BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS' REGULAR MEETING

JUNE 15, 2005

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

Questions About an Agenda Item

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

Meeting Procedures

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

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

BOARD OF DIRECTORS' REGULAR MEETING
A G E N D A

WEDNESDAY **BOARD ROOM**
JUNE 15, 2005 **7TH FLOOR**

9:45 A.M.

CALL TO ORDER

Opening Comments — Marland Townsend, Chairperson
Roll Call — Clerk of the Boards
Pledge of Allegiance

PUBLIC COMMENT PERIOD

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

COMMENDATION/PROCLAMATION

The Board of Directors will recognize employees who have completed milestone levels of twenty-five (25), and thirty (30), years of service with the Air District during this past half year with certificates and pins.

CONSENT CALENDAR (ITEMS 1 – 6) **Staff/Phone (415) 749-**

1. Minutes of June 1, 2005 Meetings **M. Romaidis/4965** **mromaidis@baaqmd.gov**

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

   Information only

3. Report of the Advisory Council **B. Zamora/4962** **Bzamora@co.sanmateo.ca.us**

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

   Report of Division Activities for the month of May 2005.

5. Consider Approval of a New Classification of Policy and Outreach Intern and Approval of Revisions to College Intern Program Guidelines **J. Broadbent/5052** **jbroadbent@baaqmd.gov**

   The Board of Directors will consider approval of a new classification of Policy and Outreach Intern and Revisions to the College Intern Program Guidelines.

6. Authorization for Execution of Purchase Orders in Excess of $70,000 **J. Broadbent/5052**

jbroadbent@baaqmd.gov

The Board of Directors will consider authorizing the Executive Officer/APCO to execute the following purchase orders in excess of $70,000.

A) Purchase order to San Francisco Honda for the purchase of 5 (five) 2005 model year compressed natural gas Honda Civic sedans, not to exceed $113,911;

B) Purchase order to Brady Air Conditioning for Phase IV HVAC replacement, not to exceed $653,160;

C) Purchase order to Benjamin Bolles for Phase III of the fire alarm upgrades, not to exceed $116,340; and

D) Purchase order to Benjamin Bolles for upgrades to the 7th floor Board room, the 7th and 4th floor bathrooms, and the main lobby doors of the District, not to exceed $147,300.

COMMITTEE REPORTS AND RECOMMENDATIONS

7. Report of the **Legislative Committee** Meeting of June 6, 2005

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

Action(s): The Committee recommends that the Board of Directors take the following position on the bills listed below:

Bill	Brief Description	Staff Recommendation
AB 386 (Lieber)	Transfers smog check policy authority from BAR to ARB	Support
AB 721 (Nunez)	Establishes loan program for metal platers to install technology to cut emissions	Support
AB 1229 (Nation)	Puts air pollution and greenhouse gas labels on new cars	Support
AJR 8 (Canciamilla)	Urges Congress to ratify international treaty on marine vessel emissions	Support
SB 250 (Campbell)	Establishes specifications for hydrogen fuel for vehicles and fuel cells	Support
SB 1024 (Perata)	Safe Facilities, Improved Mobility, and Clean Air Bond Act of 2005	Support

PUBLIC HEARING

8. Public Hearing to Consider Proposed New Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants; Proposed Manual of Procedures, Volume II, Part 4: New and Modified Sources of Toxic Air Contaminants; proposed amendments to various District rules for consistency with proposed Regulation 2, Rule 5; and certification of a California Environmental Quality Act (CEQA) Environmental Impact Report.

B. Bateman/4653
bbateman@baaqmd.gov

The proposed rule and chapter to the Manual of Procedures will incorporate existing Air Toxics New Source Review policies to prevent significant increases in health risks resulting from new and modified sources of toxic air contaminants. The rule will also reduce existing health risks by requiring updated control requirements when older, more highly polluting sources are modified or replaced.

9. Public Hearing to Consider Approval of Proposed Amendments to Regulation 3: Fees and approval of the filing of a California Environmental Quality Act (CEQA) Notice of Exemption

B. Bateman/4653
bbateman@baaqmd.gov

The proposed amendments to Regulation 3: Fees, would increase fees effective July 1, 2005 based on the results of the Cost Recovery Study by Stonefield Josephson, Inc.

10. Final Public Hearing on the Proposed District Budget for Fiscal Year 2005/2006

J. Broadbent/5052
jbroadbent@baaqmd.gov

Pursuant to California Health and Safety Code Section 40131, the Board of Directors will conduct the final public hearing on the proposed District Budget and consider adoption.

OTHER BUSINESS

11. Report of the Executive Officer/APCO

12. Chairperson's Report

13. 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)

14. Time and Place of Next Meeting – 9:45 a.m.Wednesday, July 6, 2005 - 939 Ellis Street, San Francisco, CA 94109

15. Adjournment

CONTACT CLERK OF THE BOARD - 939 ELLIS STREET SF, CA 94109 **(415) 749-4965**
FAX: (415) 928-8560
BAAQMD homepage:
www.baaqmd.gov

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

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Townsend and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 6, 2005

Re: Commendations/Proclamations

RECOMMENDED ACTION:

The Board of Directors will recognize employees who have completed milestone levels of twenty-five (25), and thirty (30) years of service with the Air District during this past half year with certificates and pins.

BACKGROUND:

Bi-annually, the District recognizes employees who have contributed incremental years of dedicated service to the District. Formally, the Board recognizes and presents service awards to employees who have completed twenty-five (25) years or more of service to the District.

During the first half of calendar year 2005, there was one employee who completed thirty (30) years of service with the District, and four employees who completed twenty-five (25) years of service with the District. A list of these employees is attached.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Mary Ann Goodley

Employee Recognition Awards

<u>30 Years of Service</u>
Victor Morales-Laimon

<u>25 Years of Service</u>
Robert Bartley
Dick Ducker
William Hammel
Ninevah Williams

AGENDA: 1

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Townsend and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 7, 2005

Re: Board of Directors' Draft Meeting Minutes

RECOMMENDED ACTION:

Approve attached draft minutes of the Board of Directors meetings of June 1, 2005.

DISCUSSION

Attached for your review and approval are the draft minutes of the June 1, 2005 Board of Directors' meetings.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

AGENDA: 1

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 ELLIS STREET – SAN FRANCISCO, CA 94109

Draft Minutes: Board of Directors' Regular Meeting – June 1, 2005

Call To Order

Opening Comments: Chairperson Marland Townsend called the meeting to order at 9:52 a.m.

Roll Call: Present: Marland Townsend, Chair, Roberta Cooper, Chris Daly (9:55 a.m.), Mark DeSaulnier, Scott Haggerty, Patrick Kwok, Nate Miley, Julia Miller, Mark Ross, Michael Shimansky, John Silva, Pam Torliatt (9:56 a.m.), Gayle B. Uilkema, Brad Wagenknecht, Shelia Young.

Absent: Harold Brown, Dan Dunnigan, Erin Garner, Jerry Hill, Liz Kniss, Jake McGoldrick, Tim Smith.

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

Commendation/Proclamation: There were none.

Public Comment Period: There were none.

Consent Calendar (Items 1 – 3)

1. Minutes of May 18, 2005

2. Communications. Correspondence addressed to the Board of Directors

3. Report of the Advisory Council. There was no report.

Board Action: Director Miller moved approval of the Consent Calendar; seconded by Director Cooper; carried unanimously with no objection.

Committee Reports and Recommendations

4. Report of the Budget and Finance Committee Meeting of May 18, 2005

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

A) Increase the District's approved FY 04/05 Penalties and Settlements Revenue budget by \$800,000 to \$2,800,000 and County Revenue budget by \$638,000 to \$14,961,175 for a total increase of \$1,438,000;
B) Correspondingly, increase the FY 04/05 Capital Outlay for Building and Grounds by \$1,090,600, the Outlay for Motorized Equipment by \$130,000,

the Outlay for Lab & Monitoring Equipment by $171,400, and the Outlay for Computer & Network Equipment by $46,000 for a total increase of $1,438,000;

C) Add a new line item in the FY 04/05 Public Information and Outreach Professional Services budget for costs related to the 50th Anniversary Symposium in the amount of $250,000, and correspondingly add a revenue line item of $250,000 to recognize sponsorship income for this event;

D) Approval of Proposed amendments to the fee schedules and adoption of fee regulation; and

E) Approval of Fiscal Year 2005/2006 Proposed Budget upon completion of the second public hearing.

Director Chris Daly arrived at 9:55 a.m. and Director Pamela Torliatt arrived at 9:56 a.m.

Director Miller presented the report and stated that the Committee met on Wednesday, May 18, 2005 and received the Third Quarter Financial Report for Fiscal Year 2004/2005.

Staff presented reports on and the Committee recommends Board approval of the following items:

A. Increase the District's approved fiscal year 2004/2005 Penalties and Settlements Revenue budget by $800,00 to $2,800,000 and County Revenue budget by $638,000 to $14,961,175 for a total increase of $1,438,000;

B. Increase the fiscal year 2004/2005 Capital Outlay for Building and Grounds by $1,090,600, the Outlay for Motorized Equipment by $130,000, the Outlay for Lab and Monitoring Equipment by $171,400, and the Outlay for Computer and Network Equipment by $46,000, for a total increase of $1,438,000; and

C. Add a new line item on the fiscal year 2004/2005 Public Information and Outreach Professional Services budget for costs related to the 50th Anniversary Symposium in the amount of $250,000, and correspondingly add a new revenue line item of $250,000 to recognize sponsorship income for this event.

Staff presented a report on the proposed fee regulation amendments for fiscal year 2005/2006. *The Committee recommends that the Board of Directors adopt the proposed amendments to the fee regulation for fiscal year 2005/2006.*

Staff provided an overview of the fiscal year 2005/2006 budget and reported back to the Committee on several issues. *The Committee recommends approval and adoption by the Board of Directors of the proposed fiscal year 2005/2006 Budget upon completion of the second public hearing.*

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

Board Action: Director Miller moved that the Board approve the recommendations and report of the Budget and Finance Committee; seconded by Director Daly; carried unanimously without objection.

5. Report of the Executive Committee Meeting of May 20, 2005

Action(s): The Committee recommended that the Board of Directors adopt the resolution establishing a climate change program at the Air District.

Chairperson Townsend presented the report and stated that the Committee met on Friday, May 20, 2005. Brian Zamora, Advisory Council Chairperson, presented the Report of the Advisory Council and noted that at its last meeting, the Council passed a resolution encouraging the Air District to address climate change.

Stan Hayes, Chairperson of the Advisory Council Technical Committee, gave a presentation on the background and recent developments of global climate change.

The Committee received a presentation from staff on climate protection and climate change and how these issues relate to the District's core mission to reduce criteria and toxic air pollutants. Staff recommended that the Board of Directors adopt a resolution establishing a Climate Protection Program at the District. The Committee accepted the staff's recommendation.

Ted Droettboom, Regional Planning Program Director of the Joint Policy Committee provided an update on the JPC.

Staff presented a status report on the financial internal systems and controls audit. Work was initiated on April 25, 2005.

Staff sought direction from the Committee regarding development of a plan for cost recovery, capital planning and reserve designations. This item was referred to the Budget and Finance Committee for its consideration.

The Committee received an update on the ongoing work on the Production System replacement. The next meeting of the Executive Committee will be at the Call of the Chair.

Board Action: Chairperson Townsend moved that the Board approve the report and recommendation of the Executive Committee, that the Board of Directors adopt a resolution establishing a climate protection program at the Air District; seconded by Director Uilkema; carried unanimously with the following Board members voting:

AYES: Cooper, Daly, DeSaulnier, Haggerty, Kwok, Miley, Miller, Ross, Shimansky, Silva, Torliatt, Uilkema, Wagenknecht, Young, Townsend.

NOES: None

ABSENT: Brown, Dunnigan, Garner, Hill, Kniss, McGoldrick, Smith.

Adopted Resolution No. 2005-05 – A Resolution Establishing the Bay Area Air Quality Management District's Climate Protection Program

6. Report of the Stationary Source Committee Meeting of May 23, 2005

Director DeSaulnier presented the report and stated that the Committee met on Monday, May 23, 2005. The Committee received a report on the status of particulate matter control measures. The report included an overview of SB 656 PM requirements for ARB and the District; current District PM activities; staff's evaluation of ARB's list of potential PM control measures; and a summary of the next steps to be taken.

Staff updated the Committee on the development of the Refinery Flare Control Rule. The report included an overview of the rule, comments received, the District's responses, and potential rule revisions. A public hearing on the rule is expected to be held at the July 20, 2005 Board meeting.

The Committee received a status report on the Air Toxics New Source Review rule development project. Staff reviewed the existing Air Toxics NSR program, the risk management policy, the goals of the air toxics NSR rule development, and public comments received on the proposed rule. The public hearing to consider adoption of this rule is set for the June 15, 2005 Board meeting.

The next meeting of the Committee is scheduled for Monday, July 25, 2005.

Board Action: Director DeSaulnier moved that the Board approve the report of the Stationary Source Committee; seconded by Director Cooper; carried unanimously without objection.

Public Hearing

7. Public Hearing to Consider Approval of Proposed Amendments to Regulation 2, Rule 1: Permits, Section 407: Permit (Authority to Construct) Expiration and approval of the filing of a California Environmental Quality Act (CEQA) Notice of Exemption

The proposed amendments to Regulation 2, Rule 1, Section 407 will allow an Authority to Construct to be renewed by request beyond the four year time limit if the authority to construct has been substantially used or the project is a long term project that is covered by an EIR.

Bill Guy, Assistant Counsel, presented the report and provided background information on the proposed amendments.

Mr. Guy noted that a workshop has been held, two minor comments were received, all legal noticing requirements have been met and the amendments are exempt from CEQA. Staff recommends that the Board adopt the proposed amendments to Regulation 2, Rule 1, Section 407: Permit Expiration and approve the filing of a CEQA Notice of Exemption.

Chairperson Townsend opened the Public Hearing at 10:05 a.m. There were no speakers and the Public Hearing was closed at 10:08 a.m.

Board Action: Director Wagenknecht moved that the Board of Directors approve the staff recommendations; seconded by Director Kwok; carried unanimously with the following Board members voting:

AYES: Cooper, Daly, DeSaulnier, Haggerty, Kwok, Miley, Miller, Ross, Shimansky, Silva, Torliatt, Uilkema, Wagenknecht, Young, Townsend.

NOES: None.

ABSENT: Brown, Dunnigan, Garner, Hill, Kniss, McGoldrick, Smith.

Adopted Resolution No. 2005-06 – A Resolution of the Board of Directors of the Bay Area Air Quality Management District Amending District Regulation 2, Rule 1, Section 407: Permit Expiration

Other Business

8. Report of the Executive Officer/APCO – Mr. Broadbent reported on the following items:

    1. Thanked the Board for its leadership position on the adoption of the Executive Committee's recommendation on the climate protection program. The Air District will be assisting cities and counties to help them implement measures that will reduce climate change precursors.
    2. The kick-off for the Spare the Air campaign is today.
    3. Today is World Environment Day. The Air District will be showcasing 10 elements of a successful local air quality program at St. Mary's Cathedral.
    4. The two DaimlerChrystler Fuel Cell cars have been delivered to the District and will be on display.
    5. The Air District's Symposium is June 20th.
    6. The Air & Waste Management Conference is the same week as the Symposium.

9. Chairperson's Report: Chairperson Townsend stated that along with Mr. Broadbent and Mr. Kendall, Director of Technical Services, he attended a meeting in Monterey put on by the American Institute for Astronomics and Aeronautics. The topics of discussion were aircraft noise and emissions.

10. Board Members' Comments – Director Daly requested staff provide a side-by-side comparison of plug-in hybrid technology versus hydrogen fuel cell technology.

    Director Young noted that she and Director Cooper have been invited to Salt Lake City for a conference with other Mayors on the climate change issue.

11. Time and Place of Next Meeting – Wednesday, June 1, 2005 – Immediately Following Regular Meeting of the Board - 939 Ellis Street, San Francisco, CA 94109.

12. Adjournment – The meeting adjourned at 10:18 a.m.

Mary Romaidis
Clerk of the Boards

AGENDA: 1

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 ELLIS STREET – SAN FRANCISCO, CA 94109

Draft Minutes: Board of Directors' Regular Meeting – June 1, 2005

Call To Order

Opening Comments: Chairperson Marland Townsend called the meeting to order at 10:19 a.m.

Roll Call: Present: Marland Townsend, Chair, Roberta Cooper, Chris Daly, Mark DeSaulnier, Scott Haggerty, Patrick Kwok, Nate Miley, Julia Miller, Mark Ross, Michael Shimansky, John Silva, Pam Torliatt, Gayle B. Uilkema, Brad Wagenknecht, Shelia Young.

Absent: Harold Brown, Dan Dunnigan, Erin Garner, Jerry Hill, Liz Kniss, Jake McGoldrick, Tim Smith.

Public Comment Period: There were none.

Public Hearing

1. First Public Hearing on the Proposed District Budget for Fiscal Year 2005/2006

Pursuant to California Health and Safety Code Section 40131, the Board of Directors opened the first of two required public hearings on the proposed District Budget for public review and comment. Final action will be taken at the conclusion of the second public hearing scheduled for June 15, 2005.

Chairperson Townsend opened the Public Hearing at 10:20 a.m.

Jack Broadbent, Executive Officer/APCO, presented the report and reviewed the fiscal year 2005/2006 budget background and overall direction. Mr. Broadbent reviewed the fiscal challenges facing the Air District. It was noted that the Community Air Risk Evaluation (CARE) program and the Production System replacement for IRIS and Databank are continuing programs from last year. Mr. Broadbent highlighted several new initiatives and presented an overview of steps the District is proposing for potential cost savings.

The Board provided direction to staff on several items.

Chairperson Townsend called for public comment at 10:42 a.m. and the following individuals came forward:

Jenny Bard American Lung Association Santa Rosa, CA 95404	Ken Mandelbaum Coalition for Clean Air Mill Valley, CA 94941

There was discussion on the role of the Air District in the enforcement and monitoring of woodsmoke in the Bay Area. The Board recommended the issue be referred to the Stationary Source and Public Outreach Committees for further discussion.

Board Action: At 10:59 a.m., Chairperson Townsend continued the Public Hearing on the proposed District Budget for fiscal year 2005/2006 to Wednesday, June 15, 2005.

Other Business

2. Board Members' Comments – Director Torliatt requested that staff provide information for a policy for consideration that would allow Directors who attend Committee meetings to be named as potential alternates to sit on the Committees if there is no quorum of the Committee.

   Director Kwok requested staff provide information on the undesignated reserves.

3. Time and Place of Next Meeting – 9:45 a.m., Wednesday, June 15, 2005 – 939 Ellis Street, San Francisco, CA 94109.

4. Adjournment – The meeting adjourned at 11:01 a.m.

Mary Romaidis
Clerk of the Boards

AGENDA: 4

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Townsend and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 15, 2005

Re: Report of Division Activities for the month of May 2005

ADMINISTRATIVE SERVICES DIVISION – J. McKAY, ACTING DIRECTOR

On May 5 and May 18 the proposed budget was presented to the Budget and Finance Committee. The Committee recommended the budget to the Board for approval. The first of two public hearings is scheduled for June 1 with the final hearing on June 15. The budgeting process includes strategy around the expense-side impact of increases to PERS funding, medical coverage and the 27 pay-period year. On the revenue-side, the challenge is a second year of reduced property tax revenue. Fortunately, this is the last year of the decrease.

