The proposed amendments are not expected to require substantial changes or any major construction activities at affected facilities. Coating manufacturers would be able to lower the VOC content limit in wood product coatings with existing equipment and facilities. Since the affected facilities would be able to implement the amendments to Regulation 8-32 without installing new equipment or modifying or building new facilities, no additional construction emissions are expected as a result of the proposed rule amendments. The proposed rule amendments are not expected to alter or increase the construction emissions from new facilities nor will the proposed project provide an incentive to construct new facilities that manufacture wood coatings. A new wood coating manufacturing facility would likely be required to undergo a siting review and approval by the local cities or counties (with or without the proposed rule amendments).

To obtain further VOC emissions from coating products it is expected that coatings would be reformulated with water-based or exempt compound formulations (e.g., acetone). During the development of CARB's Suggested Control Measure for Architectural Coatings, industry comments raised concerns regarding a number of issues associated with the use of lower VOC content limits for coating products including: (1) the use of lower VOC coatings will result in a thicker film coating; (2) the use of lower VOC coatings will result in excessive thinning of the coating; (3) the use of lower VOC coatings requires the use of additional primer for proper adhesion to the substrate; (4) lower VOC coatings will require the use of more coats; (5) the use of lower VOC coatings will require more frequent recoating, touch-up and repair work; (6) the use of lower VOC coatings will result in product substitution by end-users; and (7) the use of lower-VOC coatings may result in coatings with higher reactivity (CARB, 2007). These issues have been studied by the U.S. EPA, CARB, and SCAQMD as part of rulemaking activities (Federal Register, CARB 2007, SCAQMD 1999).

CARB staff evaluated manufacturers' product data sheets and available testing data for low VOC coatings. CARB concluded that these coatings had substrate preparation, coverage rates, and performance similar to their higher VOC counterparts without the need for excessive thinning (CARB, 2007). The same is expected to be true for wood products coatings. In addition, compliant wood products coatings are currently used in other air districts in California.

Based on the preceding analysis of potential secondary air quality impacts from implementing future architectural coatings rules, it is concluded that the overall air quality effects will be a VOC emission

reduction. Therefore, based on the significance criteria, impacts associated with the use of lower VOC coatings will be less than significant.

III c. CEQA Guidelines indicate that cumulative impacts of a project shall be discussed when the project's incremental effect is cumulatively considerable, as defined in CEQA Guidelines §15065(c). The overall impact of the proposed rule amendments is a decrease in VOC emissions. Therefore, the cumulative air quality impacts of the proposed rule amendments are expected to be beneficial.

The proposed rule amendments are not expected to result in an increase in greenhouse gas (GHG) emissions. GHG emissions are largely generated by the combustion of conventional hydrocarbon fuel that results in the release of energy as bonds between carbon and hydrogen are broken and reformed with oxygen to create water vapor and the carbon dioxide (CO₂). Greenhouse gases, which alter the amount of heat, or infrared radiation, that can escape the Earth's surface, have been linked to a gradual warming of the Earth's surface and lower atmosphere. In the United States, the largest source of greenhouse gas emissions is from fossil fuel combustion, which accounted for approximately 81 percent of greenhouse emissions in 1996 (CARB, 2006a). CO₂ is not commonly used in wood coatings production. The reformulation of wood products coatings is not expected to require the combustion of additional fuel nor increase the generation of GHG emissions. No increase in the use or production of wood coatings is expected due the proposed amendments to Regulation 8-32. One option to comply with the proposed amendments is to use abatement equipment rather than reduced VOC coatings. The use of abatement equipment, particularly incineration, would cause a slight increase in GHG. Because VOC limits consistent with the proposal have already been implemented in other air districts such as the South Coast, lower VOC coatings are available, so it is not expected that facilities will opt to comply by installing abatement equipment. Therefore, the proposed rule amendments are not expected to result in an increase in GHG emissions.

III d. The proposed amendments are expected to lead to a reduction in VOCs and reduced exposure to sensitive populations. Most facilities are expected to comply with the proposed amendments to Regulation 8-32 by lowering the VOC content in coatings manufactured and used in the Bay Area. A number of VOCs currently used in coating and solvent formulations have also been identified as TACs, such as ethylene-based glycol ethers, TCE, and toluene. When a product is reformulated to meet new VOC limits, however, a manufacturer could use a chemical, not used before, that may be a TAC. The proposed amendments to Regulation 8-32 do not provide exemptions to compounds that are TACs so there is no incentive to use TACs.

Conventional solvents include chemicals such as toluene, xylene, methyl alcohol, Stoddard Solvent, methyl ethyl ketone (MEK), isopropyl alcohol, ethylene glycol monobutyl ether (EGBE), ethylene glycol monomethyl ether (EGME), and ethylene glycol monoethyl ether (EGEE). The coatings and solvents being reformulated to comply with the proposed amendments are such chemicals as acetone, parachlorobenzotrifluoride (PBCTF), propylene glycol monomethyl ethers, di-propylene glycol monomethyl ethers (DPM), 3-ethoxypropanoic acid (an ethyl ester), and isopropyl alcohol, as well as water. Table 3-5 provides a summary of toxicity data associated with conventional coatings and products commonly used in reformulated coatings and surface preparation and cleaning solvents.

TABLE 3-5

Toxicity of Conventional and Replacement Solvents

| Conventional Solvents | | | | |
|-----------------------|-------------------------|------------------------|---|--------------------------|
| Solvents | TLV (ACGIH) (ppm) | PEL (OSHA) (ppm) | STEL ⁽²⁾ (ACGIH) (ppm) | IDLH (NIOSH) (ppm) |
| Toluene | 50 | 200 | | 500 |
| Xylene | 100 | 100 | 150 | 900 |
| MEK | 200 | 200 | 300 | 3000 |
| Stoddard Solvent | 100 | 500 | Not Available | 3448 |
| Ethyl Alcohol | 1000 | 1000 | Not Available | 3300 ⁽³⁾ |
| Methyl Alcohol | 200 | 200 | 250 | 6000 ⁽³⁾ |
| Isopropyl Alcohol | 400 | 400 | 500 | 2000 ⁽³⁾ |
| EGBE | 25 | 50 | Not Available | 700 |
| EGEE | 5 | 200 | Not Available | 500 |
| EGME | 5 | 25 | Not Available | 200 |
| Replacement Solvents | | | | |
| Acetone | 750 | 1000 | 1000 | 2500 ⁽³⁾ |
| Texanol | Not Established | Not Established | Not Established | Not Established |
| Di-Propylene Glycol | Not Established | Not Established | Not Established | Not Established |
| Propylene Glycol | 3.21 ⁽¹⁾ | Not Established | Not Established | Not Established |
| Ethylene Glycol | 39 | Not Established | Not Available | Not Established |
| PCBTF | 25 ⁽⁴⁾ | Not Established | Not Established | Not Established |
| 1,1,1-trichloroethane | 350 | 350 | 450 | 700 |
| Methylene Chloride | 50 | 500 | Not Available | 2300 |
| n-Butyl Acetate | 150 | 150 | 200 | 1700 ⁽³⁾ |
| t-Butyl Acetate | 200 | 200 | Not Available | 1500 ⁽³⁾ |
| Isobutyl Acetate | 150 | 200 | 250 | 1300 ⁽³⁾ |
| Methyl Acetate | 200 | 200 | 250 | 3100 ⁽³⁾ |
| TDI | 0.005 | 0.02 | 0.02 | 2.5 |
| HDI | 0.005 ⁽⁴⁾ | Not Established | Not Established | Not Established |
| MDI | 0.005 | 0.02 | 0.02 | 7.33 |

(1) 2007 AIHA Workplace Environmental Exposure Level; (2) STEL = short-term exposure limit (usually 15 minutes); and (3) Based on 10 percent of the lower explosive limit.

In general, replacement solvents for reformulated products are for the most part common chemicals used in a wide variety of industrial and consumer applications. Their widespread use indicates that users have the ability to use these compounds in a safe manner. Current coating formulations contain materials that are as toxic as, or more toxic than, formulations expected to be used to comply with proposed amendments to Regulation 8-32. Thus, the possible increased use of potentially toxic materials in reformulated solvents/coatings are expected to be balanced by a concurrent decrease in the use of materials in currently used products that are typically more toxic, so TAC impacts would not be expected to increase compared to existing conditions. According to the studies conducted by CARB, it was concluded that the general public and coating applicators would not be exposed to either long-term or short-term health risk due to the application of compliant coatings (CARB, 2007). It is expected that

future compliant materials will contain less hazardous materials (or will contain non-hazardous materials) as compared to previous solvent-borne coatings, resulting in an environmental benefit because the reformulated coatings and solvents are less toxic than previous solvent-borne coatings and solvents. Therefore, the proposed amendments to Regulation 8-32 are not expected to result in an increase in toxic air contaminants.

III e. The proposed amendments are not expected to result in an increase in odors. The proposed amendments to Regulation 8-32 are expected to reduce VOC emissions from the coating of wood products. The use of coatings with lower VOC limits are expected to generate less VOC emissions and ultimately reduce the potential for odor impacts. Therefore, no significantly adverse incremental odor impacts are expected due to the proposed rule amendments.

Based upon these considerations, no significant adverse air quality impacts are expected from the implementation of the proposed rule amendments. In fact, the proposed rule amendments are expected to provide beneficial air quality impacts by reducing VOC emissions and ultimately reducing ozone formation.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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.? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 entire area under the jurisdiction of the BAAQMD is affected by the proposed rule amendments, and is located within 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. A majority of the affected areas have been graded to develop various commercial or residential structures. Native vegetation, other than landscape vegetation, has generally been removed from areas to minimize safety and fire hazards. Any new development would fall under the requirements of the City or County General Plans.