The final FYE 2004 audit report was presented to the Budget & Finance Committee. The Committee recommended the report be accepted by the Board.

The Third Quarter Financial Report for FY 2005-2005 was presented at the Budget and Finance Committee meeting on May 18. The Committee recommended the report be accepted by the Board.

The Budget and Finance Committee was presented with a recommendation that the 2004-2005 Budget be increased by $1,438,000. The Committee recommended that the increase be authorized by the Board.

Status of various capital projects in process:

	Started	% Complete	Completion Date
➢ Phase II Fire Alarm System	11/2003	85%	6/2005
➢ Phase III Fire Alarm System	To be submitted in the June Board of Directors Meeting.		
➢ Phase IV HVAC Upgrade	To be submitted in the June Board of Directors Meeting.		

COMPLIANCE & ENFORCEMENT DIVISION – K. WEE, DIRECTOR

Enforcement Program

The District entered into a Stipulated Conditional Order of Abatement with Tesoro Refining in Martinez. The order is a result of four separate incidents over an 18-month period in which Tesoro's primary system for handling coker exhaust gas malfunctioned. In each case coker exhaust gas laden with particulate pollution generated a black plume from the smoke stacks.

The order requires Tesoro to develop and implement an improved back up system to handle coker emissions during upsets. The refinery must also take interim steps to reduce the likelihood of further upsets and to minimize impacts should an upset occur, including revising operating procedures, retraining staff and performing enhanced inspections of certain operational parameters and provide results to the District.

Staff has continued working with Pacific Steel Castings on sampling emissions and re-evaluation of all their emissions. The District continues to receive numerous complaints alleging "burnt pot handle" odors from the Berkeley community. Staff has conducted overtime shifts on three occasions in May to respond to air pollution complaints on non-business hours.

Staff participated in the San Leandro Town Hall meeting for City Council District 6 on May 3, 2005. Staff presented information on the air pollution complaint program. The meeting was attended by local concerned citizens, community or association leaders, including the host District 6 City Council Member, the Mayor, the Vice-Mayor, the Community Development Director, the Assistant City Manager, the Public Works Manager, and the Chief of Police.

Staff attended the Alameda County Environmental Crimes Task Force meeting on May 11, 2005 and gave a presentation about mobile refuelers and the vapor recovery requirements that apply to this category of refueling vehicle. At the Contra Costa County Environmental Crimes Task Force meeting on May 18, 2005 staff referred an Antioch company for potential DTSC and RWQCB issues related to storm runoff.

Compliance Assurance Program

Inspection and Technical Services Division staff arranged an inspection of the ConocoPhillips gasoline bulk terminal in Richmond on May 5, in preparation of CARB vapor recovery certification test that was conducted on May 10.

CARB has approved the District's request for an alternative laboratory reference test method for establishing impurity levels (arsenic and cadmium) in non-Ferrous metals. This modern test method will now allow Staff to proceed with compliance determinations for brass smelting operations subject to Regulation 11-15. A compliance assistance advisory is being prepared to notify all applicable facilities in the District of the acceptable test method.

Tesoro Refinery in Martinez started up their truck loading rack, which has been shutdown since 1998. Tesoro obtained an Authority to Construct for modification and upgrades for the rack (adding an ethanol offloading rack). CARB met with Tesoro to discuss upcoming CARB certification testing, tentatively scheduled for June 28. This testing is required by CARB prior to operation.

Compliance Assistance Program

On May 18, staff met with representatives of NUMMI at the Fremont plant to review their environmental management programs as part of the Environmental Excellence Partnership Program. The working session entailed a comprehensive review of how NUMMI determines, tracks, and reports environmental compliance issues.

Staff chaired an Idling Port Truck Workgroup meeting at the Port of Oakland on May 17, 2005. Staff and workgroup members discussed terminal methodologies for identifying appointment trucks, truck lines in and outside terminal gates, enforcement statistics and marine terminal information to be posted on the District's website. The California Trucking Association, Independent Truckers, Port of Oakland Terminal Operators, Port of Oakland staff and a member of the Environmental Indicators Project (EIP) were represented at the meeting. Staff also attended the West Oakland Collaborative Meeting on May 27 to discuss issues related to diesel truck idling at the Port of Oakland.

Staff attended an EPA-sponsored presentation on May 19, 2005 on solvent cleaners from Surface Quality Resource Center (SQRC), a non-profit operation that specializes in industry assistance and impacted community outreach. Their presentation revolved around aqueous cleaners and the available options. Staff also attended the Golden Gate Pollution Prevention Committee (G2P2C) meeting at the Berkeley Computer Resource Center on May 17.

Staff continued work for three Industry Compliance School (ICS) classes for Regulation 8, Rule 45, Automotive Refinishing, will be held in San Francisco, Sunnyvale and Emeryville, on June 8, 15 and 21. A mail out was sent to the approximately 1,140 auto body, paint distribution and trade organizations, and was also posted to the Division website. In developing the material for the ICS, staff received input from the San Francisco Department of Public Health and will include generic tips about hazardous waste and water issues in these classes.

A Compliance Advisory for Regulation 5, Open Burning, concerning Chemically Treated Wooden Grapestakes, was mailed to fire agencies, interested parties and posted to the District Website.

Operations

The second series of In-Service Training (IST) was completed on May 5, 2005. The upcoming third series of IST, will occur on May 26, June 9 and 23. Topics will include CARB diesel ATCM's, Planning Grants, SEP's, Source Test Tracking, Timecard Completion, and Personal Safety Training.

Staff's policy and procedures (P&P) development plan for the upcoming fiscal year will include revisions to the following guideline documents: Monitor and Breakdown Reportable Compliance Activity, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining (Naturally Occurring Asbestos (NOA) ATCM), Regulation 8, Rule 20, Rules 33 and 39. New P&P documents will include Regulation 8, Rules 5 and 16. Staff completed the flare graphs for Feb 2005 and posted them to the District website. Staff is currently developing an administrative operating procedure (AOP) to process notifications of the use of portable equipment under the State's Portable Equipment Registration Program (PERP).

Thayer Consulting (Thayer) has been engaged to produce a radio replacement request for proposal (RFP). They have conducted interviews, ride-alongs, and radio transmission site visits, and produced a radio coverage survey that has been distributed to Inspection staff. The survey will ascertain any area of poor coverage for inclusion in their radio reception modeling. Options for improving two-way radio voice and developing data capabilities are being investigated.

(See Attachment for Activities by County)

ENGINEERING DIVISION – B. BATEMAN, DIRECTOR

Toxics Program

Work continued on the proposed Air Toxics New Source Review Rule. The District's Board of Directors are scheduled to consider adoption of the proposed rule on June 15, 2005.

Title V Program

The public comment period ended for the reopened refinery Title V permits (Revision 2). This revision addresses issues raised by EPA in October 2004, issues raised by the refineries in their permit appeals, and incorporates recently issued authorities to construct and permits to operate. The proposed Revision 3 permit changes, addressing EPA objection issues, are expected to be issued in late June or early July. The public comment period began for renewal of the Title V permits for Mirant Delta (Antioch), PE Berkley (Berkeley), East Bay Municipal Utility District (Oakland), and City of Santa Clara (Santa Clara). The renewal permit for Mirant Delta (Pittsburg) was issued.

Permit Evaluation Program

Five staff members attended the annual CAPCOA Engineering Managers symposium in May. Topics discussed included California energy policy, pollution control at ports and terminals, and new uses of global positioning system technology for air quality compliance, permitting, and planning. Staff began evaluating a permit application submitted for a new landfill gas-to-energy project at Ox Mountain Landfill (Half Moon Bay). The project is designed to generate 13 MW of electricity by combusting landfill gas that would otherwise be flared. Staff continued to participate in California Energy Commission hearings on Petroleum Infrastructure issues, and attended a workshop on California's projected needs for petroleum infrastructure.

Engineering Special Projects Program

Staff completed the first phase of the Diesel Engine ATCM implementation project. A survey and questionnaire on compliance options was developed and mailed to thousands of affected facilities with "in-use" engines.

Community Air Risk Evaluation (CARE) Program

Staff are working closely with the District's contractor, Sonoma Technologies Inc., in preparing the data needed for Geographical Information System (GIS) maps of the point source, area source and on-road motor vehicle source toxic air contaminant emission inventories. The District requisitioned carbon-14 analyses of eighteen composite particulate filter samples. The results of this study will help the District estimate the relative annual average proportion of fine particulate matter due to the combustion of fossil fuels from one District site. An ArcSDE server was purchased to hold and manage the District GIS database for the CARE program.

INFORMATION SYSTEMS DIVISION – J. McKAY, DIRECTOR

Toolsets for Permits/Enforcement/Legal

The design methodology for replacement of IRIS and Databank has concluded with clear focus on the importance of Content Management tools. While this may not allow the District to accomplish all of its objectives with a single vendor offering, it will allow the opportunity to substitute purchased modules for custom code. A critical component of the migration to superior tool sets is migration of existing data to a new data structure and taxonomy. In the District's case this also includes migration to a new database platform (Oracle). The District is in the process of finalizing a contractual relationship to initiate this work. Although underlying structured database design can be performed apart from the design of systems for Content Management (forms and documents), the two elements will be pursued concurrently and each process will inform the other. Work on an in-house pilot project has started. Likely participants in the pilot include OpenText and other Content Management vendors. An update of the extensive requirement documentation that was previously developed continues.

Infrastructure

User migration is approximately 85% complete. The upgrade is motivated by security needs and equipment obsolescence.

LEGAL DIVISION – B. BUNGER, DISTRICT COUNSEL

The District Counsel's Office received 150 Violations reflected in Notices of Violation ("NOVs") for processing.

Mutual Settlement Program staff initiated settlement discussions regarding civil penalties for 92 Violations reflected in NOVs. In addition, Mutual Settlement Program staff sent 7 Final 30 Day Letters regarding civil penalties for 16 Violations reflected in NOVs. Finally, settlement negotiations by Mutual Settlement Program staff resulted in collection of $55,625 in civil penalties for 86 Violations reflected in NOVs.

Counsel in the District Counsel's Office initiated settlement discussions regarding civil penalties for 15 Violations reflected in NOVs. Settlement negotiations by counsel in the District Counsel's Office resulted in collection of $349,820 in civil penalties for 73 Violations.

(See Attachment for Penalties by County)

PLANNING DIVISION – H. HILKEN, DIRECTOR

Grant Programs

Staff conducted a public workshop on May 18 regarding the Transportation Fund for Clean Air (TFCA) Regional Fund grant application. Over 30 people attended. Applications are due at the District by June 30. Staff participated in a California Dialogue Group meeting in Sacramento, and made a presentation on the District's Vehicle Buy Back Program. Staff discussed the District's grant programs as part of the Enforcement Division's in-service training. A total of 619 eligible light-duty vehicles were purchased and scrapped by the three Vehicle Buy Back Program contractors.

Rule Development Program

Staff provided an update on development of the refinery flare control rule (Reg. 12-12) at the May 23 Stationary Source Committee meeting, including a summary of significant comments on the draft rule and staff responses. Staff met with Bay Area refinery managers to discuss concerns regarding the proposed flare control rule. The Draft EIR for the proposed flare control rule was circulated for public review and comment. Staff hosted technical working group meetings on organic liquid storage tanks (Reg. 8-5) and pressure relief devices (Reg. 8-28). Staff met with EPA staff regarding rule approval policies. Staff published legal notices regarding public hearings and CEQA documents for amendments to permit requirements (Reg. 2-1), the proposed New Source Review of Toxic Air Contaminants (Reg. 2-5), amendments to the fee rule (Reg. 3) and the proposed flare control rule (Reg. 12-12).

Air Quality Planning Program

Staff provided the Advisory Council and Board Executive Committee with presentations on climate change, and recommended expanded District activities linking climate change with core District programs to reduce criteria and toxic pollutants. On May 20 the Executive Committee unanimously approved a recommendation that the District Board of Directors adopt a resolution to establish a Climate Protection Program. Staff has identified several measures to be included in a draft PM implementation schedule (prepared pursuant to SB 656), reducing emissions from commercial charbroiling, IC engines, and woodburning. Staff reviewed the draft schedule with the Stationary Source Committee at the May 23 meeting. The District received delivery of two Daimler Chrysler fuel cell vehicles for use by the District on May 25. Staff wrote four comment letters regarding air quality impacts of development projects and plans in the Bay Area: San Jose Downtown Strategy 2000, Wood Street Project (Oakland), Bay Meadows Specific Plan (San Mateo), and Brentwood Surface Water Treatment Facility.

Research and Modeling

Staff hosted a Modeling Advisory Committee meeting to discuss the status of ongoing 8-hour ozone modeling at the District, and to present modeling simulations using ARB's revised emission inventory. Staff participated in conference calls of the Northern California Agencies SIP/Transport Workgroup to discuss the status of 8-hour ozone modeling by ARB. Staff participated in a meeting with the California Regional Particulate Air Quality Study (CRPAQS) Technical Committee to refine the work statement for the wintertime meteorological modeling project. Staff participated in conference calls with ARB and neighboring districts to improve modeling emissions inventory estimates. Staff participated in an international air quality conference in San Francisco, organized by the American Meteorological Society, which included a session on air quality studies in California. Staff co-authored 3 of the scientific papers presented.

PUBLIC INFORMATION & OUTREACH – T. GALVIN LEE, DIRECTOR

In May, staff completed preparations for Spare the Air 2005, with an official kick-off date set for June 1st. This year Bay Area transit operators will provide free transit during the morning commute hours on the first five Spare the Air days only. The emphasis in this years advertising program will be to help residents think about air quality and plan ahead for the next Spare the Air day. A media event held at SBC Park to promote the Free Morning Commute story was covered by KPIX, KFTY, KNTV, KGO (radio and television), KCBS, KPCC, Tri-Valley Herald, Fremont Argus, Asian Week, Bay Area Business wire, Oakland Tribune, Contra Costa Times and the SF Chronicle. For the first time, several transit agencies including Muni, GG Transit, Sam Trans, VT, AC Transit, and Sonoma County transit will wrap their buses to advertise the opportunity.

The District's mower exchange program concluded on May 21. This annual series of events promotes the reduction of air pollution with an incentive. Bay Area residents traded-in their old gasoline mowers for recycling to receive a $100 instant rebate on a Black & Decker corded electric mower. In all, 500 mowers were exchanged. Media coverage included two TV news pieces. The first was a feature story on KGO-TV's "Seven on Your Side" with Mike Finney, the other a live broadcast on the KRON's "Henry's Garden" with Henry Tennenbaum.

The District hosted an air quality meeting in the City of East Palo Alto to address local concerns. The meeting was well attended and well received. Meetings with the West Oakland Toxics Collaborative are continuing. The City of Oakland and City of Sonoma adopted a woodsmoke ordinance in May. The District began distributing its new video entitled "Sparing the Air for a Healthier Future" to employers and the general public.

TECHNICAL DIVISION – G. KENDALL, DIRECTOR

Air Quality

During the first three weeks of May air quality levels remained in the Good AQI category. This was due to a prolonged springtime weather pattern with frequent periods of rain, cool temperatures, and good mixing. A ridge of high pressure strengthened over Arizona on May 22nd causing the storm track to shift well north of the Bay Area. A gradual warming trend ensued, and by May 25th ozone levels reached the low Moderate AQI category at Livermore (54 AQI) as temperatures reached the low 90's in the inland valleys. Good air quality returned from May 26th through the 31st as high pressure inland weakened allowing stronger onshore winds.

Air Monitoring

Thirty-two of the thirty-four air monitoring stations were operational during the month of May 2005. The Hayward and Crockett stations, both located at local Water District facilities, are off-line during seismic upgrades of those facilities.

Meteorology and Forecasting

February 2005 air quality data were quality assured and entered into the EPA Air Quality System (AQS) database. Staff continued to make daily air quality and burn forecasts. Staff performed an audit of the meteorological systems for the San Rafael Rock Quarry Monitoring Project.

Quality Assurance

The Quality Assurance (QA) group continued its regular, ongoing performance audits by conducting audits on 31 monitors at 10 District air monitoring stations. QA staff performed a start-up audit on an SO_2 analyzer at the ConocoPhillips new Cummings Skyway Ground

Level Monitoring (GLM) monitoring station. Staff also conducted performance audit on the four SO_2 and H_2S GLM monitoring stations at the Shell Refinery.

QA staff conducted shut-down performance audits on two continuous PM_{10} monitors and one continuous $PM_{2.5}$ monitor operated by Sonoma Technologies, Inc. for the San Rafael Rock Quarry Monitoring Project.

Laboratory

In addition to the ongoing, routine analyses, three impinger samples taken from the sand recycling unit at Pacific Steel Casting Plant in Berkeley were analyzed for phenolic compounds, three samples were analyzed for trimethylamine, and nine samples were analyzed for heavy metals. The benzene content and true vapor pressure of the organic layers of three condensate samples from the Marquez Energy Natural Gas Processing Facility in Oakley were determined. A screen printing cleaning product from Printime Corporation was analyzed for VOC partial pressure. Two resin samples from ISOLA Laminate Systems were analyzed for organic compounds. Two flare gas samples from Refinery in Martinez and the Chevron Refinery in Richmond were analyzed for hydrocarbons, sulfur, and other compounds.