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 wood products coatings. The proposed amendments are not expected to require the construction of any major new facilities and would not require construction activities outside of existing facilities. Most areas where wood products coatings are used have typically been graded and developed, and biological resources, with the exception of landscape species, have generally been removed. Implementation of the proposed amendments to Regulation 8-32 would further reduce the VOC content of wood products coatings, primarily through reformulation. The amendments to Regulation 8-32 would not require development outside of existing areas and would not impact any native biological resources.

Based upon these considerations, no significant adverse impacts to biological resources are expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside a formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and applications affected by the proposed rule amendments to Regulation 8-32 are located throughout the area within the jurisdiction of the BAAQMD.

Regulatory Background

The State CEQA Guidelines define a significant cultural resource 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 wood products coatings. There are existing laws designed to protect and mitigate potential impacts to cultural resources. Amendments to Regulation 8-32 are not expected to affect archeological or cultural sites because reformulation of wood products coatings would not require any construction activities. Existing facilities have been graded and developed. No new construction would be required outside of the existing facility boundaries due to the adoption of the proposed amendments to Regulation 8-32. As a result, no significant adverse impacts to cultural resources are expected due to the proposed amendments to Regulation 8-32.

Based upon these considerations, no significant adverse impacts to cultural resources are expected from the implementation of the proposed rule amendments.

| | 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: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • 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. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Strong seismic groundshaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

The Bay Area is 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 inter-fingered 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. Wood products coatings are applied to new and existing wood products. No major construction activities would be required as a result of adopting the proposed amendments to Regulation 8-32, as the proposed amendments affect coating formulators, sellers, and users, and have no effects on geophysical formations in the District as no new structures would need to be constructed. Coating activities and operations would not change from current practices, i.e., people will not be exposed to adverse geological effects greater than what currently exists. Wood coating products manufacturer's may have to modify individual processes and procedures and may require new equipment to ensure it continues to meet the quality standards for its specific products using lower VOC coatings. Facilities may have to adjust spray techniques, drying techniques, and other internal procedures to accommodate the characteristic of lower VOC and water-borne coatings, but major construction activities are not expected. No significant adverse impacts from seismic hazards are expected since no new major development is required to implement the proposed amendments to Regulation 8-32.

VII b. The proposed amendments to Regulation 8-32 do not require major construction activities such as grading or trenching, so existing geophysical conditions will be unaffected. Since no major development will be required as a result of the proposed amendments, no major soil disturbance activities are expected. Therefore, the lowering of VOC content limits of affected wood products coatings would not result in substantial soil erosion or the loss of topsoil as no major construction activities would be required.

VII c – e. The proposed amendments to Regulation 8-32 are not expected to require major new development. Since affected facilities already exist, no additional structures would be constructed on a geologic unit or soil that is unstable or that would become unstable, or potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Likewise, no structure would be constructed on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. Compliance with the Uniform Building Code would minimize the impacts associated with existing geological hazards. Major construction activities would not be required and would not affect 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. Therefore, no significant adverse impacts to geology and soils are expected due to the proposed amendments to Regulation 8-32.

Based upon these considerations, no significant geology and soils impacts are expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Setting

The affected coating manufacturing facilities handle and process measurable 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.

Hazards are related to the risks of fire, explosions, or releases of hazardous substances in the event of accident or upset conditions. Hazards are thus related to the production, use, storage, and transport of hazardous materials. Industrial production and processing facilities are potential sites for hazardous materials. Some facilities produce hazardous materials as their end product, while others use such materials as an input to their production processes. Examples of hazardous materials used by consumers include fuels, paints, paint thinner, nail polish, and solvents. Hazardous materials may be stored at facilities producing such materials and at facilities where hazardous materials are part of the production processes. Storage refers to the bulk handling of hazardous materials before and after they are transported to the general geographical area of use. Currently, hazardous materials are transported throughout the Bay Area in great quantities via all modes of transportation including rail, highway, water, air, and pipeline.

The potential hazards associated with handling such materials are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facilities where they exist. 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.

- 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 or vessel 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 many types of industrial facilities. 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.

Regulatory Background

The use, storage and transport of hazardous materials are subject to numerous laws and regulations at all levels of government. The most relevant existing hazardous materials laws and regulations include hazardous materials management planning, hazardous materials transportation, hazardous materials worker safety requirements, hazardous waste handling requirements, and emergency response to hazardous materials and waste incidents. There are many federal and state rules and regulations that facilities handling hazardous materials 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.

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.

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 40 CFR, 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 U.S. 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 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 considers human factors as part of process hazards analyses, incident investigations, training, operating procedures, among others.

Discussion of Impacts

VII a - c. It is expected that the proposed amendments to Regulation 8-32 will lead to a reduction in VOC emissions from wood product coatings. Most affected facilities are expected to comply with the proposed amendments to Regulation 8-32 by reducing the VOC content limit of coatings. There are no provisions in the proposed amendments that would increase the total amount of coatings currently used by affected facilities. The use of new formulations of coatings may alter chemical constituents of the solvents used in these operations. CARB concluded in the SCM for architectural coatings that coating manufacturers will continue the trend of using less hazardous solvents in compliant coatings. It is expected that this will continue to be the trend with wood products coatings as well and future compliant coatings will contain less hazardous materials, or non-hazardous materials, compared to conventional coatings, resulting in a net benefit regarding hazards (CARB, 2006).

Wood coating operations are not expected to change from current practice and, thus, the amount of solvents used or transported is not expected to increase. In fact, the use of water-borne formulations will result in a decrease in solvent use and transport. Therefore, no additional transport of the solvents is expected and, thus, no new hazards to the public will be created through transport, use, or disposal of hazardous materials. As a result, the proposed amendments are not expected to increase the probability of a hazardous material release.

It is assumed that coatings would be reformulated as water-based or with solvents such as parachlorobenzotrifluoride (PCBTF) or acetone. There are two hazards to be considered when evaluating hazard impacts from reformulating coatings and solvents; flammability and ignitions/explosions. Reformulation with water-based coatings would reduce the risk of flammability, since solvents are not typically included as part of the formulation of these coatings. TBAC and acetone have the same flammability rating as the conventional solvents that would be replaced (toluene, xylene, MEK) (see Table 3-6). The National Fire Protection Association (NFPA) Flammability Classification for PCBTF is the lowest of the solvents evaluated (1 = combustible if heated versus 3 = warning: flammable liquid flash point below 100 degrees Fahrenheit (F)). Consequently, no increase in flammability due to reformulation is expected.

The auto-ignition temperature of a substance is the temperature at or above which a material will spontaneously ignite (catch fire) without an external source of ignition, such as a spark or flame. Flash point is the lowest temperature at which a liquid would have a concentration in the air near the liquid surface which could be ignitable by an external source of ignition (spark or flame). The lower the flash point, the easier it is to ignite the material. PCBTF has characteristics that are similar to the solvents likely to be replaced; however, PCBTF's auto-ignition temperature is lower. While the auto-ignition temperature for PCBTF is the lowest of the solvents presented it is still 194 degrees F and the flashpoint temperature of 109 degrees F is higher than both the replacement solvents evaluated (CARB, 2006).

TABLE 3-6

Chemical Characteristics for Common Solvents

| Chemical Compounds | M.W. | Boiling Point (F) | Flashpoint (F) | Vapor Pressure (mmHg @ 68 F) | Lower Explosive Limit (% by Vol.) | Flammability Classification (NFPA)* |
|--|-------------|--------------------------|-----------------------|-------------------------------------|--|--|
| Traditional/Conventional Solvents | | | | | | |
| Toluene | 92 | 231 | 40 | 22 | 1.3 | 3 |
| Xylene | 106 | 292 | 90 | 7 | 1.1 | 3 |
| MEK | 72 | 175 | 21 | 70 | 2.0 | 3 |
| Isopropanol | 60 | 180 | 53 | 33 | 2.0 | 3 |
| Butyl Acetate | 116 | 260 | 72 | 10 | 1.7 | 3 |
| Isobutyl Alcohol | 74 | 226 | 82 | 9 | 1.2 | 3 |
| Stoddard Solvent | 144 | 302-324 | 140 | 2 | 0.8 | 2 |
| Petroleum Distillates (Naphtha) | 100 | 314-387 | 105 | 40 | 1.0 | 4 |
| EGBE | 118 | 340 | 141 | 0.6 | 1.1 | 2 |
| EGME | 76 | 256 | 107 | 6 | 2.5 | 2 |
| EGEE | 90 | 275 | 120 | 4 | 1.8 | 2 |
| Replacement Solvents | | | | | | |
| Acetone | 58 | 133 | 1.4 | 180 | 2.6 | 3 |
| Di-Propyl Glycol | 134 | 451 | 279 | 30 | 1 | 1 |
| Propylene Glycol | 76 | 370 | 210 | 0.1 | 2.6 | 1 |
| Ethylene Glycol | 227 | 388 | 232 | 0.06 | 3.2 | 1 |
| Texanol | 216 | 471 | 248 | 0.1 | 0.62 | 1 |
| Oxsol 100 | 181 | 282 | 109 | 5 | 0.90 | 1 |

Source: SCAQMD, 2005

*National Fire Protection Association. 0 = minimal; 1 = slight; 2 = moderate; 3 = serious; 4 = severe

Acetone, the solvent with the highest flammability rating, has characteristics that are similar to the conventional solvents it would likely replace; however, the flash point temperature is the lowest compared to all solvents evaluated. Acetone vapors will not cause an explosion unless the vapor concentration exceeds 26,000 ppm. In contrast, toluene vapors can cause an explosion at 12,000 ppm; the concentration of MEK that could cause an explosion is 14,000 ppm; and the concentration of xylene vapors that could cause an explosion is even lower at 10,000 ppm. Under operating guidelines of working with flammable materials in well-ventilated areas, as prescribed by the fire department codes, it would be difficult to achieve concentrated streams of such vapors. Therefore, reformulation is not expected to increase, and may actually reduce, ignition or explosion hazards.