Source Test

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

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

Alameda County

Received Date	Site #	Site Name	City	Regulation Title
5/9/2005	D0476	Alameda Gas & Mart	Alameda	Failure to Meet Permit Conditions
5/23/2005	P8948	DAVNI LLC	Berkeley	Asbestos Demolition, Renovation
5/18/2005	A0703	Pacific Steel Casting Co-Plant #2	Berkeley	Public Nuisance
5/26/2005	C6992	San Pablo Mini Mart	Berkeley	Gasoline Dispensing Facilities
5/24/2005	D0501	Hato Corp dba Blacow Service Station	Fremont	Gasoline Dispensing Facilities
5/16/2005	L6230	P. W. Stephens, Inc.	Fremont	Right of Access to Information
5/2/2005	C8687	Warm Spring Gas	Fremont	Gasoline Dispensing Facilities
5/24/2005	B6779	Western Truck Fabrication	Hayward	Motor Vehicle Coating Operations
5/9/2005	C8876	Livermore Beacon	Livermore	Gasoline Dispensing Facilities
5/5/2005	B6884	Custom Auto Body & Fender	Oakland	Authority to Construct; Permit to Operate
5/18/2005	A8655	K J's Auto Body Repair	Oakland	Motor Vehicle Coating Operations
5/16/2005	A0030	Owens-Brockway Glass Container Inc	Oakland	Particulate Matter and Visible Emissions
5/16/2005	Q5007	Environmental Remedies	Pleasanton	Asbestos Demolition, Renovation
5/16/2005	G2645	Bluewater Environmental Services	San Leandro	Asbestos Demolition, Renovation
5/26/2005	B1780	Russell Heath Cleaners	San Leandro	Perc Dry Cleaning

Contra Costa County

Received Date	Site #	Site Name	City	Regulation Title

5/26/2005	C1124	Lone Tree Gas & Food	Antioch	Gasoline Dispensing Facilities
5/4/2005	B2967	TRC	Antioch	Parametric Monitoring and Recordkeeping Procedures; Failure to Meet Permit Conditions
5/20/2005	Q6592	Far Hills Mobile Home Park	Bay Point	Asbestos Demolition, Renovation
5/4/2005	A0581	ST Shore Terminals LLC	Crockett	Storage of Organic Liquids
5/12/2005	A0011	Shell Martinez Refinery	Martinez	Continuous Emission Monitoring and Recordkeeping Procedures
5/9/2005	B2758	Tesoro Refining and Marketing Company	Martinez	Continuous Emission Monitoring and Recordkeeping Procedures
5/9/2005	B2758	Tesoro Refining and Marketing Company	Martinez	Major Facility Review (Title V); Particulate Matter and Visible Emissions
5/13/2005	A4618	Allied Waste Industries (Keller Canyon Landfill)	Pittsburg	Public Nuisance
5/20/2005	A0031	Dow Chemical Company	Pittsburg	Major Facility Review (Title V); Process Vessel Depressurization
5/20/2005	B1866	Los Medanos Energy Center	Pittsburg	Major Facility Review (Title V)
5/4/2005	A0010	Chevron Products Company	Richmond	Flare Monitoring at Petroleum Refineries
5/9/2005	A0010	Chevron Products Company	Richmond	Parametric Monitoring and Recordkeeping Procedures; Major Facility Review (Title V)
5/9/2005	D0351	Golden 7 Quick Stop	Richmond	Gasoline Dispensing Facilities
5/4/2005	A0745	Shore Terminal LLC	Richmond	Marine Vessel Loading Terminals; Storage of Organic Liquids; Failure to Meet Permit Conditions; Major Facility Review (Title V); Equipment Leaks; Storage of Organic Liquids
5/20/2005	A0016	ConocoPhillips - San Francisco Refinery	Rodeo	Public Nuisance
5/9/2005	C8906	Top Food and Gas	San Pablo	Permit to Operate

Marin County

Received Date	Site #	Site Name	City	Regulation Title
5/5/2005	C1806	Chevron Station #90024	Mill Valley	Gasoline Dispensing Facilities
5/4/2005	A8054	Victor's Ironworks	San Rafael	Failure to Meet Permit Conditions
5/4/2005	B5964	Water Bird Finishes	San Rafael	Authority to Construct; Permit to Operate; Wood Products Coatings

Napa County

Received Date	Site #	Site Name	City	Regulation Title
NONE				

San Francisco County

Received Date	Site #	Site Name	City	Regulation Title
5/19/2005	Q6067	Arturo Alvarez	San Francisco	Asbestos Demolition, Renovation
5/3/2005	Q6874	Bananas	San Francisco	Public Nuisance
5/5/2005	Q7235	Idl Torres	San Francisco	Asbestos Demolition, Renovation

San Mateo County

Received Date	Site #	Site Name	City	Regulation Title
5/2/2005	C9939	Tosco Fac#5898	Pacifica	Gasoline Dispensing Facilities
5/18/2005	A0353	AJ's Quick Clean Center	Palo Alto	Perc Dry Cleaning
5/18/2005	B0893	C G & E Auto Body	Redwood City	Motor Vehicle Coating Operations
5/18/2005	A1534	South Bayside System Authority	Redwood City	Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

5/24/2005	A0051	United Airlines, SF Maintenance Center	San Francisco	Major Facility Review (Title V)
5/4/2005	D0752	Pacific Fuel & Auto Service, Inc	San Mateo	Gasoline Dispensing Facilities

Santa Clara County

Received Date	Site #	Site Name	City	Regulation Title
5/17/2005	D1415	City of Gilroy	Gilroy	Authority to Construct; Permit to Operate
5/4/2005	C9602	Navy Exchange/PO Box 84	Moffett Field	Gasoline Dispensing Facilities
5/2/2005	A7324	House of Printing	Mountain View	Failure to Meet Permit Conditions
5/3/2005	B0367	Mountain View Printing	Mountain View	Authority to Construct; Permit to Operate; Failure to Meet Permit Condition
5/4/2005	C6217	Capitol Touchless Carwash	San Jose	Gasoline Dispensing Facilities
5/17/2005	C5214	Hansra Gas & Mart	San Jose	Gasoline Dispensing Facilities
5/9/2005	B3289	Los Esteros Critical Energy Facility	San Jose	Failure to Meet Permit Conditions
5/4/2005	C0541	Petro America	San Jose	Permit to Operate
5/10/2005	G7571	Qualified Maintenance	San Jose	Authority to Construct; Permit to Operate
5/24/2005	C6186	Reco Gas and Minimart	San Jose	Gasoline Dispensing Facilities
5/4/2005	C4156	Unocal #4553	San Jose	Gasoline Dispensing Facilities
5/16/2005	B5925	E2C Incorporated	Santa Clara	Failure to Meet Permit Conditions
5/16/2005	F9324	Process Stainless Lab	Santa Clara	Authority to Construct; Permit to Operate
5/16/2005	B6058	Sae Materials	Santa Clara	Failure to Meet Permit Conditions
5/18/2005	A3285	Camaro Cleaners	Sunnyvale	Perc Dry Cleaning

Solano County

Received Date	Site #	Site Name	City	Regulation Title
5/20/2005	A0901	Valero Benicia Asphalt Plant	Benicia	Storage of Organic Liquids
5/17/2005	B2868	Duracite	Fairfield	Authority to Construct; Permit to Operate
5/9/2005	C9678	Freeway Shell Service	Fairfield	Failure to Meet Permit Conditions
5/20/2005	B6939	Golden Cabinetry	Fairfield	Authority to Construct; Permit to Operate

Sonoma County

Received Date	Site #	Site Name	City	Regulation Title
5/9/2005	C0191	Rohnert Park Tesoro	Rohnert Park	Gasoline Dispensing Facilities
5/24/2005	B6991	Detail To Perfection	Santa Rosa	Authority to Construct; Permit to Operate
5/4/2005	Q7210	Petersen Ranch	Sebastopol	Open Burning
5/9/2005	Q4348	Spirit of Christmas Tree Farm	Sebastopol	Open Burning

May 2005 Closed NOVs with Penalties by County

Alameda

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Advanced Printing	A8009	Pleasanton	$3,000	1
American Brass & Iron Foundry	A0062	Oakland	$7,000	3

American Technologies	P4188	Hayward	$4,000	3
Eagle Gas	C0192	Oakland	$300	1
Karcher Environmental	Q5732	San Leandro	$2,000	1
PE Berkeley, Inc	B1326	Berkeley	$1,070	4
Precision Roofing Company	N6720	Oakland	$1,000	1
Rhino Gas	C0584	Oakland	$500	1
Seagate Recording Media Operations	A3921	Fremont	$2,000	2
Warm Spring Gas	C8687	Fremont	$1,500	3

Total Violations Closed: 20

Contra Costa

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Aerial Control	Q1225	Brentwood	$1,000	2
BP West Coast Products	C9832	Richmond	$500	1
Certified Coatings of California	N8677	Concord	$3,000	1
Contra Costa Country Club	C6157	Pleasant Hill	$2,000	1
Copart	Q7013	Martinez	$4,000	2
Denova Homes	Q3269	Pleasant Hill	$750	1
Jess Enterprises	A6960	Pittsburg	$500	4
Main & Geary Chevron	C8913	Walnut Creek	$500	1
Remote Access Technology	A0016	Pinole	$1,500	4
Venoco, Inc	A0813	Bay Point	$2,000	1

Total Violations Closed: 18

Napa

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Adair Tench	Q6739	Napa	$250	1
Joseph Phelps Vineyards	J0352	Saint Helena	$400	1
Marcia Stagnaro	Q7008	Calistoga	$200	1
Napa Valley Petroleum	C7638	Napa	$750	2
Saviez Vineyards	N5148	Calistoga	$2,000	2
Voyager Vineyard	P1871	Napa	$350	1

Total Violations Closed: 8

San Francisco

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Arturo Alvarez	Q6068	San Francisco	$250	1
Custom Cabinet & Counter Top	B2487	San Francisco	$500	1
Dri Clean Expert	B1030	San Francisco	$200	1
Fabricare Cleaners	A7219	San Francisco	$350	1
Killarney Construction	P5613	San Francisco	$700	1
Meyers Sheet Metal Box, Inc	A8120	San Francisco	$500	1
One Hour Cleaners	A4248	San Francisco	$500	1
The Presidio Trust	N6718	San Francisco	$500	1

Total Violations Closed: 8

San Mateo

Site Name	Site Occurrence	City	Penalty	# of Violations Closed

Genentech, Inc	A1257	South San Francisco	$1,000	1
Graham Vane	Q1696	Pacifica	$1,750	5
Pacific Fuel & Auto Service, Inc	D0752	San Mateo	$500	1
Tosco Fac#5898	C9939	Pacifica	$300	1
UPC Hauling	Q2517	South San Francisco	$500	1

Total Violations Closed: 9

Santa Clara

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Anderson Behel, Inc	A8894	Santa Clara	$500	1
City of Sunnyvale Solid Waste Program	A2253	Sunnyvale	$3,000	6
Cleaning & Alteration Shop	B1642	San Jose	$250	1
Costco Gasoline	D0758	Gilroy	$650	1
De Luna Furniture Refinishing	B1719	Gilroy	$500	1
East Dunne Shell-Shell Oil Company	D0038	Morgan Hill	$2,000	2
Furtado Dairy	N7246	Gilroy	$1,500	1
Guerrero Auto Body	P6159	San Jose	$750	3
PK Selective Metal Plating	B2213	Santa Clara	$1,000	1
Rawson Custom Cabinet Inc	B2636	Morgan Hill	$750	1
SFPP, LP	A4020	San Jose	$4,000	1
Unocal #5368	C9225	Milpitas	$500	1

Total Violations Closed: 20

Solano

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Azteca Auto Repair	P2225	Fairfield	$500	1
Jarks Enterprise LLC	C8862	Vallejo	$375	2
Texas Petroleum Service	C8932	Fairfield	$500	1
Valero Benicia Asphalt Plant	A0901	Benicia	$50,000	10
Valero Refining Company - California	B2626	Benicia	$281,500	47
Woodard Chevrolet	A3505	Fairfield	$750	1

Total Violations Closed: 62

Sonoma

Site Name	Site Occurrence	City	Penalty	# of Violations Closed
Andrew Stoeppelwerth	Q6146	Petaluma	$200	1
Applied Industrial Coatings	B1822	Rohnert Park	$1,000	2
Daniel Oberti	Q6352	Sebastopol	$300	1
Dutra Materials/San Rafael Rock Quarry Inc	A3992	Petaluma	$700	1
Dutton Ranch	P8548	Sebastopol	$2,000	1
James Foster	Q6143	Petaluma	$350	1
John's Formica Shop	A5617	Santa Rosa	$650	1
Kim Kabot	Q6116	Sebastopol	$300	1
Molly Rodgers	Q5396	Cotati	$125	1
O'Dell Printing Co Inc	A7645	Rohnert Park	$500	1
Sonoma Farms	P1574	Sonoma	$626	2
Sue VanBell	Q6740	Petaluma	$300	1

Total Violations Closed: 14

ACRONYMS AND TERMINOLOGY

ABAG	Association of Bay Area Governments
AC	Authority to Construct issued to build a facility (permit)
AMBIENT AIR	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

AGENDA: 5

BAY AREA AIR QUALITY MANGEMENT DISTRICT
Memorandum

To: Chairperson Townsend and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 15, 2005

Re: Consider Approving a New Classification of Policy and Outreach Intern and Approving the Revised College Intern Program Guidelines

RECOMMENDATION

Approve a new classification of Policy and Outreach Intern and the revised College Intern Program Guidelines as set forth in the attached resolution.

BACKGROUND

The District currently has a College Internship Program. Through this Program, college students learn about the District, our operations, and our mission through mentoring from District staff and practical work experience.

The new classification of Policy and Outreach Intern has been developed to perform various functions related to policy review and development, outreach, and public relations outreach. The qualifications are directed at college students and are appropriate for this class. This would be an unrepresented classification. The pay rate would be set at $23.69 per hour. In order to begin recruiting interns from area colleges the classification description and pay rate must be adopted.

The current College Intern Program Guidelines are specific to Air Quality Engineering Intern positions. The revised guidelines are more general in order to reflect that the internship program is evolving to include other academic areas in addition to engineering.

The Employees' Association and the District have concluded discussions on the new classification description and the revised program guidelines. This was necessary because the internship program is the subject of a pre-existing agreement between the District and the Association that is incorporated into the current MOU.

BUDGET CONSIDERATION/FINANCIAL IMPACT

There is no direct financial impact to establish this classification. Positions hired into this classification will be funded using temporary salaries already included in the proposed budget for FY 05-06.

Respectfully Submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Michael K. Rich

POLICY AND OUTREACH INTERN

DEFINITION

Under close supervision, performs various professional administrative functions related to policy review or development, outreach, or public relations. The Intern may be placed in a specific functional area or work in a broad range of areas. The student gains practical work experience while following guidelines and procedures defined by the Division in which they work.

DISTINGUISHING CHARACTERISTICS

This is a temporary training position. The purpose of this job classification is to provide students with an opportunity to apply their education to work and gain practical experience while exposing them to the operations and mission of the District.

EXAMPLES OF DUTIES (Illustrative Only)

Provides support for special studies related to air quality or health policy issues or outreach efforts by conducting research, reviewing policies or regulations, collecting and analyzing data and preparing documentation.

Writes reports, summaries, and correspondence subject to review and editing by higher-level staff members.

Contacts public agencies, professional organizations, industry representatives, community groups and District staff to obtain or impart information and data.

Summarize data or information, in written, tabular, and/or graphic form.

Assists with the preparation and distribution of printed information, such as advisories, publications, fact sheets, newsletters, or other informational documents.

Participates in various public events or meetings.

Conducts research and analysis on proposed policies and legislation related to air quality.

Reviews and comments on policies and legislation related to air quality.

Accompanies District staff on visits to legislative sessions and/or hearings.

May make oral presentations.

May make recommendations.

Assists with routine tasks related to the work.

QUALIFICATIONS

Knowledge of:

Basic principles of college level policy and public or community relations.

Fundamental research principles and practices.

Proper business English, punctuation, spelling, and grammatical usage.

Business operations of computer equipment.

Ability to:

Apply principles and practices related to policy review or development, and outreach. (Knowledge in this area will be developed during the internship).

Prepare data in written, tabular, and graphic form.

Research applicable District, state and federal laws, rules and regulations.

Read and interpret plans, policies, regulations, and other data.

Write and communicate verbally in a clear and concise manner.

Use a personal computer, particularly word-processing, spreadsheet, and database software, and use the Internet to perform research and prepare documentation.

Maintain accurate records and files.

Follow instructions and guidelines and complete assignments in a timely and efficient manner.

Establish and maintain effective working relationships.

Use tact, discretion, initiative and sound judgment within established guidelines.

Other Requirements:

Specified positions may require that college transcripts be provided. In addition, specific positions may require the possession of a valid California driver's license and meeting the automobile insurability requirements of the District.

Student Qualification Requirements:

Must be continually enrolled in and attending an accredited college or university (summer enrollment is not required).

Must be at or entering the junior, senior, or graduate level of college study with a declared major in policy, political science, communications, public relations, public administration or a closely related field.

Must have a grade point average of 2.5 or higher (where 4.0 is the highest GPA).

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Resolution No. ___

A Resolution to Approve New Classification of Policy and Outreach Intern and Approve Revised College Intern Program Guidelines

WHEREAS, the District and the Employees Association desire to establish a new classification of Policy and Outreach Intern and revise the College Intern Program Guidelines;

WHEREAS, the parties have met and conferred in good faith pursuant to Section 17.04 of the MOU on the details of the Policy and Outreach Intern and Program Guidelines and reached agreement subject to the approval of the Board of Directors;

WHEREAS, the agreements reached between the District and Employees Association have been reduced to writing in the form of two Side Letters of Agreement;

WHEREAS, the use of interns to perform work normally performed by represented District employees is subject to the provisions of Section 16.02 of the MOU;

WHEREAS, the MOU must be modified in order that the Side Letters of Agreement not be in conflict with Section 16.02 of the MOU;

WHEREAS, Section 17.04 of the Memorandum of Understanding (MOU) between the District and the Employees Association requires written consent of the parties to any modification to the MOU;

WHEREAS, the parties have agreed to incorporate the two Side Letters of Understanding into the MOU as though fully set forth therein subject to the approval of the Board of Directors;

WHEREAS, there is no fiscal impact resulting from approval of this Resolution;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors hereby approves the two Side Letters of Agreement regarding the new classification of Policy and Outreach Intern and the revised College Intern Program Guidelines and incorporates them into the MOU as though fully set forth therein.

The foregoing resolution was duly and regularly introduced, passed and adopted at a regular meeting of the Board of Directors of the Bay Area Air Quality Management District on the Motion of Director__________________________, seconded by Director ________________________, on the ______ day of ___________ 2005 by the following vote of the Board:

AYES:

NOES:

ABSENT:

____

Marland Townsend
Chairperson of the Board of Directors

ATTEST:

____

Mark Ross
Secretary of the Board of Directors

AGENDA: 6

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Townsend and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 6, 2005

Re: Authorization for Execution of Purchase Orders in Excess of $70,000

RECOMMENDED ACTION

Staff recommends that the Board of Directors authorize the Executive Officer/APCO execute the following purchase orders in excess of $70,000

A) Purchase order to San Francisco Honda for the purchase of 5 (five) 2005 model year compressed natural gas Honda Civic sedans, not to exceed $113,911;

B) Purchase order to Brady Air Conditioning for Phase IV HVAC replacement, not to exceed $653,160;

C) Purchase order to Benjamin Bolles for Phase III of the fire alarm upgrades, not to exceed $116,340; and

D) Purchase order to Benjamin Bolles for upgrades to the 7th floor Board room, the 7th and 4th floor bathrooms, and the main lobby doors of the District, not to exceed $147,300.

BACKGROUND

The District fleet is comprised of purchased and leased vehicles. As leases terminate, the District turns in the leased vehicles. When purchased vehicles exceed 100,000 miles they are sold at auction. Fleet vacancies are filled with new leases or with purchased vehicles, with an emphasis on fuel efficiency and, when possible, alternative fuels.

Three prior phases of HVAC work have been completed.

Fire Alarm upgrades are proposed to occur in four equally priced phases.

A review of accessibility and compliance with the American with Disabilities Act has led to this recommendation for improvements on the 4th and 7th floors.

DISCUSSION

Ongoing requirements to replace retired fleet vehicles provide the opportunity to increase the percentage of vehicles using alternate fuels. Use of such vehicles allows the 6.6% reduction in the District's fuel budget for FYE 2006. Seventy percent of the current fleet is conventionally powered. The proposed purchase increases the number of District CNG vehicles to 27.