The following safety practices and application techniques are recommended by the National Association of Corrosion Engineers (NACE) and the Society for Protective Coatings during the application of coatings and solvents including future compliant coatings and surface preparation and cleaning solvents.

- **Worker Isolation** – Areas where coatings with hazardous materials are applied should be restricted to essential workers. If feasible, these workers should avoid direct contact with hazardous materials by using automated equipment or an area with plenty of ventilation.
- **Protective Clothing and Equipment** – When there is the potential for hazardous material exposure, workers should be provided with and required to use appropriate personal protective clothing and equipment such as coveralls, footwear, chemical-resistant gloves and goggles, full faceshields, and suitable respiratory equipment.
- **Respiratory Protection** – Only the most protective respirators should be used for situations involving exposures to hazardous materials because they have poor warning properties, are potent sensitizers, or may be carcinogenic. Any respiratory protection program must, at a minimum, meet the requirements of the OSHA respiratory protection standard [29 CFR 1910.134]. Respirators must be certified by NIOSH and MSHA according to 30 CFR or by NIOSH (effective July 19, 1995) according to 42 CFR 84.
- **Worker and Employer Education** – Worker education is vital to a good occupational safety and health program. OSHA requires that workers be informed about hazardous materials they work with, potential hazards of those materials, training to minimize hazards, potential health effects of exposure, and methods to prevent exposure.

The fire departments regulate spray application of flammable or combustible liquids. They require no open flame, spark-producing equipment, or exposed surfaces exceeding the ignition temperature of the material being sprayed within the area. For open spraying, no spark-producing equipment or open flame shall be within 20 feet horizontally and 10 feet vertically of the spray area. Anyone not complying with the guidelines would be in violation of the current fire codes. The fire departments limit residential storage of flammable liquids to five gallons and recommends storage in a cool place. If the flammable coating container will be exposed to direct sunlight or heat, storage in cool water is recommended. Finally, all metal containers involving the transfer of five gallons or more should be grounded and bonded.

Thus, applicators are not expected to require additional training regarding the proper handling or application of compliant coatings containing hazardous materials which will further reduce the applicator's exposure because these safety measures tend to be established in existing affected facilities.

Based upon all of the above considerations, hazard impacts are expected to be less than significant. It is expected that the lower VOC content coatings will contain less hazardous materials, or non-hazardous materials, as compared to conventional coatings, resulting in a net benefit regarding hazards. Reformulation with water-based coatings would reduce the risk of flammability, since solvents are not typically included as part of the formulation of these coatings and replacement solvents, like acetone, have the same flammability rating as the conventional solvents that would be replaced (toluene, xylene, MEK). Replacement solvents generally have auto-ignition temperature and flash point temperature characteristics that are similar or better than conventional solvents. Reformulation is not expected to increase, and may actually reduce, flammability, ignition and explosion hazards. Local fire department

and OSHA regulations coupled with standard operating practices ensure that conditions are in place to protect against hazard impacts. Therefore, no significant impacts on hazards are expected.

VII d. No impacts on hazardous material sites are anticipated from the proposed rule amendments that would apply to wood products coatings manufacturers. Some of the affected areas 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. Wood products coatings manufacturing facilities already exist, and are primarily located and operated within the confines of industrial and commercial facilities. The proposed rule amendments neither require, nor are likely to result in, activities that would affect 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 wood products coatings manufacturers. The existing equipment and operations are primarily located within the confines of existing industrial and commercial facilities. Once the proposed amendments are implemented, facilities would be expected to comply by lowering the VOC content limit in applicable coatings. These changes are expected to be made within the confines of the existing facilities. No development outside of existing facilities is expected to be required by the proposed amendments to Regulation 8-32. Therefore, no significant adverse impacts on an airport land use plan or on a private air strip are expected.

VII g. No significant impacts on emergency response plans are anticipated from the proposed rule amendments. Reducing the VOC content of affected coatings is not expected to affect or interfere with a user's ability to comply with all adopted emergency response plans and emergency evacuation plans because the proposed amendments are not expected to require construction of any major structures or features that could impede the execution of emergency response or emergency evacuation plans. Additionally, Health and Safety Code 25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In cooperation with California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area. Therefore, no significant adverse impacts on emergency response plans are expected.

VII h. No increase in hazards related to wildfires are anticipated from the proposed rule amendments. The coating manufacturers affected by the proposed amendments already exist and are primarily located and operate within the confines of existing industrial and commercial. The proposed amendments would not result in construction activities outside the boundaries of the existing facilities. No increase in exposure to wildfires will occur due to the proposed amendments to Regulation 8-32.

Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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.

The wood products coatings and operations affected by the proposed rule amendments are located throughout the Bay Area. 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 Bay Area is 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 (SWRCB), 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 Regional Water Quality Control Board (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 (RWQCB).

In response to the Federal Act, the State Water Resources Control Board (SWRCB) 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, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. 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 constituent 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, dichlorodiphenyltrichloroethane (DDT), diazinon, dieldrin, dioxin and furan compounds, mercury, nickel, polychlorinated biphenyls (PCBs), and selenium.

Discussion of Impacts

VIII a - f. No significant adverse impacts on hydrology/water quality resources are anticipated from the proposed amendments to Regulation 8-32, which would apply to wood products coatings manufacturing facilities and coating applicators throughout the Bay Area. Lowering the VOC content limit of certain wood products coatings at affected facilities will have no direct or indirect impact on hydrology and water quality because the reformulation of the coatings is not expected to change the current wood products coatings operation practices or alter the coating formulations to be more detrimental to water quality.

It is reasonable to assume that additional water will be used for the manufacture of wood products coatings as one of the impacts of the proposed amendments to Regulation 8-32 could be the increased production of water-based coatings. CARB estimated the increased water demand in the Bay Area associated with its proposed architectural coatings Suggested Control Measure would be about 6.28 million gallons per year by 2010 or about 17,206 gallons per day (CARB, 2000). The primary objective of CARB's control measure was to set VOC limits and other requirements that are feasible (based on current technology) and that will achieve significant emission reductions in VOC emissions from architectural coatings. Larger quantities of architectural coatings are used in the Bay Area than wood products coatings as the use of architectural coatings is more wide spread. For the purposes of this analysis, wood products coatings are assumed to be about 10 percent of the use of architectural coatings, so the manufacture of wood products coatings is estimated to require about 628,000 gallons of water per year or about 1,700 gallons per day in the Bay Area. Using this estimate for water demand is expected to be conservative because many of the manufacturer's of wood coatings have already reformulated some of the coatings because of existing rules and regulations in other parts of the state. This potential increase in water demand is within the capacity of water supplied from various sources in the Bay Area (estimated water demand of about 1,880 billion gallons per year in 2010) (CARB, 2000) and is not considered significant compared with current and projected future demand and supply. While there are projected drought-year shortages in some regions of California, these shortages would occur regardless of the proposed rule amendments.

The SWRCB and nine RWQCBs are responsible for protecting surface and groundwater supplies in California, regulating waste disposal, and requiring cleanup of hazardous conditions (California Water §§13000 - 13999.16). In particular, the SWRCB establishes water-related policies and approves water

quality control plans, which are implemented and enforced by the RWQCBs. These agencies also regulate discharges to State waters through federal NPDES permits. Discharges to publicly owned treatment works (POTW) are regulated through federal pretreatment requirements enforced by the POTWs.

The proposed amendments to Regulation 8-32 are not expected to adversely impact water quality since the use of less toxic exempt solvents is expected to result in equivalent or lesser water quality impacts than currently used solvents. Water resources impacts are considered significant if they cause changes in the course of water movements or of drainage or surface runoff patterns; substantially degrade water quality; deplete water resources; significantly increase toxic inflow to public wastewater treatment facilities; or interfere with groundwater recharge efforts. No significant adverse impacts are anticipated from implementation of the proposed amendments.

The amendments to Regulation 8-32 are not expected to adversely impact water quality because the use of exempt solvents is expected to result in equivalent or lesser water quality impacts than currently used solvents due to the compliant solvents being less toxic. Further, because a certain portion of currently available compliant coatings are already based on water-borne technology, no additional water quality impacts from future compliant waterborne coatings are expected because these coatings are also expected to be waterborne, but make up the same proportion of water-borne coatings as are currently used prior to the amendments. Finally, the amendments to Regulation 8-32 are not expected to promote the use of compliant coatings formulated with hazardous solvents that could create water quality impacts.

VIII g – i. The wood products coatings manufacturing operations and applicators affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD. No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-32. Coatings manufacturers are generally located to avoid flood zone areas and other areas subject to flooding. The proposed amendments are not expected to require additional construction activities, place any additional structures within 100-year flood zones, or other areas subject to flooding. Therefore, no significant adverse impacts due to flooding are expected.

VIII j. The wood products coatings manufacturing operations and applicators affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD. No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-32. The proposed amendments are not expected to place any additional structures within areas subject to inundation by seiche, tsunami or mudflow. Therefore, no significant adverse impacts on hydrology/water due to seiche, tsunami, or mudflow are expected.

Based upon these considerations, no significant adverse hydrology and water quality impacts are expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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. No provisions of the proposed amendments to Regulation 8-32 would directly affect applicable land use plans, zoning ordinances, habitat conservation, or natural community conservation plans. Wood products coatings operations are expected to comply with Regulation 8-32 by reducing VOC content in coatings. These changes are expected to occur within the confines of existing facilities. No construction activities outside of the confines of existing facilities are expected to be required due to the adoption of the proposed amendments to Regulation 8-32, so no impacts on land use are expected. Wood products coatings operations located in the District are not expected to need additional land to continue current operations or require rezoning to comply with the proposed rule amendments.