The existing rooftop HVAC units are 17 years of age and are at the end of their useful lives. The new units, besides providing greater efficiency and reduced maintenance costs, will provide for a morning purge of interior air now required by Title 24.

The fire alarm upgrades include the installation of smoke and audible/strobe devices on each floor.

ADA upgrades include ramps for the Board room dais, wider dais walkways, relocation of the side exit door, automatic openers for bathroom doors, relocation of bathroom light fixtures and receptacles, new partitions, relocation of plumbing, and push button entry for the lobby.

BUDGET CONSIDERATION/FINANCIAL IMPACT

This work will be funded from the approved 2004/2005 budget as amended by the Board of Directors at the June 1, 2005 meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jeff McKay

AGENDA: 7

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Townsend and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 7, 2005

Re: Report of the Legislative Committee Meeting of June 6, 2005

RECOMMENDED ACTIONS

The Committee recommends the Board of Directors adopt positions on 6 bills as indicated in the table below. Staff reports submitted to the Committee are attached.

DISCUSSION

The Legislative Committee met on Monday, June 6, 2005, and discussed a number of bills. Descriptions of the bills and the Committee's recommendations are given in the table below.

Bill	Brief Description	Recommendation
AB 386 (Lieber)	Transfers smog check policy authority from BAR to ARB	Support
AB 721 (Nunez)	Establishes loan program for metal platers to install technology to cut emissions	Support
AB 1229 (Nation)	Puts air pollution and greenhouse gas labels on new cars	Support
AJR 8 (Canciamilla)	Urges Congress to ratify international treaty on marine vessel emissions	Support
SB 250 (Campbell)	Establishes specifications for hydrogen fuel for vehicles and fuel cells	Support
SB 1024 (Perata)	Safe Facilities, Improved Mobility, and Clean Air Bond Act of 2005	Support

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

BUDGET CONSIDERATION/FINANCIAL IMPACTS

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Mary Ann Goodley

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Inter-Office Memorandum

To: Chairperson Townsend and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 8, 2005

Re: Public Hearing to Consider Adoption of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, Associated Amendments to Several other District Rules and the Manual of Procedures, and Certification of an Environmental Impact Report for these Regulatory Actions

RECOMMENDED ACTION

Staff recommends that the Board take the following actions:

A) Adopt Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants;
B) Adopt Manual of Procedures Volume II: Engineering Permitting Procedures, Part 4: New and Modified Sources of Toxic Air Contaminants;
C) Adopt amendments to Regulation 2: Permits, Rule 1: General Requirements, Rule 2: New Source Review, and Rule 9: Interchangeable Emission Reduction Credits;
D) Adopt amendments to Regulation 8: Organic Compounds, Rule 34: Solid Waste Disposal Sites, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks, and Rule 47: Air Stripping and Soil Vapor Extraction Operations;
E) Adopt amendments to Regulation 11, Hazardous Pollutants, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations;
F) Certify an Environmental Impact Report for these regulatory actions; and
G) Adopt a CEQA Statement of Overriding Considerations.

BACKGROUND

1. Air Toxics Program

The District has had, since 1987, a program to describe, control, and where possible eliminate public exposure to toxic air contaminants (TACs). TACs are air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a potential hazard to human health. The air toxics program was established as a separate and complementary program to the traditional criteria pollutant programs, which focus on attaining and maintaining ambient air quality standards (e.g., ozone).

The District's air toxics program includes three individual regulatory programs directed at stationary sources of TACs located at industrial and commercial facilities. Two of these programs apply to sources at existing facilities, and the third is the Air Toxics New Source Review (NSR) program, which focuses on proposed projects involving new and modified sources. This report describes the existing Air Toxics NSR program, and changes to the program that District staff are proposing to make through a rule development process.

2. Existing Air Toxics NSR Program

The goal of the District's Air Toxics NSR program is to prevent significant increases in health risks resulting from new and modified sources of TACs based on preconstruction permit review. The program is also intended to reduce existing health risks by imposing updated control requirements when older, more highly polluting, sources are modified or replaced.

The Air Toxics NSR program was established in 1987 at the direction of the District's Board, and has been implemented based on policies and procedures established by the Air Pollution Control Officer (APCO) after holding workshops and considering public input. The Air Toxics NSR program is a local program; there are no specific State or federal mandates requiring such a program. In California, most of the 35 air districts currently have an Air Toxics NSR program – these programs are all based on the same general framework, although specific program requirements may vary between air districts.

The Air Toxics NSR program is a health risk-based program, meaning that the program requirements are based on the results of a health risk screening analysis (HRSA). An HRSA is a site-specific scientific analysis of the measure of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic substances. The Air Toxics NSR program uses an HRSA methodology that was specifically developed by agencies including Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) for use in air pollution control programs in California. This methodology is documented in State guideline documents, which have been updated several times since their original publication in 1987.

The District's Risk Evaluation Procedure identifies the procedures that staff follow to assess the significance of TAC emissions from new and modified sources. The Risk Evaluation Procedure specifies that all permit applications for new and modified sources must be screened for emissions of TACs. If any TAC is emitted in amounts that exceed specified de minimis levels, a site-specific HRSA is completed by District staff using computer-modeled estimates of atmospheric dispersion. Estimates of public exposure, and cancer and non-cancer health risk, are made for the maximally exposed residential and off-site worker receptor locations.

The District's Risk Management Policy (RMP) specifies criteria that the APCO has established for the approval of permits for new and modified sources of TACs based on the results of an HRSA. Under the RMP, sources must use the Best Available Control Technology for Toxics (TBACT) to minimize emissions if the project would increase an individual's lifetime cancer risk by more than 1 in a million. If TBACT is used, permits may be issued if the maximum cancer risk from the project is 10 in a million or less. The RMP also limits TAC emissions based on non-cancer health risks by specifying that a project may not increase an individual's non-cancer risk by more than a Hazard Index of 1.0. [A Hazard Index is calculated by dividing the estimated exposure-level of a TAC with the TAC's Reference Exposure Level. The Reference Exposure Level is the exposure level below which no adverse non-cancer effects are expected even in sensitive subpopulations.]

The APCO has also established alternative RMPs for two specific source categories based on risk management considerations: (1) diesel-fueled engines, and (2) perchloroethylene (Perc) dry cleaners. The criteria for diesel-fueled engines are essentially the same as those previously described except that, for emergency standby engines, health risks are calculated for all engine operations except for emergency use. This provision was established so that the District would not need to limit standby engine operation in the case of an emergency.

The APCO has established a specific RMP for dry cleaners that allows permits to be issued above 10 in a million cancer risk, but within the range established in State and federal risk management guidelines. The dry cleaner RMP was established after OEHHA increased their cancer potency value for Perc by a factor of ten in 1991. Following this action, the District determined that: (1) the use of this revised toxicity value would result in maximum cancer risks for most new and modified Perc dry cleaners that would exceed the project risk levels established in the RMP (i.e., greater than 10 in a million); (2) non-Perc alternative dry cleaning technologies were either not adequately advanced for the District to require instead of Perc, or were slated to be phased-out as stratospheric ozone depleting compounds (e.g., CFCs); and, (3) although a number of reasonable risk reduction measures were available to reduce the risk from Perc dry cleaners, in many cases they would not be sufficient to reduce the risk below the 10 in a million criterion. In consideration of these factors, the District established an RMP for Perc dry cleaners that would allow permits to be issued for maximum cancer risks up to 100 in a million if TBACT and all reasonable risk reduction measures are used.

Prior to the year 2000, the District completed HRSAs for an average of about 175 permit applications per year. This number increased to 255 in 2000, and to over 400 in each of the years 2001 through 2004 (the peak year was 2002, in which 602 HRSAs were completed). The large increase in the number of HRSAs completed since the year 2000 is due primarily to the elimination of permit exemptions for certain sources, particularly engines that are used to supply backup power in the event of an emergency.

The District has made significant improvements in recent years with respect to the speed and level of refinement with which HRSAs can be completed. Most of these improvements have to do with the use of more advanced computer tools and digital data and maps that are used to complete the air dispersion modeling and land-use analysis portions of the analysis. These tools include digital topographic maps, aerial photos, terrain elevations, parcel maps, and real estate property databases.

A wide variety of different types of sources have TAC emissions and may be subject to HRSA requirements. Diesel engines are currently the most common type of source evaluated in the Air Toxics NSR program, accounting for over 60 percent of the HRSAs completed. Other source categories for which significant numbers of HRSAs are completed are, in order of decreasing numbers, gasoline dispensing facilities, various gas-fired combustion sources, soil-vapor extraction systems, and dry cleaners. Other common, but less numerous, sources evaluated include surface coating operations, organic liquid storage tanks, coffee roasters, crematories, and furniture strippers.

District staff work with permit applicants to help them meet the criteria for permit approval specified in the RMP. If, after exhausting all reasonably available levels of refinement, the results of an HSRA indicate that the project will not meet the requirements of the RMP as proposed, District staff will identify options under which compliance can be achieved. The applicant may then consider these options, and is given the opportunity to amend their application, or submit a new permit application, with changes in the project necessary to reduce health risks to levels specified in the RMP. In relatively rare instances, the APCO will deny a permit for a proposed project because it has not met the health risk requirements of the RMP. In the vast majority of cases, however, viable permitting options can be identified where the use of emissions control technology and/or other risk reduction measures will be successful in reducing the health risks to acceptable levels.

3. Air Toxics NSR Rule Development Project

In 2003, the District initiated a project to codify the policies and procedures that make up the Air Toxics NSR program by adopting a new District rule (Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants), and a new part to its Manual of Procedures. Amendments to several other District rules were also identified as being needed to maintain consistency with Regulation 2, Rule 5. This rule development project is intended to improve the legal defensibility of the District's permitting decisions, and to increase the clarity and public visibility of program requirements.

The rule development project is also intended to serve as an opportunity to update and enhance program requirements. Most of the proposed changes are intended to increase conformity with updated State risk assessment and risk management guidelines. The most significant proposed changes are: (1) add the consideration of acute health risks in HRSAs; (2) add a TBACT requirement for non-cancer health risks at a Hazard Index of 0.20; (3) use updated toxicity values and exposure assessment procedures; and, (4) remove existing exemptions from project risk limits for dry cleaners due to advances in non-Perc alternative technologies. Due to increases in the quantity and complexity of HRSAs that will result from these changes, an increase in permit fees is also proposed for applications that require an HRSA to fund the additional anticipated staff resources. (The proposed fee amendments are included in a separate regulatory proposal also scheduled for Board consideration on June 15, 2005).

The District held a series of workshops in mid-2003 to discuss an initial Air Toxics NSR rule proposal with interested parties. Workshops were held at the District Office, and at community locations in Richmond, Oakland, San Francisco, and East Palo Alto. The most extensive comments submitted were from the Golden Gate University School of Law Environmental Law and Justice Clinic (ELJC) on behalf of the Environmental Justice Air Quality Coalition, Bayview Hunters Point Community Advocates, and Our Children's Earth Foundation. The California Council for Environmental and Economic Balance (CCEEB) also submitted detailed comments. District staff subsequently met on several occasions with ELJC and their clients, as well as with representatives of CCEEB, in order to clarify and resolve issues. Further work on the rule was delayed for a period of time pending the release of revised risk assessment guidelines and tools from OEHHA and CARB.

On March 16, 2005, the District issued a revised Air Toxics NSR rule proposal. The revised proposal was made in response to public comments and updates in State risk assessment guidelines occurring since the initial proposal was issued. A public workshop to discuss the revised proposal was held on April 8, 2005. Staff subsequently met separately with ELJC and their clients, and with representatives of CCEEB, to further discuss issues. Several changes to the revised proposal were made based on comments received, and a final proposed rule was issued on May 13, 2005.

In January 2005, staff determined that the requirements of CEQA would be most appropriately met for this rule development project by the preparation of an Environmental Impact Report (EIR). On January 26, 2005, a Notice of Preparation of a Draft EIR was issued. The Draft EIR was completed on April 18, 2005. The public comment period on the Draft EIR ended on May 23, 2005.

PUBLIC COMMENTS

Staff has worked to address a wide variety of public comments submitted, and has incorporated a number of suggested changes into the final proposed rule. Staff does not agree, however, with a number of the comments and suggestions made.

One of the primary areas of disagreement has to do with comments made by ELJC that the program should be revised to address cumulative air pollution exposure. ELJC contends that the incremental risks from additional TAC sources may create unacceptable health burdens in affected communities when added to existing health risks from air pollution in an area.

The District's proposal does not include cumulative risk considerations for two reasons: (1) the needed policies, tools, and databases are currently not available for that purpose; and (2) at this time, there is no evidence that emissions from new and modified sources that meet the proposed project risk limits would cause, or contribute significantly to, adverse cumulative health effects. In order to better address the issue of cumulative health risks, the District has recently established the Community Air Risk Evaluation (CARE) program. The CARE program plan includes a pilot cumulative risk assessment project that will be used to better evaluate the need for, and the resources required to, incorporate cumulative risk considerations into the Air Toxics NSR program at a future date. The CARE program will also lead to the development of measures to reduce TAC emissions from sources that are identified to have significant contributions to cumulative health risks in any areas found to be more heavily impacted.

Staff also does not agree with ELJC that the project risk limits in the proposed rule need to be made substantially more stringent. Staff believes that more stringent project risk limits (e.g., limiting project cancer risk to 1 in a million, as ELJC has recommended) would place unreasonable burdens on permitted sources. The District's risk limits were chosen to provide a balanced consideration of technological feasibility, economic reasonableness of risk reduction methods, uncertainties and variability in health risk assessments, and protection of public health. Based on the District's experience, it would be virtually impossible for a wide variety of sources that the District routinely permits to meet the risk levels that ELJC has suggested, despite the use of TBACT and all other reasonable risk reduction measures. This includes almost all retail gasoline dispensing facilities, Perc dry cleaners, diesel back-up generators, crematories, furniture refinishing operations, and many natural gas-fired combustion sources. The likely result would be that these sources could not be sited, even in commercial areas, as the maximum risk for these sources typically results from exposures to nearby off-site workers.

The District has recently received several additional comments on this proposal. A recent comment from CCEEB requested clarifying changes in the proposed regulatory language with respect to emission calculation procedures. District staff agree with this request, and have included minor revisions to the proposed regulatory language to clarify that, in calculating annual TAC emissions for a source, emissions that are "reasonably" predictable are to be included. These minor changes are noted in Attachment 1 to this Board memorandum. Because the changes are not "so substantial as to significantly affect the meaning of the proposed rule or regulation," the Board may take action on the proposed regulatory language, with these minor revisions included, at the June 15th Board meeting.

On June 6, 2005, the District received another lengthy comment letter from ELJC on the proposed rule and rule amendments. A letter was also received on June 7, 2005, from the Bay Area Clean Air Task Force. Many of the issues identified in these letters reiterate comments that were previously made. District staff have considered these recent comments, and do not believe that any further changes in the staff proposal are needed. Responses to these comment letters are provided in Attachments 2 and 3 to this Board memorandum.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The District prepared an Environmental Impact Report (EIR) to evaluate the potential for environmental impacts associated with this regulatory proposal. The EIR indicates that the District's proposal to require new and modified dry cleaners to meet the project risk limits of Regulation 2, Rule 5, may result in a significant increase in emissions of precursors to ozone, a criteria air pollutant. This increase may occur when dry cleaners switch from perchloroethylene, a negligibly reactive organic compound, to less toxic cleaning solvents (i.e., VOCs) that may be precursors to ozone formation. Even though the District proposal is expected to reduce emissions of perchloroethylene and other toxic air contaminants, the potential for this increase in VOC emissions is considered significant under CEQA. No other significant impacts were identified in the EIR. The Board resolution includes findings certifying the EIR.

Because no enforceable means to directly mitigate the potential increase in VOC emissions was found to be feasible, CEQA requires the Board to adopt a statement of overriding considerations. The Board resolution includes the necessary statement of overriding considerations and the findings to support the statement.

RECOMMENDATION

Staff recommends that the Board certify the EIR prepared for these regulatory actions and adopt a statement of overriding considerations. Staff further recommends that the Board adopt the proposed Regulation 2, Rule 5: New Source Review for Toxic Air Contaminants, and associated amendments to several other District rules and the Manual of Procedures, with an effective date of July 1, 2005.

Respectfully submitted,

Jack P. Broadbent
Executive Officer / Air Pollution Control Officer

Prepared by: Brian Bateman
Reviewed by: Peter Hess

Attachments

Attachment 1: Minor Revision to Proposal

Based on comments received from CCEEB, the staff added late revisions to Regulation 2, Rule 5 and the Manual of Procedures to clarify that, in calculating annual TAC emissions for a source, emissions that are "reasonably" predictable are to be included:

2-5-601 Emission Calculation Procedures: The APCO shall determine annual TAC emissions (expressed as pounds per year), to be used for comparison with chronic trigger levels and in estimating cancer risk and chronic hazard index, and one-hour TAC emissions (expressed as pounds per hour), to be used for comparison with acute trigger levels and in estimating acute hazard index as follows:

601.1 Emission calculations shall include emissions resulting from routine operation of a source or emissions that are <u>reasonably</u> predictable, including, but not limited to continuous and intermittent releases and predictable process upsets or leaks, subject to enforceable limiting conditions.

Manual of Procedures, Volume II, Part 4:

3.3.2 Emissions Characterization (2nd paragraph)

- As stated in Regulation 2-5-601.1, the TAC emissions that are subject to Regulation 2, Rule 5 requirements include any emissions that result from routine operation of a source or emissions that are <u>reasonably</u> predictable. These routine or predictable emissions…

3.4 Additional Completeness Criteria (2nd bullet)

- Provide maximum hourly and maximum annual TAC emission rates or sufficient information for the District to calculate these TAC emission rates. These maximum TAC emission rates include routine or <u>reasonably</u> predictable TAC emissions but exclude emissions occurring due to accidental releases or other unpredictable circumstances such as emergency use of emergency standby engines…

Attachment 2: Responses to Golden Gate University Environmental Law and Justice Clinic Comments Dated June 6, 2005

1. **Comment: ELJC supports the proposed removal of the "specific findings exemption" that would have given the APCO discretion to approve projects with health risks exceeding the proposed risk limits.**

   Comment noted.

2. **Comment: ELJC supports the following proposed improvements to the existing risk management policies: (1) use of a lower chronic hazard index threshold for TBACT requirements, (2) addition of acute hazard index for acute non-cancer health risks, (3) use of more conservative exposure assumptions in the risk assessment process, (4) removal of special risk policy and limits for dry cleaners, and (5) increasing permit application fees.**

   Comment noted.