Based upon these considerations, no significant adverse impacts to land use are expected due to the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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 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. The proposed amendments are designed to lower VOC content in wood products coatings, and would not typically require mineral resources to reformulate compliant products. Therefore, no impacts on mineral resources are expected.

Based upon these considerations, significantly adverse impacts to mineral resources not expected from the implementation of the proposed amendments to Regulation 8-32.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Expose persons to or generate of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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-d. The wood products coatings and operations affected by the proposed rule amendments already exist and it is expected that while wood products coatings operations are not noise intensive, coatings manufacturers would comply with existing relevant local community noise standards and ordinances. Wood products coatings formulators and coating contractors affected by the proposed rule amendments would be required to use coatings reformulated with lower VOC content. No major construction activities would be required due to the adoption of the proposed amendments to Regulation 8-32 so that no noise impacts associated with the use of construction equipment and construction-related traffic is expected.

Noise from the proposed amendments is not expected to produce noise in excess of current operations at facilities that manufacture wood products coatings. In general, the primary noise sources at existing facilities that manufacture wood products coatings are generated by vehicular traffic, spray equipment, and heavy equipment such as fork lifts and trucks. It is expected that facilities affected by the proposed amendments to Regulation 8-32 will comply with all existing noise control laws or ordinances. Further, the OSHA and Cal/OSHA have established noise standards to protect worker health. Additionally, compliance with amendments to Regulation 8-32 is not expected to create significant noise impacts as lowering VOC content in wood products coatings will not affect noise levels from coating operations or applications as contractors would continue to use the same or similar equipment. Therefore, no adverse significant impacts to noise are expected due to the proposed project.

XI. e-f. Though some of the facilities affected by the proposed project may be located at sites within an airport land use plan, or within two miles of a public airport, the lowering of VOC content in certain wood products coatings would not expose people residing or working in the project area to the same degree of excessive noise levels associated with airplanes. Compliance with amendments to Regulation 8-32 will not affect noise levels from coatings manufacturing or applications as manufacturers would continue to use the same or similar equipment. All noise producing equipment must comply with local noise ordinances and applicable OSHA or Cal/OSHA workplace noise reduction requirements. Based upon the above considerations, significant noise impacts are not expected from the implementation of the proposed project.

Based upon these considerations, significant noise impacts are not expected from the implementation of the proposed rule amendments.

| | 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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. No major construction activities are expected due to the proposed amendments. The minor facility modifications that may be required by the proposed amendments can be completed within the existing coatings manufacturing facilities in the Bay Area. Further, it is not expected that the minor facility modifications will require new employees at the affected facilities. Human population within the jurisdiction of the BAAQMD is anticipated to grow regardless of implementing the amendments to Regulation 8-32. As a result, the proposed project is not anticipated to generate any significant adverse effects, either direct or indirect, on population growth or population distribution in the Bay Area.

XII b-c. Because the proposed project would include minor modifications and/or changes at existing facilities located in the Bay Area, the proposed project is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the Bay Area.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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 proposed amendments will require the lowering of VOC content in certain wood products coatings, but all modifications would occur within the confines of the existing wood products coatings

manufacturers. The proposed amendments would not impact existing security and, therefore, are not expected to impact police services or require additional police protection.

Reformulation of coatings is not expected to require new or additional fire fighting resources. It is more likely that compliant coatings will be reformulated with less hazardous materials compared to current coatings, resulting in a reduction in the need for fire fighting services. Fire protection services are generally provided by city and county fire departments with some cities contracting with the county for services. Local fire departments function as the first responding emergency team in the event of a fire or release of hazardous materials. Additionally, coating materials compliant with the proposed amendments to Regulation 8-32 are not expected to cause significant adverse human health impacts, so accidental release scenarios would be expected to pose a lower risk to the public and less need for emergency responders. Therefore, the proposed amendments are not expected to significantly increase the need or demand for additional fire protection services above current levels.

As noted in the “Population and Housing” discussion above, the proposed project is not expected to induce population growth in any way because the existing coatings manufacturers (e.g., workforce) are expected to be sufficient to accommodate any modifications or conversions that may be necessary at affected facilities and the reformulation of coatings is not expected to require additional employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

Based upon these considerations, significant public services impacts are not expected from the implementation of the proposed rule amendments.

| | 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.? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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. As discussed under “Land Use” above, there are no provisions of the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed amendments to Regulation 8-32 and no increase in population is expected. Further, the proposed amendments would not increase the use of existing neighborhood and regional parks or other recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment because the proposed project is not expected to induce population growth. Therefore, no significant adverse impacts on recreation are expected.

Based upon these considerations, significant recreation impacts are not expected from the implementation of the proposed rule amendments.

| | 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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.

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 restriped 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 state and county level. Planning for interstate highways is generally done by the California Department of Transportation.

Most local counties maintain a transportation agency that has the duties of transportation planning and administration of improvement projects within the county and implements the Transportation Improvement and Growth Management Program, and the congestion management plans (CMPs). The CMP identifies a system of state highways and regionally significant principal arterials and specifies level of service standards for those roadways. The Metropolitan Transportation Commission is the main transportation planning agency in the Bay Area.