3. **Comment: CEQA requires the District to evaluate the potentially significant and adverse cumulative health effects of the proposed rules.**

   The District carefully considered the cumulative impacts of its proposal and addressed cumulative impacts in the EIR prepared for the project. The District proposal will lead to reductions in risk beyond those that would occur with the present toxics NSR program and certainly beyond those that would occur in the absence of a toxics NSR program. In commenting on the EIR and again with this comment, ELJC defines the project as the proposed new rule, changes to the existing rules, ***plus all future permit decisions made under the program in the future****. Based on its view that adverse cumulative impacts are caused by the program rather than by the economic activities that the program regulates, ELJC concludes, contrary to simple common sense, that the toxics NSR program, which without doubt reduces risk, is, in fact, responsible for increasing risk. ELJC's argument is not a CEQA argument, but an argument over stringency: ELJC would like a more stringent rule than the one being proposed, even though there is no program with greater stringency anywhere in the U.S.*

   ELJC refers to and incorporates its 23 pages of comments on the Draft EIR prepared for this project. The District has responded at length to these comments, and the District responses can be found in Appendix B at the back of the final EIR document.

4. **Comment: The proposed rule's classification of individual projects meeting health risk limits as "ministerial" activities exempt from CEQA is inappropriate because the District exercises discretion when it (a) conducts risk assessments, (b) makes TBACT determinations, and (c) imposes permit conditions.**

   Because the proposal does not change longstanding District practice regarding treatment of certain projects as ministerial, there are no impacts from rule ***adoption*** *for purposes of CEQA. The District believes that the use of ministerial exemptions in connection with the toxics NSR program is appropriate under CEQA.*

   Whether a project is ministerial turns on whether the District exercises discretion in the permitting process for the project. The proposed rule and the existing program treat a project that is determined through an HRSA to have a risk below the project health risk limits as ministerial. They also treat as ministerial a project for which risk can be reduced below the limits through the application of TBACT. ELJC cites the Friends of Westwood *case for the propositions that acts are ministerial where an agency has no power to exercise its personal judgment, where standards are fixed by statute or ordinance or the enactment of another legislative body, and where the agency can be forced to follow standards. The court in that case, however, drew a distinction between routine building permit decisions and the permits in question, which were for construction of a 26 story, mixed-use tower with an estimated 1980's value of $88 million. Because the Los Angeles Municipal Code granted city departments considerable discretion in handling some aspects of this large project, the court held that the permits were not ministerial. The court made it clear that it was not holding that all or most of the 40,000 building permits issued each year in Los Angeles were "discretionary projects."*

   ELJC states, in a conclusory way, that the District has not established fixed standards it must follow. This is simply not the case. The existing toxics NSR program and the proposed rule both establish fixed standards: the rules set health risk limits and require use of a specified methodology for calculating the health risks that are to be compared to the risk limits. The methodology will be published on the District website and any revisions will be handled through a public rule development process.

5. **Comment: The District proposal causes cumulative impacts from multiple future project activities and fails to address those impacts in the Draft EIR.**

The District is proposing to adopt rules that would further limit risk from future projects subject to the toxics NSR program. In its comments on the Draft EIR and with this comment, ELJC redefines the project to include the rules ***plus all future decisions on permits****, then assumes – without substantial evidence – that those future projects will have adverse impacts, and then attributes those impacts to the proposed, more stringent rules.*

ELJC's conversion of a program that limits risk into a program that creates risk defies simple common sense. The project before the Board quite plainly includes no actions on individual permits, nor could it, since these future activities are unknown. The activities to be regulated by the rule arise from the independent actions of economic actors who open businesses or install or modify equipment or operations. These activities will occur regardless of whether the District has a toxics NSR program or adopts a rule for the program. Rather than cause the impacts attributable to these activities, the District rule will ameliorate them.

Even if we assume, despite the lack of logical support, that the toxics NSR program somehow causes the activities that produce impacts, these impacts are not foreseeable. It would be an exercise in pure speculation, and contrary to the requirements of CEQA, to attempt to analyze these impacts.

More importantly, there is simply no evidence that these activities, even if they are somehow the result of the toxics NSR program, cause cumulative adverse impacts. In its comments on the Draft EIR, ELJC repeatedly claimed that the rule might produce significant environmental effects through a geographic concentration of risk, either when multiple new sources are located in the same area or a new source is located in an area where there are existing sources of TACs. Assuming that the toxics NSR rule somehow causes, rather than mitigates risk concentrations, ELJC has not presented substantial evidence of a significant effect. The risk criteria for the existing program and the proposed rule are project-based, extremely conservative, and set at a level that allows co-location of new sources or location of a new source near existing sources. The project risk criteria are not measures of significance for multiple aggregated sources. As a result, the risk from multiple projects taken together may not be said to be a significant effect simply because the risk exceeds the risk of 10 in one million allowed for a single project.

The District has modeled a number of worst-case scenarios, cited by ELJC in its comments on the Draft EIR, involving geographic concentration of sources, and, though the highest risk scenario (involving gas stations located on all four corners of an intersection) was found to slightly exceed 20 in one million, such a level of risk is not much above the 10 in one million single project risk and is a small fraction of the current average Bay Area inhalation risk of 600 in one million. In addition, any incremental localized risk increases of this magnitude are likely to be outweighed by the documented general decline in ambient risk that has occurred over the last decade.

In addition, the available air monitoring data do not support the notion that there are localized areas of significantly higher risk in the Bay Area. The available data from District monitors is presented in the EIR on p. 3-18. The data from the Richmond, San Francisco (Arkansas Street), and West Oakland monitors show ambient concentrations for the measured TACs that are similar to those for other monitoring stations in the Bay Area. The available data, therefore, do not suggest the existence of particular "hot spots." Through a new Community Air Risk Evaluation (CARE) program, the District has undertaken an effort that may help determine whether there are toxic "hot spots" in the Bay Area, but that effort is just beginning.

Note that ELJC made this same comment in its comments on the Draft EIR. For a more complete discussion of these issues, see the District's responses to the ELJC CEQA comments in Appendix B of the Final EIR included in the Board package.

6. **Comment: Because, under CEQA, compliance with thresholds of significance does not conclusively establish that impacts are not significant, compliance of a future project with project-based thresholds (e.g., 10 in one million) does not rule out significant effects from the project. Because the District rule would treat projects that meet the risk limits as ministerial projects, the rule would avoid consideration of evidence of such significant cumulative impacts.**

   Because the project risk limit is also the District's adopted CEQA threshold of significance, a project involving emissions only from permitted sources and meeting the project risk limit cannot be said to cause significant effects. By definition, such a project does not have significant impacts. The project risk limits are conservative and are intended to allow for siting in urban areas without creating significant cumulative impacts.

   In most cases involving issuance of a District permit, the District is not the lead agency. If there are other impacts from a project related to sources for which permits are not issued (e.g., truck traffic), the lead agency must consider those impacts, regardless whether the issuance of the District permit is ministerial.

In the future, with the development of cumulative impact thresholds and methodologies, a project that involves emissions only from permitted sources and that meets the project risk limit might be found to exceed some type of cumulative risk criteria and therefore have adverse impacts. With these developments, it would make sense for the District to adopt thresholds of significance based on cumulative risk. At present, however, it cannot be fairly argued that the District's proposed use of ministerial exemptions results in significant cumulative impacts.

7. **Comment: The District should have analyzed mitigation measures and alternatives to avoid or lessen cumulative impacts.**

   Based on its argument that the project has significant impacts not discussed in the EIR, ELJC argues that the failure to discuss mitigation measures and alternatives to address these alleged impacts violates CEQA. As discussed above, the impacts ELJC attributes to the project are not project impacts. As a result, no discussions of mitigation measures and alternatives, beyond those included in the EIR, are necessary.

8. **Comment: The proposed procedures for calculating emissions from modified sources are not health protective because (a) the procedures will allow cumulative increases in total emissions that may result in unacceptable risk levels, (b) the baseline emission calculation procedures will allow a facility to increase emissions or make other modifications without undergoing toxics NSR, and (c) the procedures will allow the APCO to consider contemporaneous reductions of emissions that will not necessarily result in comparable risk reductions. These comments are described further below.**

   As explained in more detail below, the District's proposed emission calculation procedures will not allow project emission increases that result in unacceptable risk levels nor allow a modified source to increase emissions without undergoing toxics NSR. While it is true that the toxics NSR program will not include the baseline emission levels from grandfathered or loss of exemption sources in the analysis of source or project risks, the proposed project health risk limits were intended to apply incrementally to projects and are not appropriate limits for baseline health risks from a facility. The District's response to comments on cumulative risk addresses this issue in more detail. Furthermore, the District implements other regulatory programs including District rules, CARB ATCMs, federal NESHAP and MACT requirements, and the AB2588 Air Toxics Hot Spots Program that reduce baseline health risks from facilities. In addition, when TBACT is required for a modified source, TBACT controls are typically applied to the whole source and will therefore achieve reductions in both emission increases and baseline emissions.

Cumulative Increases. *ELJC states that adding proposed risks for a modified source to the existing baseline risks from the source could result in total source risks that exceed the project risk limits and that such cumulative health impacts were unacceptable.*

ELJC has misunderstood how the proposed rule treats chronic impacts. In accordance with Regulation 2-5-601.3.2, annual emission increases for a modified source are based on the new maximum permitted emission level minus the baseline emission level. For all modified sources that were constructed after January 1, 1987, the baseline emission level is zero, and the total maximum permitted emission level from this source is used to evaluate the source and project health risks. The only cases in which the total emission levels from modified sources are not evaluated under toxic NSR are (a) grandfathered sources that were initially permitted prior to January 1, 1987 or (b) sources that were permitted pursuant to a loss of exemption from permitting requirements. In either case, the source and project health risks include the current proposed emission increases plus any previous emission increases resulting from modifications that have occurred since January 1, 1987. Therefore, the total emission increases for a modification of a grandfathered or loss of exemption source are really the proposed maximum permitted emission level for the source minus the permitted emission level that was in effect as of 1/1/87 (this baseline emission level would be adjusted downward if the source is required to comply with a MACT, ATCM, or District limit).

In the rare case where a grandfathered or loss of exemption source has no emission cap or limit in a permit condition, the baseline limit will be calculated pursuant to Regulation 2-5-602.2. The health impacts resulting from emission increases at these modified sources will be controlled by the toxics NSR program, while the health impacts resulting from baseline emissions at modified sources will be reduced through other regulatory programs (such as the AB2588 Air Toxics Hot Spots Act and source-specific control measures). If the health impacts resulting from emission increases at a modified source are high enough to trigger TBACT, then emission controls or other appropriate risk reduction measures will be required for that modified source. Since these TBACT controls are applied to the entire modified source, the TBACT requirements will reduce both emission increases at the modified source as well as baseline emissions from the modified source.

In accordance with Regulation 2-5-601.3.1, acute health impacts for a modified source will be determined based on the maximum emitting potential of the modified source, regardless when the source was constructed.

<u>Baseline Calculations.</u> ELJC states that the District's recent revisions to the proposed baseline emission calculation procedures would make it easier for existing sources to avoid undergoing toxics NSR. ELJC suggests that the District should use only a fixed period of time to establish the baseline period, similar to 2-2-605.2 or 2-9-602.2, rather than allowing the applicant the opportunity to make a demonstration to the District's satisfaction that a period other than the last 3 years is more appropriate for determining baseline emissions. ELJC also states that the baseline throughput should be the "lesser of" the actual average throughput or the maximum permitted throughput rather than "either" of these options.

The baseline period is used to calculate baseline emissions only when an existing permitted source has no emission cap or emission rate limit. While many existing sources do not have TAC emission limits stated in permit conditions, almost all permitted sources have throughput limits that can be used to establish maximum permitted TAC emission levels for the source. These permitted throughput levels and the resulting maximum permitted TAC emission rates will be used both to determine (a) whether or not the proposed physical/operational changes will result in TAC emission increases above the maximum permitted levels and (b) the magnitude of the emission increases above this previous maximum permitted emission level.

The "lesser of" language in Regulation 2-2-605.2 was intended to prevent sites from getting credit for emissions that occurred when the throughput exceeded a maximum permitted level:

2-2-605.2 Baseline throughput is the lesser of:
- 2.1 actual average throughput during the baseline period; or
- 2.2 average permitted throughput during the baseline period, if limited by permit condition.

This concept of preventing a site from getting credit for non-compliant periods is more clearly stated in the proposed Regulation 2-5-605.2.2:

2-5-605.2.2 Baseline throughput is either the:
- 2.2.1 Actual average throughput during the baseline period, if throughput is not limited by permit condition; or
- 2.2.2 Maximum throughput as allowed by permit conditions on the date the application is complete.

Using the lesser of the actual throughput or the maximum permitted throughput rate, would inflate the magnitude of the current proposed modification for a source that is currently operating well below it's maximum permitted throughput level compared to the same modification at a source that is operating close to it's maximum permitted limit. For example, if two auto body repair shops are permitted to operate at the same throughput rate using the same coatings and both decide to ask for the same increase in throughput rate, then the two modifications should be treated exactly the same under toxics NSR. However, if *the lesser of the actual or permitted throughput rate is used to determine the baseline emissions, then the modifications would be treated differently if the shops had different actual throughput levels. Treating the same modification differently is inherently unfair. Therefore, the District believes that the proposed language is the most appropriate because it prevents sites from getting baseline emission credit for non-compliant emissions and provides fair and equal treatment to all sites.*

Since almost all permitted sources have either emission caps or throughput limits, the need to use a baseline period to calculate actual average throughput rate and baseline emission rate will occur infrequently. Although the District prefers that the baseline period be the 3-year period immediately preceding the date that an application is complete, the District has found through experience that other longer periods of time may be appropriate. In some cases, the companies have requested that longer periods of time be used for determining baseline throughput rates, because the sources were not operating for long periods of time due to equipment failures the necessitated the proposed modification or due to the recent economic downturns experienced by many Bay Area companies. However, the District has also found the need to look at longer periods of time than the last 3 years, because of the limited availability of source test data for TACs. The District prefers to use site-specific source test data for determining baseline TAC emissions whenever this data is available. However, source tests for TACs are generally not required on an annual basis due to the expense of testing for TAC emissions. Due to the possibility that throughput and/or TAC emission rate data may not be available or may not be appropriate during the 3 years prior to the current application, the District feels that allowing other longer time periods of time for determining baseline emissions is reasonable for the rare cases when the District needs to make such a determination.

<u>Contemporaneous Risk Reductions:</u> ELJC states that consideration of contemporaneous emission reductions under Section 2-5-601.4 would allow an unacceptable hazard index based on a decreased cancer risk. The rule language states, "For a modified source, the APCO may consider contemporaneous reductions of other emissions from the modified source when estimating the project risk…" and provides an example, "…a modified source may have a decrease in benzene emissions that would mitigate an increase in toluene emissions)." ELJC also comments that any contemporaneous reduction should result in actual pollution reduction, offset any new emissions and result in no increased pollution.

The intended applicability is very narrow; it only applies to an individual source that is being modified -- contemporaneous reductions at other sources would not be considered. We agree that project risk standards should not be exceeded even when contemporaneous emission reductions from a modified source are considered. However, we may consider the replacement of a component in a coating formulation or process reaction component with one that is less toxic to be a beneficial project, and may consider this to meet TBACT requirements. Emissions would be weighted by toxicity factors in considering adequate mitigation.

Some examples that may be acceptable:

- *Emissions of carcinogen A are increased but are fully mitigated by a contemporaneous reduction in emissions of carcinogen B, net cancer risk is reduced.*

- *Emissions of carcinogen A are increased but are partially mitigated by a contemporaneous reduction in emissions of carcinogen B, net increase in cancer risk is less than one in a million.*

- *Emissions of carcinogen A are increased but are partially mitigated by a contemporaneous reduction in emissions of carcinogen B, net increase in cancer risk is less than ten in a million and TBACT is applied.*

- *Emissions of noncarcinogen A are increased but are fully mitigated by a contemporaneous reduction in emissions of noncarcinogen B, net risk is reduced.*

- *Emissions of noncarcinogen A are increased but are partially mitigated by a contemporaneous reduction in emissions of noncarcinogen B, net increase in Hazard Index is less than 0.20.*

- *Emissions of noncarcinogen A are increased but are partially mitigated by a contemporaneous reduction in emissions of noncarcinogen B, net increase in Hazard Index is less than 1.0 and TBACT is applied.*

- *Emissions of noncarcinogen A are increased but are partially mitigated by a contemporaneous reduction of emissions of carcinogen B, Hazard Index is less than 1.0. TBACT may be considered to be satisfied depending on toxicity weighted value of mitigating emission reduction (i.e., TBACT may be considered to be a favorable product substitution that would result in an increase in Hazard Index that is mitigated by a reduction in cancer risk).*

9. **Comment: The acute hazard index should be included in the definition of a "modified source" and should also be used as a trigger for TBACT requirements.**

Section 2-5-214 defines a modified source as one with an increase in the daily or annual emission level of any toxic air contaminant. District staff believe that this will be effective in identifying those sources that would have emission increases that would result in potentially significant acute exposure.

The District is unaware of any agency that has established a TBACT requirement based solely on acute HI. The District does not believe that a TBACT requirement based on a maximum acute HI of 0.2 is appropriate for a number of reasons as follows.

- *An acute HI of 0.2 is only twenty percent of the exposure level at which specified health effects might be expected to occur in the general population including sensitive individuals;*

- *Most acute RELs are based on health effects that are mild and reversible (e.g., mild irritation of the eyes, nose, or throat). Uncertainties in the available toxicological data also require that most acute RELs incorporate extrapolation factors of 10 or more;*

- *Most of the sources that the District permits have continuous or intermittent emissions that result in exposures that are more appropriately characterized as being chronic than acute. For example, OEHHA recommends that acute RELs be used to evaluate exposures that occur no more frequently than every two weeks in a given year. Nearly all TACs with acute RELs also have chronic RELs, and the District has proposed to require TBACT based on a very stringent chronic HI of 0.20. Many sources with acute impacts may also be required to be controlled with TBACT based on maximum cancer risk exceeding 1 in one million, or BACT based on maximum POC, NPOC, or PM emissions exceeding 10 lb/day;*

- *The maximum acute HI is determined based on the maximum one-hour average ambient pollutant concentration predicted using the maximum hourly emission rate of the source being evaluated. The likelihood of an actual adverse acute health effect is also dependent on the frequency and spatial extent under which such peak concentrations may occur, which is not part of the evaluation; and,*

- *In many cases, the use of TBACT based solely on an acute HI of 0.20 would not be cost-effective. This may be the case if the peak exposure was limited to only a few hours per year (TBACT is required to reduce emissions during all periods of source operation). Additionally, some very small sources (e.g., small natural gas fired combustion sources) would likely have maximum acute*

HI's over 0.20 due primarily to very localized ground-level impacts caused by limited dispersion. In these cases, project costs would be increased, District resources would be expended, and permit-processing time would be lengthened, for very little reductions in emissions.

10. **Comment: ELJC opposes exemption (2-5-111) from risk calculation for emissions from operation during emergency conditions and during emission testing required by the APCO.**

    The emergency use exemption is carried forward from the existing RMP for diesel-fueled engines, and is intended to avoid restricting the use of these engines during emergencies (defined in Regulation 9, Rule 8, Section 231). In Section 2-5-111, this provision will now be extended to other types of emergency standby engines (e.g., natural gas-fired engines) in order to encourage the use of non-diesel alternatives. In addition, the District is proposing to expand this exemption to include emissions arising from emission testing of these engines required by the APCO. This proposal is consistent with the Airborne Toxic Control Measure (ATCM) for stationary diesel engines that was adopted in late 2004 by CARB. Because most new engines are certified by the manufacturer to comply with emission standards in the ATCM, emission testing will be very infrequently required by the APCO, and these emissions are not expected to be significant.

    To be consistent with other air quality programs and regulations, we generally only consider those emissions that are predicable. At this time, we consider true emergency conditions to be unpredictable. In addition, risk to the public from other causes would likely be increased during emergency conditions, and the District made a risk management decision that restricting operation of back-up generators and other engines during these emergency conditions would not well serve the public health.

11. **Comment: The District should use the OEHHA HRA guidelines, the guidelines should be included in the regulatory text, and updates to the District-adopted guidelines should be required within one year of any applicable change to OEHHA's guidelines.**

    The District is using the OEHHA HRA guidelines but wished to have a local document that would clarify portions of the guidelines for use in a permitting program and would serve as a convenient reference for the major exposure factors. Because the OEHHA guidelines were developed for the Air Toxics Hot Spots program and are recommended for risk assessment of existing sources, some minor modifications of the guidelines are helpful for use with the permitting of new and modified sources. The two major differences between the District guidelines and the OEHHA guidelines are (1) the use in the District procedures of a residential breathing rate jointly recommended by CARB and OEHHA but not *included in the OEHHA guidelines, and (2) the use of a District list (Table 2-5-1) of toxic compounds.*

The proposed rule makes use of the District guidelines mandatory. The guidelines will be published on the District website, and any modifications will be made through a public rule development process. Maintaining a separate list will give staff time to assess the impacts of new compounds or existing compounds that may have been assigned new toxicity factors and contact potentially affected parties prior to adoption of the new health effects values within Rule 2-5. Staff also uses major exposure factors (e.g., breathing rate) for establishing the emission trigger levels listed in Table 2-5-1.

District staff plans to update Table 2-5-1 and the HRSA Guidelines for all new health effects values and changes to major exposure factors (especially for inhalation risk) established by OEHHA as amendments to the 2003 HRA guidelines. However, minor changes (e.g., minor non-inhalation factors) would be of little interest to the public, and should be routinely used by a risk screener. In addition, District staff wishes to use HARP, AERMOD, and other advanced risk assessment tools and formally updating the rule or HRSA guidelines for minor changes to these computer programs would be impractical. The District plans to update Rule 2-5 and the HRSA guidelines within a year of relevant changes but does not wish to be held to a schedule that could be difficult to satisfy because of events beyond our control.

12. Comment: As a matter of environmental justice, the District must protect against disproportionate health impacts resulting from permitting in communities like Richmond, West Oakland, and Bayview-Hunters Point.

As discussed in response 5, disproportionate impacts, if they exist, are not the result of the toxics NSR program. The toxics NSR program does not create risk, it reduces risk. As discussed in response 5, the available evidence suggests that there is only minor variation in risk from exposure to toxic air contaminants in ambient air in the Bay Area. Because not enough is known about variation in exposure, the District has undertaken a Community Air Risk Evaluation program to help determine whether there are any Bay Area localities in which risks from air toxics are significantly higher than average risk.

Attachment 3: Responses to Bay Area Clean Air Task Force Comments Dated June 7, 2005

1. **Comment: Establishment of significance thresholds for individual projects does not take into account the goal of mitigating cumulative impacts from many different sources, may fail to provide adequate and equal health protection for all Bay Area communities, and may avoid analysis of cumulative impacts required by CEQA.**

   The risk thresholds for individual projects are extremely conservative and are designed to allow siting of a new or modified source among other sources in an urban environment. The available evidence suggests that there is only minor variation in risk from exposure to toxic air contaminants in ambient air in the Bay Area and that all Bay Area communities have benefited from risk reductions achieved by the toxics NSR program and other risk reduction programs. Through a new Community Air Risk Evaluation program, the District has undertaken an effort that may help determine whether there are toxic "hot spots" in the Bay Area, but that effort is just beginning. To the extent that there are any hot spots, the toxics NSR program does not cause them but instead mitigates them. The proposed rule does not have cumulative impacts that increase risk in any community in any way. This issue was raised by ELJC in comments on the Draft EIR for the proposed rule. The District's rebuttal of the ELJC arguments can be found in Appendix B of the EIR.

2. **The permitting a few years ago of seven diesel backup generators in one building, each treated as a single source, should not have occurred and should not be duplicated.**

   The combined risk for emissions from these engines is low, even though this project involves one of the most extreme concentrations of sources of toxic air contaminants known to the District. As with most projects for which air permits are issued, the District was not the lead agency for this project. The lead agency for the project in question was the City and County of San Francisco. The City hired a consultant to analyze cumulative impacts, concluded that there would be no significant impacts, and adopted a CEQA negative declaration.

   The District recently modeled the impacts from 22 engines at the site subject to toxics NSR review and found that the risk for the maximally exposed residential receptor was 6 in one million and for the maximally exposed worker receptor was 20 in one million. The residential risk level is below, and the worker risk level is only slightly above, the risk limit for a single project, and both are a small fraction of the average Bay Area risk from ambient air of 600 in one million. Well-documented reductions in ambient risk that have occurred over the past several years from the toxics NSR program operating along with other programs probably outweigh the incremental increase in risk from the engines.

This scenario was raised by the ELJC in comments on the Draft EIR for the Districts toxics NSR rule proposal as an example of adverse impacts from the rule. Instead, it serves as an illustration that risks are not additive and that even extreme concentrations of sources meeting the stringent risk limits of the rule are not likely to result in significant impacts. For a more detailed discussion of this example, see response 8 in Appendix B of the EIR.

3. **Comment: We are opposed to the District retaining the exemption of "emergency standby engines," primarily because the District does not distinguish between general "backup" use and true "emergency" use.**

   The District believes standby engines, whether used for "backup" or "emergency," serve important public health and safety purposes, and a distinction serves no useful purpose. In Section 2-5-111 of the proposed rule, the exemption is extended to other types of emergency standby engines (e.g., natural gas-fired engines) in order to encourage the use of non-diesel alternatives. Because most new engines are certified by the manufacturer to comply with emission standards in the Airborne Toxic Control Measure for stationary diesel engines adopted in late 2004 by CARB, emission testing will be very infrequently required by the APCO, and these emissions are not expected to be significant.

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

STAFF REPORT
JUNE 2005

Proposed Adoption of:

Regulation 2: Permits,

Rule 5: New Source Review of Toxic Air Contaminants

Manual of Procedures, Volume II: Engineering Permitting Procedures,

Part 4: New and Modified Sources of Toxic Air Contaminants

Proposed Amendments to:

Regulation 2: Permits,

Rule 1: General Requirements

Rule 2: New Source Review

Rule 9: Interchangeable Emission Reduction Credits

Regulation 8: Organic Compounds,

Rule 34: Solid Waste Disposal Sites

Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks

Rule 47: Air Stripping and Soil Vapor Extraction Operations

Regulation 11: Hazardous Pollutants,

Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations

Toxic Evaluation Section
Bay Area Air Quality Management District

TABLE OF CONTENTS

1. Executive Summary

For the last eighteen years, the District has had a program to evaluate and reduce the public's exposure to toxic air contaminants (TACs). TACs are air pollutants which may cause or contribute to an increase in mortality, or in serious illness, or which may pose a potential hazard to human health. The District's overall air toxics program includes three individual regulatory programs directed at stationary sources of TACs. Two of these programs apply to sources at existing facilities, and the third is the Air Toxics New Source Review (NSR) Program, which focuses on proposed projects involving new and modified sources. This staff report addresses proposed changes to the District's Air Toxics NSR Program.

The goal of the Air Toxics NSR Program is to prevent significant increases in health risks resulting from new and modified sources of TACs based on preconstruction permit review. The program is also intended to reduce existing health risks by requiring updated control requirements when older, more highly polluting, sources are modified or replaced. The Air Toxics NSR Program was established in 1987 at the direction of the District's Board of Directors, and has been implemented based on policies and procedures established by the District's Air Pollution Control Officer (APCO).

The Air Toxics NSR Program is a health risk-based program, meaning that the program requirements are based on the results of health risk assessment (HRA). An HRA is an analysis that estimates the increased likelihood of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic substance. The Air Toxics NSR Program uses an HRA methodology that was specifically developed for air pollution control programs in California. This methodology is documented in State HRA guideline documents, which have been updated several times since their original publication in 1987. Under the Air Toxics NSR Program, District staff complete a site-specific Health Risk Screening Analysis (HRSA) as part of the permit evaluation process for any proposed project with TAC emissions that exceed specified de minimis toxic trigger levels.

Depending on the results of an HRSA, new and modified sources may be required to control emissions of TACs using the Best Available Control Technology for Toxics, or TBACT. The residual emissions remaining after the use of TBACT are also evaluated to make sure that the health risks for any exposed individual in the surrounding community will not be significantly increased by the proposed project. The current Air Toxics NSR Program also allows the APCO to consider the degree of uncertainty in the HRSA, along with a number of other factors, in making a risk management decision to issue or deny a permit.

The District is now proposing to codify the policies and procedures that make up the Air Toxics NSR Program by adopting a new District rule: Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, and a new part to its Manual of

Procedures. Amendments to several other District rules are also proposed in order to maintain consistency with Regulation 2, Rule 5. The goals of this rule development project are to: (1) improve the legal defensibility of the District's permitting decisions, (2) increase the clarity and public visibility of program requirements, and (3) update and enhance program requirements primarily to increase conformity with updated State guidelines.

The most significant proposed changes to the Air Toxics NSR Program are:

- Currently, HRSAs are completed to evaluate and limit chronic (i.e., long-term) health risks resulting from TAC emissions. The proposed rule would add the consideration of acute (i.e., short-term) health risks, and establish an acute project risk limit.
- Currently, TBACT is required for a project that results in a cancer risk of greater than 1.0 in one million. The proposed rule would change the TBACT threshold from a project-basis to a source-basis, and add a TBACT threshold for chronic non-cancer health risks. Under the proposed rule, any new or modified source would be required to use TBACT if the source risk is a cancer risk greater than 1.0 in one million and/or a chronic hazard index greater than 0.20. These changes focus the requirement for state-of-the-art control equipment on those sources that contribute most significantly to health risks, and provide a greater level of protection for non-carcinogenic health effects.
- The proposed rule would remove existing exemptions from project risk limits for dry cleaners due to advances in less-toxic technologies. This change will provide additional incentives for dry cleaners to use alternatives to perchloroethylene.
- The proposed rule and HRSA Guidelines include updated lists of toxic air contaminants, toxicity values, and exposure assessment procedures that are consistent with the most recent State risk assessment guidelines adopted by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA). The rule, and HRSA guidelines, will be periodically updated to incorporate future changes to the OEHHA guidelines.
- Currently, the APCO has discretion to issue permits for projects that exceed risk standards based on risk management considerations, although this has rarely been done. The proposed rule would eliminate the provision for discretionary risk management. All projects would be required to comply with project risk limits of 10 in one million for cancer risk, and 1.0 for acute and chronic hazard index.
- The proposed amendments to Regulation 3 would increase permit application fees for applicants requiring an HRSA in order to fund the additional staff resources needed to implement the proposed program changes. These proposed fee amendments have recently been combined with the District's overall proposed amendments to Regulation 3 for the upcoming FY 2005-06, which are scheduled to be considered for adoption on June 15, 2005.

The District has prepared an Environmental Impact Report (EIR) to evaluate the potential for environmental impacts associated with this regulatory proposal. The EIR indicates that the District's proposal to require new and modified dry cleaners to meet the project risk limits of Regulation 2, Rule 5, may result in a potentially significant increase in emissions of precursors to ozone, a criteria air pollutant. This may result from dry cleaners that switch from perchloroethylene, a negligibly reactive organic compound, to less toxic cleaning solvents (i.e., VOCs) that may be precursors to ozone formation. Even though the District proposal is expected to reduce emissions of perchloroethylene and other toxic air contaminants, the potential for this increase in VOC emissions is considered significant under CEQA. No other potentially significant adverse impacts were identified in the EIR.

The changes in the Air Toxics NSR Program that would result from adoption of the proposed rule and rule amendments are not expected to result in significant economic impacts. The regulatory proposal meets the required findings of necessity, authority, clarity, consistency, non-duplication, and reference. The District conducted a series of five workshops in 2003, and one workshop in 2005, to discuss the proposals with interested parties, and has considered all public comments in establishing the final proposal. District staff believe that the regulatory proposal meets the goals of the rule development project, and recommends that it be adopted with an effective date of July 1, 2005.

2. Background

2.1 Introduction

This staff report addresses proposed changes to the Bay Area Air Quality Management District ("the District") Air Toxics New Source Review (NSR) Program. The Air Toxics NSR Program has been an important part of the District's air pollution control efforts for the past eighteen years. The proposed changes in the program will result in the adoption of a new District rule, and amendments to several existing District rules and Manual of Procedures. The proposed regulatory language is provided in Appendix A of this report.

2.2 The District Air Toxics Program

Over the last several decades, public concern about air pollution has expanded from what is typically called "smog" and other criteria air pollutants (so called because they are regulated by first developing health-based criteria as the basis for setting permissible ambient air quality standards) to include toxic air contaminants (TACs). A pollutant is considered toxic if it has the potential to cause adverse health effects such as cancer, birth defects, respiratory ailments, or other serious illness.

For the last eighteen years, the District has had a program to evaluate and reduce the public's exposure to TACs. The District's program, along with other programs in place at the State and national level, have significantly reduced exposure to TACs through the control of emissions from stationary sources, motor vehicles, fuels, and consumer products. For example, over the past ten years the average cancer risk from TACs that are routinely measured in the ambient air has been cut in half. Despite this success, regulatory programs continue to be needed to manage and further reduce public exposure to TACs.

The District's efforts to reduce public exposure to TACs include the promotion of measures directed at reducing emissions from motor vehicles, which are the largest source of TACs. The District has initiated the Community Air Risk Evaluation (CARE) Program to investigate the cumulative impact of stationary, area, and mobile sources at a neighborhood-level. The CARE Program will result in targeted risk reduction measures, including voluntary risk reduction projects funded by grants (e.g., Carl Moyer and Transportation Fund for Clean Air).

The District's regulatory programs, however, focus on the stationary sources over which the District has direct regulatory authority. TACs are released from a variety of stationary sources, ranging from small facilities like dry cleaners and gasoline stations, to large facilities such as chemical factories and refineries.

The District has three regulatory programs that are used to reduce the health risks associated with exposure to TACs emitted from stationary sources: (1) a Source Category-based Control Program, (2) the Air Toxic “Hot Spots” Program, and (3) the Air Toxics NSR Program.

1. The goal of the Source Category-based Control Program is to reduce emissions from new and existing sources by establishing control measures for specific types of sources. This program includes Airborne Toxic Control Measures (ATCMs) originating from California's Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983), and National Emission Standards for Hazardous Air Pollutants (NESHAPs) originating from the federal Clean Air Act. The District has also adopted a number of locally developed control measures that reduce emissions of TACs including a number of rules in District Regulations 8 and 11. Recently, the California Air Resources Board (CARB) adopted a statewide ATCM to regulate stationary diesel engines.

2. The Air Toxics “Hot Spots” (ATHS) Program was established with the adoption of the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987). The ATHS Program requires facilities to establish and update TAC air emissions inventories. The District then prioritizes these facilities based on the quantity and toxicity of emissions, and the proximity of the facility to potential receptors. High priority facilities are required to prepare facility-wide health risk assessments and, where health risks are determined to be above significance levels established by the District, notification of nearby residents is required. The ATHS Program also was amended (SB 1731, Calderon 1992) to require facilities

that pose a significant health risk to the community to reduce their risk by implementing a risk reduction audit and plan. A number of facilities in the Bay Area reduced TAC emissions in order to get below risk thresholds requiring public notification under the ATHS Program. In addition, many Bay Area dry cleaners that use percholoroethylene were required to implement risk reduction measures under the program.

3. The goal of the District's Air Toxics NSR Program is to prevent significant increases in health risks resulting from new and modified sources of TACs based on preconstruction permit review. The program is also intended to reduce health risks by requiring updated control requirements when older, more highly polluting, sources are modified or replaced. The rationale for this approach is that it is generally more cost-effective to apply stringent air pollution controls to sources at the time of initial construction or modification versus on a retrofit-basis. The Air Toxics NSR Program is the subject of this staff report.

2.3 The Existing District Air Toxics NSR Program

2.3.1 Legal Authority

The District Air Toxics NSR Program is a local program; there are no specific State or federal mandates requiring such a program. (A program established by U.S. EPA under Section 112(g) of the federal Clean Air Act requires case-by-case control technology determinations for some proposed projects with very large TAC emissions, but this does not qualify as a comprehensive air toxics NSR program). The authority for the program is derived from several sections of the California Health and Safety Code (CH&SC).

The primary authorities are provided in three sections of the CH&SC as follows: (1) CH&SC Section 42300 provides an air district the authority to establish a preconstruction permitting program, (2) CH&SC Section 42301(b) provides an air district the authority to deny permits if the Air Pollution Control Officer (APCO) is not satisfied that the proposed new and modified source(s) will comply with applicable requirements, including rules, regulations, and orders of the air district or State Board, or any air pollution requirements in the CH&SC, and (3) CH&SC Section 41700 is an air pollution requirement that prohibits emissions of air contaminants from sources which cause injury to the public or which endanger public health.

Additional authority for the Air Toxics NSR Program is provided in CH&SC Section 39659(a)(1), which indicates that air districts may adopt regulations that establish procedures for issuing permits, and take any other action that may be necessary to establish, implement and enforce programs for the regulation of Hazardous Air Pollutants (HAPs) that have been listed as TACs (all federal HAPs have now been listed as State TACs).

2.3.2 Risk-Based Approach

The District Air Toxics NSR Program is a health risk-based program, meaning that the program requirements are based on the results of health risk assessment (HRA). An HRA is an analysis that estimates the increased likelihood of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic substances. (Note that an HRA completed for the Air Toxics NSR Program is generally referred to as a "Health Risk Screening Analysis", or HRSA).

Risk-based approaches are widely used in regulatory programs in the United States by federal agencies such as the Environmental Protection Agency, Department of Energy, and the Nuclear Regulatory Commission, and in California by State agencies including the California Air Resources Board, Department of Pesticide Regulation, Department of Toxics Substances Control, and the Water Resources Control Board. A risk-based approach is appropriate for the Air Toxics NSR Program because it provides site-specific information regarding potential health effects of proposed new and modified sources that can be used in an objective manner to evaluate compliance with CH&SC Section 41700.

Like many fields of science, there is considerable uncertainty in the process of health risk assessment. This uncertainty arises from lack of data in many areas and necessitates the use of models and assumptions to estimate health risks. When HRAs are used in a regulatory program, it is essential that a uniform methodology be established for estimating health risks based on a consistent set of models and assumptions. At the same time, the program should also allow for updating the HRA methodology based on advances in scientific understanding.

The District Air Toxics NSR Program uses an HRA methodology that was specifically developed for air pollution control programs in California. This methodology is documented in State HRA guideline documents, which have been updated several times since their original publication in 1987. The models and assumptions used in these guidelines are designed to err on the side of health protection in order to avoid underestimation of risk to the public.