Discussion of Impacts

XV a-b. Since no major construction activities are expected as a result of implementing the proposed amendments to Regulation 8-32, no increase in construction-related traffic is expected.

Wood products coatings manufacturers are not expected to increase or decrease the amount of coatings they produce, and coating contractors are not expected to change the amount of coatings they apply, as a result of the proposed rule amendments. Therefore, the number of trucks needed to deliver the materials to produce lower VOC content coatings should not significantly change from the current number of delivery trucks, and the number of trucks required to distribute reformulated coating products should not change. No additional delivery or disposal trucks are expected to be required due to the proposed rule amendments. The work force at each affected facility is not expected to increase as a result of the proposed amendments. Thus, the traffic impacts associated with the proposed rule amendments are expected to be less than significant.

XV c. Though some of the wood products coatings manufacturers that will be affected by the proposed amendments may 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, actions that would be taken to comply with the proposed amendments are not expected to influence or affect air traffic patterns. Further, the reformulation to lower VOC content coatings would not be expected to involve air traffic or affect

navigable air space in any way. Thus, the proposed amendments would not result in a change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

XV d - e. The location of each affected facility is expected to be consistent with surrounding land uses and traffic/circulation in the surrounding areas of the affected coatings manufacturing facilities. Thus, the proposed amendments are not expected to increase traffic hazards or create incompatible uses at or adjacent to the affected coatings manufacturing facilities. Since no major construction activities are expected due to the proposed amendments, no increase in construction traffic is expected. The proposed amendments are not expected to require a modification to circulation, thus, no long-term impacts on the traffic circulation system are expected to occur. The proposed amendments do not involve construction of any roadways, so no increase in traffic hazards is expected. Emergency access at each affected wood products coatings manufacturing facility is not expected to be impacted by the proposed amendments since no major construction activities are required. Further, each affected facility is expected to continue to maintain their existing emergency access and procedures and emergency access would not be impacted by the proposed rule amendments.

XV f. Since no major construction activities are required due to adoption of the proposed amendments, no significant impact on parking for construction workers is expected. Further, no additional parking is expected to be needed after adoption of the proposed rule amendments because no increase in employees at wood products coatings manufacturing facilities is expected. Therefore, the proposed rule amendments will not result in significant adverse impacts on parking.

XV g. Operational activities resulting from the proposed amendments are not expected to conflict with policies supporting alternative transportation since the proposed amendments do not involve or affect alternative transportation modes (e.g. bicycles or buses).

Based upon these considerations, significant transportation/traffic impacts are not expected from the implementation of the proposed rule amendments.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 most 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 wood products coatings manufacturers, which is not recycled off-site, is required to be disposed of at a licensed 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 maintained within the local jurisdiction.

Discussion of Impacts

XVI a, b, d and e. The operations affected by the proposed rule amendments already exist and are primarily located within the confines of existing wood products coatings manufacturing facilities. The proposed rule amendments are not expected to generate additional wastewater at the affected facilities. See Section VIIIa for further discussion on wastewater impacts.

XVI c. The affected facilities are expected to comply with the proposed amendments by lowering the VOC content in certain wood products coatings. No major construction activities at the existing facilities would be required as a result of adopting the proposed amendments. Any facility modifications would be expected to occur within the confines of the existing facilities. Therefore, the proposed amendments are not expected to alter the existing drainage or require the construction of new storm water drainage facilities. Nor are the proposed amendments expected to create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Therefore, no significant adverse impacts on storm drainage facilities are expected.

XVI f and g. The proposed rule amendments would not affect the ability of existing facilities to comply with federal, state, and local statutes and regulations related to solid waste. Coating operations are not expected to change as a result of the proposed amendments to Regulation 8-32. The volume of coatings and coating wastes are also not expected to increase as a result of the proposed amendments. As a result, no new solid or hazardous waste will be generated due to the lowering of the VOC content limit in certain wood products coatings. The increased use of water-based coatings could have a beneficial impact on hazardous waste facilities by decreasing the amount of hazardous materials used and disposed

of in the manufacturing process. Therefore, potential adverse solid waste impacts are considered to be less than significant.

| | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 VOC emission reductions from wood products coatings, thus providing a beneficial air quality impact and related health effects. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources.

XVII b-c. The proposed amendments are expected to result in emission reductions of VOCs from affected facilities and applications, thus providing a beneficial air quality impact, improvement in air quality, and reduced health impacts due to reduce exposure to VOC emissions. The proposed rule amendments are part of a long-term plan to reduce the potential health impacts associated with exposure to 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. In fact, the proposed rule amendments are expected to provide beneficial health impacts by reducing VOCs emissions, the formation of ozone, and reducing human exposure to ozone in the Bay Area. No

significant adverse environmental impacts are expected due to implementation of the proposed rule amendments.

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CHAPTER 4

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