The standard risk assessment approach currently involves four steps: (1) Hazard Identification, (2) Exposure Assessment, (3) Dose-Response Assessment, and (4) Risk Characterization. Hazard Identification involves identifying the specific toxic substances that need to be evaluated and whether each of these is a potential human carcinogen, and/or is associated with other types of adverse health effects.

Exposure Assessment involves estimating the extent of public exposure to each substance for which potential cancer risk or non-cancer health effects will be evaluated. For HRAs involving air emissions, this involves: (a) quantifying TAC emission rates, (b) modeling transport, dispersion, and fate in the environment, (c) identifying exposed populations and possible exposure routes, and (d) estimating exposure levels. While Exposure Assessment may involve estimating aggregate population-wide exposures and health risks, most risk-based regulatory programs focus on estimating health risks to individuals within the exposed population. The level of exposure resulting from a particular source of air emissions may vary greatly between individuals depending on their proximity to the source, their degree of mobility, and many other factors. Risk assessments that are used in regulatory programs generally use a number of conservative assumptions that simplify exposure estimates, and focus on estimating health risks for a hypothetical maximally exposed individual (MEI).

Dose-Response Assessment is the process of quantifying the relationship between the level of exposure to a toxic substance and incidence of an adverse health effect in an exposed population. In carcinogenic risk assessment, the dose-response relationship is expressed in terms of a cancer potency factor (CPF) that is used to calculate the probability or risk of contracting cancer from an estimated exposure, assuming that: (a) risk is directly proportional to dose, and (b) there is no threshold for carcinogenesis. CPFs are commonly expressed as the upper bound probability of developing cancer assuming continuous lifetime exposure to a substance at a dose of one milligram per kilogram of body weight per day.

Non-cancer health effects are generally assumed to have a threshold level of exposure below which adverse effects do not occur, and the dose-response relationship is expressed on the basis of this threshold exposure level. In California HRA guidelines, these threshold levels are generally known as Reference Exposure Levels, or RELs. Typically, RELs are established by applying safety factors to the Lowest Observed Adverse Effects Level (LOAEL) or No Observed Adverse Effects Level (NOAEL) values from animal or human studies. The use of safety factors means that exceeding a specific REL does not automatically indicate an adverse health impact. Rather, it is an indication of the erosion of the margin of safety for exposure to that particular compound.

Risk characterization is the final step of risk assessment. In this step, risks are calculated by combining modeled exposure estimates determined through exposure assessment with CPFs and/or RELs developed through dose-response assessment. For each carcinogen, lifetime cancer risk is calculated by multiplying an individual's estimated exposure level by the appropriate CPF. Cancer risk from exposure to a mixture of different carcinogens is assumed to be additive. Non-cancer risk is calculated by dividing an individual's estimated short-term (i.e., acute) or long-term (i.e., chronic) exposure level to a particular substance by the appropriate REL to yield a hazard quotient (HQ). An additive approach is also used to estimate non-cancer risks resulting from exposure to pollutant mixtures by adding together the individual hazard quotients for all substances that may affect the same target organ or organ system; this sum of HQs is called a Hazard Index (HI).

2.3.3 Program History

In 1986, the District's Board of Directors adopted a plan to reduce public exposure to TACs in the Bay Area. One of the plan elements was for District staff to begin reviewing permit applications for new and modified sources for potential health risks associated with any emitted TACs. The primary goals established for this new program were to prevent significant increases in health risks from newly constructed or modified stationary sources, and to reduce health risks by requiring improved air pollution controls when older, more highly emitting, sources are modified or replaced. Additional program objectives included the use of a consistent science-based approach to evaluate health risks that involves, where possible, the consideration of site-specific factors, and the minimization of costs to permit applicants for completing these site-specific HRSAs. After holding a public workshop on the matter, the District's APCO established the Air Toxics NSR Program with the adoption of a Risk Evaluation Procedure (REP) and Risk Management Policy (RMP) in 1987.

The REP established a methodology for completing HRSAs for new and modified sources that was based on the Air Toxics Assessment Manual (CAPCOA, 1987), a guideline document that was developed by a statewide working group. The RMP established specific criteria for permit issuance where TAC emissions from a proposed project would not likely cause, or contribute significantly to, an unacceptable adverse health risk for any member of the public. The RMP also specified that the APCO was ultimately responsible for risk management, and could consider a variety of factors when determining the acceptability of a proposed project and whether to issue or deny a permit.

On several occasions in the 1990's, the District initiated rulemaking to convert the REP and RMP into rules and procedures adopted by the District's Board of Directors. In 1991, the District held workshops on the first such proposal, but the rule development process was suspended in order to take advantage of workshops being held on risk management by CARB. The process was restarted with District workshops held in 1992 and 1993. One of the goals of the 1993 District proposal was to adopt a rule that would allow the District to obtain delegation from U.S. EPA to implement federal requirements regarding new and modified sources mandated under Section 112(g) of the Clean Air Act. The District again suspended the rulemaking process to allow U.S. EPA to finalize their Section 112(g) rule. The Section 112(g) rule was adopted by U.S. EPA in December 1996, but was determined to be grossly inadequate to protect public health in the Bay Area. The District decided to incorporate these federal requirements into Regulation 2, Rule 2: New Source Review, and to continue to implement the REP and RMP.

The District's REP and RMP have been updated several times since their original adoption, primarily in response to revisions in statewide health risk assessment and risk management guidelines. These guideline revisions included HRA guidelines adopted for use in the ATHS Program, and risk management guidelines for new and modified sources adopted by CARB. The District established a specific RMP for dry cleaners that allowed permits to be issued for health risks within the action range identified in the CARB risk management guidelines, provided that the Best Available Control Technology and all reasonable risk reduction measures were employed. The District also established a specific risk management policy for diesel-fueled engines so that limitations would not need to be placed on standby engines during emergency use. The current versions of the District's REP and RMP were adopted on February 3, 2000, with the exception of the RMP for diesel-fueled engines, which was adopted on January 11, 2002. These documents, included in Appendix B of this Staff Report, describe the existing District Air Toxics NSR Program and serve as the baseline for evaluating the changes that would result from the proposed rulemaking described in this report.

2.3.4 Risk Evaluation Procedure

The REP describes the procedures that are followed by District staff when reviewing permit applications for new and modified sources in order to determine the health risks associated with emissions of TACs. The principle components of the REP are described as follows.

1. All applications for authorities to construct or permits to operate new and modified sources are reviewed by the District for emissions of TACs that may result in adverse health effects. The same definitions of "new source" and "modified source" given in District Regulation 2, Rule 2: New Source Review are used, with the exception that the date of January 1, 1987 is used for determining applicability. The January 1, 1987 date is used because it marks the beginning of the District Air Toxics NSR Program.

2. Emissions are determined for all new and modified sources that make up a construction "project" plus any "related projects". A "project" includes all new and modified sources contained within a single permit application. A "related project" includes all new and modified sources at a facility that have been permitted within the two-year period immediately preceding the date a complete application is received, unless the permit applicant can demonstrate to the satisfaction of the APCO that the sources involved are not directly related to one another. A "related project" also includes a series of consecutive modifications to a single source (e.g., increasing a source's permitted throughput) that have occurred since January 1, 1987, regardless of the time period over which the modifications occur. The related project provisions were included in order to discourage circumvention which might be achieved by breaking a construction project into smaller pieces and submitting more than one permit application over a period of time.

3. The need for an HRSA is based on whether the total emissions for any new sources, plus the increase in emissions for any modified sources, would exceed any listed annual TAC trigger levels. The emissions for new and modified sources represent the maximum operation of the source as it is described in the permit application with any limiting permit conditions that are established by the District. The emission calculation procedures that are used are essentially the same as those used for Regulation 2, Rule 2: New Source Review. Where emissions are below all applicable TAC trigger levels, the construction project is judged to be in accordance with the District's RMP, and no risk screening analysis is required.

   Due to the large number of new and modified sources that emit some quantity of TACs, and the finite resources available for conducting HRSAs, the TAC trigger levels serve as a method to streamline the health risk evaluation process. The TAC trigger levels are established for those toxic compounds for which health effects values have been established, based primarily on statewide HRA guidelines. The TAC trigger levels were developed based on de minimis health risks using conservative assumptions regarding how emissions are released to the atmosphere, how they are transported and dispersed to off-site locations, how they are taken up into a person's body, and the time period over which exposure is assumed to occur. Projects emitting TACs at emission rates below the TAC trigger levels are not expected to cause, or contribute significantly to, an unacceptable adverse health risk for any individual.

4. If a risk screening analysis is required, the District will perform either a Level 1 or Level 2 analysis, often in an iterative manner. A Level 1 analysis, or screening analysis, employs simplified procedures and assumptions that assure a conservative estimate of public impact. There are situations, however, in which a Level 2, or refined analysis, is preferable including instances in which a screening analysis yields a risk value that exceeds levels given in the District's RMP. A refined analysis employs procedures and assumptions that are more site-specific, resulting in a risk evaluation that is more representative of actual risks. The District completes refined analyses (e.g., including using representative meteorological data, digital terrain elevation data, and site-specific exposure data) where feasible based upon available data and staff resources. An applicant, or a consultant hired by an applicant, may also perform a screening or refined analysis for District review.

5. Currently, HRSAs must be performed in accordance with a specified risk assessment methodology established for use in the ATHS Program for estimating maximum individual cancer and chronic non-cancer health risks. These guidelines consist of the Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines (CAPCOA, 1993), along with several tables of updated health effect values adopted for use in the ATHS Program by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA).

2.3.5 Risk Management Policy

The RMP specifies that the APCO is responsible for risk management at the District. The APCO may consider a number of factors in determining whether to issue or deny a permit for a proposed project together with the results of an HRSA. These factors include the degree of uncertainty in the risk analysis, possible net air quality benefits of updated replacement equipment, the lifetime of the project, incorporation of all feasible risk reduction measures, the costs of mitigation, and any benefit of the project to the local community and society. The APCO has established specific criteria in the RMP under which permits for new and modified sources can be issued without further risk management considerations. These criteria are:

1. The annual emissions associated with the project would result in an incremental cancer risk equal to or less than 1.0E-06 (one in a million), were the exposure to

continue for 70 years. When applicable, the chronic non-cancer risk associated with the project, expressed in terms of a hazard index, must be equal to or less than 1.0. The risk is calculated at the point of maximum residential or maximum off-site worker exposure, whichever is greater.

2. The annual emissions associated with the project would result in an incremental cancer risk greater than 1.0E-06 (one in a million) and equal to or less than 1.0E-05 (ten in a million), were the exposure to continue for 70 years, the chronic non-cancer risk associated with the project, expressed in terms of a hazard index, is equal to or less than 1.0, and TBACT has been applied to permitted sources. The risk is calculated at the point of maximum residential or maximum off-site worker exposure, whichever is greater.

In addition to the criteria listed above, the APCO has also established additional criteria under which permits for two specific categories of new and modified sources can be issued without further risk management considerations: (1) diesel-fueled engines, and (2) perchloroethylene (Perc) dry cleaners. The criteria for diesel-fueled engines are essentially the same as those listed above except that, for emergency standby engines, risks are to be calculated for all engine operation except for emergency use (as defined in Regulation 9-8-231). This provision was established so that the District would not need to limit engine operation in the case of an emergency.

The criteria under which permits for new and modified Perc dry cleaning sources can be issued without further risk management considerations are:

1. The annual emissions associated with the project would result in an incremental cancer risk greater than 1.0E-06 (one in a million) and equal to or less than 1.0E-05 (ten in a million), were the exposure to continue for 70 years, and TBACT has been applied to permitted sources. TBACT for Perc dry cleaners is as follows:
   a. TBACT is a Secondary Control Machine for any new installation of a dry cleaning machine (including new facilities, replacement machines, and additional machines at existing facilities) or for an increase in the permitted level of solvent emissions, except as follows for relocated machines.
   b. TBACT is a Closed-loop Machine for a relocated machine. The relocation of an existing facility's machine to a new non-residential facility within the District is exempt from secondary control requirements.
2. The annual emissions associated with the project would result in an incremental cancer risk greater than 1.0E-05 (ten in a million) and equal to or less than 1.0E-04 (one hundred in a million), were the exposure to continue for 70 years, TBACT has been applied to permitted sources, and all reasonable risk reduction measures have been applied. All reasonable risk reduction measures for Perc dry cleaners are as follows:
   a. A Vapor Barrier Room, consistent with Regulation 11-16-307.1 and the Dry Cleaner Ventilation Guidelines, for a new facility (including a relocated facility), or

b. An enhanced ventilation system, consistent with Regulation 11-16-307.2 and the Dry Cleaner Ventilation Guidelines (i.e., a Vapor Barrier Room, Vapor Capture Room, Partial Vapor Room, or Local Ventilation System), for a proposed project at an existing facility that is not co-residential.

The project acceptability criteria identified in the RMP are summarized in Table 1 below.

Table 1. Summary of District RMP Criteria for Issuance of Permits without Further Risk Management Considerations

Project Acceptability Criteria	Cancer Risk Threshold	Chronic Hazard Index Threshold
Project is acceptable as proposed. [1]	$\leq$ 1.0 in a million	$\leq$ 1.0
Project is acceptable if all sources in the project have TBACT. [1]	$\leq$ 10 in a million	$\leq$ 1.0
For dry cleaners, project is acceptable if all sources in the project have TBACT and all reasonable risk reduction measures have been applied.	$\leq$ 100 in a million	$\leq$ 1.0

[1] Health risks for emergency standby diesel engines do not include emissions that occur during emergency use.

2.3.6 Program Implementation

Under the REP, the District reviews all permit applications for new and modified sources for TAC emissions. Annual TAC emissions are estimated by District engineers based on source-specific emissions data or material balance, vendor guarantees, and/or representative general emission factors, taken together with the maximum requested source activity levels (e.g., maximum annual fuel or material throughput).

An HRSA is prepared by District staff for proposed projects with TAC emissions that would exceed any listed annual TAC trigger levels. To conserve limited resources, an iterative approach is often used in completing these HRSAs. The iterative approach involves initially completing a simplified health-conservative HRSA in order to determine whether a more complex, refined, HRSA is needed. These refinements are often applied sequentially using site-specific information until the requirements of the RMP are met.

The District has made significant improvements in recent years with respect to the speed and level of refinement with which HRSAs can be completed. Most of these improvements have to do with the use of more advanced computer tools and digital data that are used to complete the air dispersion modeling and land-use analysis portions of the analysis. These tools include digital topographic maps, aerial photos, terrain elevations, parcel maps, and real estate property databases.

If, after exhausting all reasonably available levels of refinement, the results of an HRSA indicate that the project will not meet the requirements of the RMP as proposed, District staff will identify options under which compliance can be achieved. The permit applicant may then consider these options, and is given the opportunity to amend their application, or submit a new permit application, with changes in the project necessary to reduce health risks to levels specified in the RMP.

In relatively rare instances, the District APCO will deny a permit for a proposed project because it has not met the health risk requirements of the RMP. In the vast majority of cases, however, viable permitting options can be identified where the use of emissions control technology and/or other risk reduction measures will be successful in reducing the health risks to acceptable levels.

Prior to 2000, the District completed HRSAs for an average of about 175 permit applications per year. This number increased to 255 in 2000, to 440 in 2001, and to 602 in 2002. More recently, the number of HRSAs completed was 432 in 2003, and 403 in 2004. The large increase in the number of HRSAs completed in the last five years is due primarily to the elimination of permit exemptions for certain sources, particularly engines that are used to supply backup power in the event of an emergency.

A wide variety of different types of sources have TAC emissions and may be subject to HRSA requirements. Diesel engines are currently the most common type of source evaluated in the Air Toxics NSR Program, accounting for about two thirds of the HRSAs completed in 2004. Other source categories for which significant numbers of HRSAs are completed are, in order of decreasing numbers, gasoline dispensing facilities (GDFs), various gas-fired combustion sources, soil-vapor extraction systems, and dry cleaners. Other common, but less numerous, sources evaluated include landfills surface coating operations, organic liquid storage tanks (i.e., non-GDFs), coffee roasters, crematories, and furniture strippers.

3. Proposed Changes to Air Toxics NSR Program

3.1 Goals of Proposed Changes to Air Toxics NSR Program

The District is proposing to codify the REP and RMP by adopting a new District rule, and a new part to the Manual of Procedures, as follows: Regulation 2: Permits, Rule 5: New and Modified Sources of Toxic Air Contaminants, and Manual of Procedures Volume II: Engineering Permitting Procedures, Part 4: New and Modified Sources of Toxic Air Contaminants. The District is also proposing amendments to other rules and regulations to maintain consistency with the new Regulation 2, Rule 5, as follows: Regulation 2: Permits, Rule 1: General Requirements, Rule 2: New Source Review, and Rule 9: Interchangeable Emission Reduction Credits; Regulation 8: Organic Compounds, Rule 34: Solid Waste Disposal Sites, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks, and Rule 47: Air Stripping and Soil Vapor Extraction Operations; and, Regulation 11: Hazardous Pollutants, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations.

The goals of this proposed rulemaking are:

1. To improve the legal defensibility of the District's permitting decisions concerning new and modified sources of TACs. The proposed program would be implemented through rule requirements and procedures adopted by the District's Board of Directors, rather than policies and procedures adopted by the District's APCO.

2. To increase the clarity and public visibility of program requirements. Publication in the District's rulebook and Manual of Procedures will clarify program requirements. A series of community-based workshops was conducted in order to get input and increase public awareness of the program.

3. To update and enhance the existing District Air Toxics NSR Program. Most of the changes that are proposed are intended to increase conformity with updated State health risk assessment and risk management guidelines.

The proposed program updates and enhancements will require additional District staff resources due to increases in the number of HRSAs that will need to be conducted and reviewed, and due to added complexity in these analyses. The District is therefore also proposing amendments to Regulation 3: Fees, to provide the necessary revenue to fund these activities.

3.2 Program Updates and Enhancements

The adoption of the proposed Regulation 2, Rule 5, and the companion Manual of Procedures, Volume II: Part 4, will codify the existing District REP and RMP. It will also update and enhance program requirements and increase conformity with State risk assessment and risk management guidelines. These guidelines include:

1. Revised health risk assessment guidelines established by OEHHA. The SB 1731 amendments to the ATHS Program required OEHHA to revise the risk assessment guidelines used in the ATHS program after a peer review process, and in consideration of input from the State's Scientific Review Panel (SRP). After a multi-year effort, OEHHA adopted *Air Toxic Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (August 2003) for use in the ATHS Program in October of 2003. (The new OEHHA HRA guidelines will be referred to in the remainder of this report as the "2003 HRA Guidelines"; the existing HRA guidelines will be referred to as the "1993 HRA Guidelines").

2. CARB released the Hotspots Analysis and Reporting Program (HARP) in December 2003 (CARB, 2003a). The HARP software is intended to facilitate the preparation of HRAs using the 2003 HRA Guidelines.

3. The District has been informed, however, that OEHHA is evaluating further refinements to the exposure assessment methods that are given in the 2003 HRA Guidelines, and that these refinements may result in significant changes to exposure estimates for the breathing (i.e., inhalation) pathway. In light of this, CARB and OEHHA released *Air Resources Board Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk* (CARB, 2003b), that is to be used to augment the 2003 HRA Guidelines where a single cancer risk value (rather than a range of risk values) is needed or prudent for characterizing risk, or where a single risk value is used for risk management decision-making for residential receptors. The District will use this Interim Policy and the recommended 80th percentile breathing rate value (302 Liters/Kilogram-day) for implementing Regulation 2, Rule 5, until OEHHA completes their refined review of exposure assessment methods. The 80th percentile value will be referred to as the "Interim Residential Breathing Rate."

In 1993, CARB issued *Risk Management Guidelines for New and Modified Sources of Toxic Air Pollutants* (CARB, 1993). These guidelines were intended to assist air districts in making permitting decisions for new and modified sources of TACs. In 2000, CARB also issued *Risk Management Guidance for the Permitting of New Stationary Diesel Fueled-Engines* (CARB, 2000). The suggested risk levels for permitting decisions in the CARB guidelines are summarized in Table 2.

Table 2. Summary of CARB Risk Management Guideline Criteria for Issuance of Permits

Project Acceptability Criteria	Cancer Risk Threshold	Hazard Index Threshold
Project is acceptable as proposed. [1]	≤ 1.0 in a million	≤ 0.2
Project is acceptable if all sources in the project have TBACT. [1]	≤ 10 in a million	≤ 1
Project is acceptable if all sources in the project have TBACT, the applicant submits a Specific Findings Report, and the APCO finds that a permit should be issued. [1]	< 100 in a million	≤ 10
For diesel engines, project is acceptable if specific technology requirements are met. In addition, for non-emergency engines used more than 400 hr/yr, project is acceptable if a Specific Findings Report is prepared and the APCO finds that a permit should be issued.	No specific upper bound risk limit established	No specific upper bound risk limit established

[1] Districts may exempt certain categories of small businesses (e.g., dry cleaners, wood furniture refinishers, gasoline service stations), which have implemented all technically feasible and cost effective control measures.

The proposed Air Toxics NSR Program updates and enhancements are described in the following sections.

3.2.1 Acute Health Risks

<u>Proposal</u>

Add the consideration of acute (i.e., short-term) health risks, to conform to the 2003 HRA Guidelines, and limit project risk to an acute hazard index of 1.0, to conform to CARB risk management guidelines.

<u>Discussion</u>

The existing District REP and RMP focus on adverse health effects that may result from long-term (i.e., chronic) exposures to TACs. There are no specific requirements for consideration of health effects that may result from acute exposures. Acute health effects have not previously been considered because: (1) health effect values for acute exposures for the general public have been of limited number and uneven quality, and have focused on industrial accidents instead of routine or predictable short-term emissions, and (2) use of the available health effects values have generally indicated (e.g., for a wide variety of sources evaluated under the requirements of the ATHS Program) that these acute exposures are rarely of concern for routine or reasonably predictable non-routine emissions.

In the 2003 HRA Guidelines, OEHHA has established uniform, science-based, guidelines for the derivation of acute health effect values that are applicable to general public exposures to routinely emitted TACs (OEHHA, 1999). The 2003 HRA Guidelines establish 51 acute RELs, almost all of which were developed *de novo* for these guidelines. The District is proposing to expand the scope of the Air Toxics NSR Program by using these new OEHHA acute RELs to evaluate short-term health effects.

The District program will focus on acute exposures to TACs that result from emissions that are routine or reasonably predictable in nature rather than those that are the result of accidents. Accidental releases of toxic compounds are separately regulated under the California Accidental Release Prevention (CalARP) Program. The CalARP Program is administered by the California Office of Emergency Services (OES) and is implemented by local administering agencies in each city or county. The purpose of the CalARP program is to reduce the frequency of accidental releases of hazardous substances and reduce the consequences in the event a release occurs.

An acute REL is an air concentration that is not likely to cause adverse effects in a human population exposed to that concentration for a short period of time. Almost all of the acute RELs are based on one-hour exposures, except for a few that are based on exposures of several hours (i.e., 4-, 6-, and 7-hour). The acute RELs are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. All but a few of the acute RELs are protective of mild health effects, which are considered minor and reversible (e.g., mild irritation of the eyes, nose or throat). The RELs are designed to protect the most sensitive individuals in the population by the inclusion of margins of safety. Inclusion of margins of safety means that exceeding a specific REL does not automatically indicate an adverse health impact. Rather, it is an indication of the erosion of the margin of safety for exposure to that particular compound.
As is the case for estimating chronic non-cancer health effects, a hazard index approach is used to estimate potential acute health effects. For a given TAC, the acute hazard quotient is the ratio of the estimated short-term exposure to the applicable acute REL. To assess the cumulative impact resulting from exposure to more than one compound, the effects are assumed to be additive for a given toxicological endpoint. Thus, where multiple TACs are being considered, the total acute hazard index is the sum of the individual acute hazard quotients for all TACs identified as affecting the same target organ or organ system.

The District is proposing to add a requirement (subsection 2-5-302.3) that would limit the project risk to an acute hazard index of 1.0. The District believes that the proposed project risk limits for acute health effects are adequate to protect public health without establishing a specific TBACT requirement based on acute health risks alone. It is expected that many sources will require emissions controls, in some cases at a BACT-level or beyond, in order to keep the project risk from exceeding an acute hazard index of 1.0. Also, most TACs with acute RELs also have chronic RELs, and the District is proposing a stringent TBACT requirement for chronic non-cancer health effects (see next section of this report). Finally, most TACs are also regulated as either precursor or non-precursor organic compounds, or as particulate matter, and have BACT requirements specified in District Regulation 2, Rule 2 (i.e., for new and modified sources that emit 10 pounds per day or more).

The District is proposing to include all compounds with OEHHA acute RELs in the Air Toxics NSR Program with the exception of carbon monoxide, nitrogen dioxide, and sulfur dioxide. Each of these is a criteria air pollutant, rather than a TAC, with existing requirements for air quality impact analysis in District Regulation 2, Rule 2.

Toxic trigger levels expressed as one-hour emission rates are being established (i.e., in Table 2-5-1) to determine the need for evaluating acute health impacts. The trigger levels were determined for each TAC based on the applicable acute REL, a conservative estimate of the one-hour average air concentration that would result from a unit emission rate (i.e., Chi/Q), and a hazard index of 1.0. Details of the methodology used to derive these trigger levels are given in Appendix C of this report.

The same air dispersion models that are currently used for estimating chronic health effects (e.g., SCREEN, ISCST) will generally be used for estimating acute health effects. The emission rates used in the modeling will be the maximum emissions that would be expected to occur over the averaging period of the acute REL (i.e., a one-hour period in most cases). The hazard index will be calculated based on the highest model-predicted short-term average (e.g., one-hour) ambient air concentration at a receptor location where public exposure could occur. Non-inhalation pathways are not considered in the calculation of an acute hazard index.

The receptor locations used in evaluating acute health effects will, in some cases, be different from those used in evaluating chronic health effects. The evaluation of chronic health effects focus on locations where individuals live or work (excluding on-site workers, which are regulated by occupational health and safety standards rather than air district requirements). The proposed rule defines receptor location (Section 2-5-218) in a manner that is sufficiently broad in determining the MEI for acute health effects: A location where an individual may live (residential receptor) or work (worker receptor) or otherwise reasonably be expected to be exposed to toxic air contaminants for the particular chronic or acute exposures being evaluated in an HRSA. Locations include (a) locations outside of the property boundary of the facility being evaluated and, (b) locations inside the property boundary where a person may reside (e.g., at military base housing, prisons, or universities). The APCO is to consider the potential for public exposure in determining appropriate receptor locations.

The acute RELs vary widely in their relative toxicity, with values that span a full five orders of magnitude. The TAC that is expected to most frequently require emissions controls and/or other risk reduction measures in order to comply with the proposed acute project risk requirement is acrolein. Acrolein is an organic compound that is emitted from a variety of sources, including those that burn fossil fuels, and it has the lowest acute REL of any that have been adopted by OEHHA. Acrolein emissions can be effectively controlled, however (e.g., oxidation catalysts are extremely effective in removing acrolein emissions from engine exhaust).

3.2.2 TBACT Threshold for Chronic Non-Cancer Risks

Proposal

Establish a TBACT threshold for non-cancer health risks based on a source risk of a chronic hazard index of 0.20 to conform to CARB risk management guidelines.

Discussion

TBACT is often necessary under the existing District RMP in order to maintain a project risk that is less than or equal to a chronic hazard index of 1.0. The District is proposing to require TBACT for sources with a chronic non-cancer hazard index greater than 0.20 (Section 2-5-301). This will conform to the recommended non-cancer TBACT requirement in the CARB risk management guidelines.

The annual toxic trigger levels used to determine the need for a risk screening analysis have been revised accordingly. The trigger levels were determined for each TAC based on the applicable chronic REL, a conservative estimate of the annual average air concentration that would result from a unit emission rate, and a target hazard index of 0.20. It should be noted that nearly all of the trigger levels for compounds that have a CPF are based on cancer rather than non-cancer target risks. Details of the methodology used to derive these trigger levels are given in Appendix C of this report.

3.2.3 Toxicity Values and Exposure Assumptions

Proposal

With some minor exceptions, use updated toxicity values and exposure assessment procedures that conform to the 2003 HRA Guidelines.

Discussion

Toxicity values and exposure assessment procedures are the two central components of health risk assessment. Toxicity values are the result of dose-response evaluation, which provide quantitative relationships between the amount of exposure to a substance and the extent of toxic injury or disease. Exposure assessment procedures are used to estimate the magnitude and duration of public exposure to substances being evaluated.

The 2003 HRA Guidelines continue to use a point estimate approach for establishing dose-response relationships. That is, single toxicity values (e.g., a CPF, a chronic

REL, and/or an acute REL) are assigned to each substance as appropriate. The District is proposing to update the list of compounds included in the Air Toxics NSR Program to include those TACs with health effect values published in the 2003 HRA Guidelines (including new or updated health effects values as of January 1, 2005). These values represent the best information currently available concerning the toxicity of chemical compounds based on general population exposures and incorporating an adequate margin of safety. Table 3 contains a list of the compounds that would be either added to, or removed from, the list of compounds currently included in the REP as a result of this updating.

Table 3. Summary of Differences in TACs Listed in Proposed Table 2-5-1 and the Existing District REP

Compounds Added	Compounds Removed
Acrylic acid	Butyl alcohol, tert-
Antimony compounds	Chlorotoluenes
Arsine	Diethylaminoethanol
Chlorine dioxide	Dimethyl phthalate
Chloroacetophenone, 2-	Dioctyl phthalate
Chloroprene	Ethyl acetate
Chromium trioxide (as chromic acid mist)	Ethyl alcohol (ethanol)
Cyanide and compounds (inorganic)	Gasoline vapors
Diethanolamine	Methylpyrrolidone, N-
Dimethyl formamide, N,N-	Silica, respirable, crystalline
Epoxybutane, 1,2-	Tetrahydrofuran
Ethylbenzene	Trichlorobenzene, 1,2,4-
Ethylene glycol	Vapam (sodium methyldithiocarbamate)
Fluorides and compounds	
Hydrogen selenide	
Methyl tertiary-butyl ether (MTBE)	
Mineral fibers (<1% free silica)	
Ozone	
Propylene (propene)	
Propylene glycol monomethyl ether	
Sulfates	
Sulfuric acid and oleum	
Triethylamine	
Vanadium compounds	
Vinyl acetate	
Vinyl bromide	

Exposure assessment procedures begin with the use of air dispersion models to estimate air concentrations of TACs at various locations. Then, for determining cancer risk (and non-cancer risk from non-inhalation pathways) the dose, or amount received by an individual over a period of time, must be estimated. The relationship between air concentration and dose is very complex; estimates of dose can be made, however, with the use of algorithms that describe these relationships in a simplified form. Some of these algorithms describe the fate and transport of TACs in the environment and are used to estimate pollutant concentrations in applicable exposure media such as soil, water, vegetation, and animal products. Other algorithms are used to describe human uptake of TACs through exposure pathways such as direct inhalation, dermal adsorption, and various ingestion routes.

A variety of exposure parameters must be defined in order to calculate dose using exposure assessment algorithms. In the standard point estimate approach for health risk assessment, a single value (often called a default value) is assigned to each exposure parameter. Generally, high-end values are selected as default values for exposure parameters so that risk will not be underestimated. The existing District REP and RMP are based on this high-end point estimate approach as described in the 1993 HRA Guidelines.

In developing the 2003 HRA Guidelines, OEHHA completed a re-evaluation of the existing algorithms used for making exposure estimates. The re-evaluation showed that the algorithms used in the 1993 HRA Guidelines were largely appropriate for use in the point estimate approach, so these algorithms were retained with only minor modifications. A number of the default values used as exposure parameters were updated, however, based on literature reviews. Furthermore, key exposure parameters were assigned both average values and high-end default values for point estimate risks, and a distribution of values for use in a stochastic approach where adequate information was available to describe such a distribution.

The District is proposing to continue to use the point estimate approach to estimate health risks, but with the updated high-end default exposure parameters identified in the 2003 HRA Guidelines (OEHHA, 2000) with the exception of the Interim Residential Breathing Rate recommended by CARB. Also, consistent with the 2003 HRA Guidelines, an HRA may be refined using appropriate site-specific exposure parameters (i.e., a Tier 2 analysis) provided that reasonable justification can be provided for non-default values used. A Tier 3 stochastic analysis may also be used (e.g., using the HARP model) but, under the 2003 HRA Guidelines, this would only provide refined results for residential cancer risk estimates associated with non-inhalation pathways. If stochastic analysis is used, the cancer risk results used for determining compliance with Regulation 2, Rule 5, must be based on the 95th percentile cancer risk (see District HRSA Guidelines given in Appendix D of this report).

For inhalation exposures, breathing rate is a key exposure parameter used in calculating cancer risk. Breathing rate is typically expressed using units of liters of air respired per day, for each kilogram of body weight. In the 1993 HRA Guidelines, a default daily breathing rate of 286 L/kg-day is used for residents, based on a respiration rate of 20 cubic meters per day, and a 70 kg body weight. The 2003 HRA Guidelines increase this default (95 percentile) breathing rate for residents to 393 L/Kg-day. CARB recommends using the 80th percentile value (Interim Residential Breathing Rate) of 302 L/Kg-day for estimation of a single risk value for risk management decision-making.

Exposure frequency (i.e., days per year exposed) and exposure duration (i.e., years exposed) are other key assumptions used in the calculation of cancer risk. For residents, the 1993 HRA Guidelines use a default value of 365 days/yr for exposure frequency, and a default value of 70 years for exposure duration. The 2003 HRA Guidelines decrease the default residential exposure frequency slightly to 350 days/yr, and retain the 70-year default exposure duration.

When combined, use of the default values for breathing rate, exposure frequency, and exposure duration given in the 2003 HRA Guidelines result in residential inhalation exposure estimates that are 31.8 percent higher then those produced using the 1993 HRA guidelines. Point estimate exposures using the Interim Residential Breathing Rate are very similar to those provided with the 1993 HRA Guidelines.

The default breathing rate for off-site workers in the 2003 HRA Guidelines is increased to 149 L/Kg-day, based on an hourly breathing rate of 18.6 L/kg-hr (i.e., 1300 L/hr for a 70 kg worker). The 1993 HRA Guidelines use a default breathing rate of 95.3 L/kg-day for workers, based on the same hourly breathing rate used for residents (i.e., 11.9 L/kg-hr) but applied to an 8-hour rather than a 24-hour period.

For workers, the 1993 HRA Guidelines use a default value of 240 days/yr for exposure frequency, and a default value of 46 years for exposure duration. The 2003 HRA Guidelines increase the default worker exposure frequency slightly to 245 days/yr, but decrease the default exposure duration to 40 years.

When combined, use of the default values for breathing rate, exposure frequency, and exposure duration given in the 2003 HRA Guidelines result in worker inhalation exposure estimates that are 38.7 percent higher then those produced using the 1993 HRA Guidelines. The District intends on conforming to these worker exposure assumptions in HRSAs completed for the Air Toxics NSR Program. The worker exposure assumptions do not affect the trigger levels in Table 2-5-1 because these are based on residential exposure assumptions.

For certain TACs, potential exposures from non-inhalation pathways may need to be estimated. In the 2003 HRA Guidelines, a number of the parameters used to calculate non-inhalation exposures have been updated relative to the 1993 HRA Guidelines. Tables 4a, 4b, and 4c contain a comparison of these exposure parameters.

Table 4a. Comparison of High-End Default Exposure Parameters (Residential)

Exposure Parameter	Units	1993 HRA Guidelines	2003 HRA Guidelines
Breathing Rate	L/kg bw-day	286	393 *
Exposure Frequency (cancer risk)	days/year	365	350
Exposure Duration (cancer risk)	Years	70	70
Body Weight	Kg	70	63
Incidental Soil Ingestion Rate	mg/kg bw-day	1.57	1.7
Water Intake Rate	ml/kg bw-day	28.6	54
Dermal Surface Area Exposed	cm^2	4,656	5,500
Dermal Soil Loading	mg/cm^2	0.5	1.0
Dermal Absorption	None	Chemical-specific and Scenario-dependant	
Dermal Exposure Frequency	days/year	365	350
Breast Milk Consumption Rate	g/kg-day	138	138
Food Consumption:			
Exposed Produce	g/kg bw-day	3.57 for vine crops	12.1
Leafy Produce	g/kg bw-day	0.14	10.6
Protected Produce	g/kg bw-day	NA	4.88
Root Produce	g/kg bw-day	0.7	10.5
Beef	g/kg bw-day	1.4 for meat	6.97
Chicken	g/kg bw-day		5.02
Pork	g/kg bw-day		4.59
Eggs	g/kg bw-day		5.39
Dairy	g/kg bw-day	4.3 for milk	17.4
Fish	g/kg bw-day	0.34	1.35
Fish Bioconcentration Factor	None	Chemical-specific	

Notes:

* Interim Residential Breathing Rate is 302 L/Kg-day

NA = Not Available

1993 HRA Guidelines are: CAPCOA Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, California Air Pollution Control Officer's Association, October 1993.

2003 HRA Guidelines are: (1) Air Toxics Hot Spots Program Risk Assessment Guidelines: Part IV; Technical Support Document for Exposure Assessment and Stochastic Analysis, Office of Environmental Health Hazard Assessment, September 2000, and (2) Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spot Program Guidance Manual for Preparation of Health Risk Assessments, Office of Environmental Health Hazard Assessment, August 2003.

Per the 2003 HRA Guidelines, for multipathway evaluation, minimum exposure pathways evaluated for residents include inhalation, soil ingestion, and dermal exposure. If dioxins, furans, or PCBs are emitted, then breast-milk consumption is also mandatory. Other exposure pathways are evaluated on a site-specific basis.

Table 4b. Comparison of Environmental Fate Evaluation

Media	1993 HRA Guidelines	2003 HRA Guidelines
Air	GLC = ER * X/Q	Same as 1993 HRA Guidelines
Soil	Function of: - deposition - accumulation period - chemical-specific half-life in soil - mixing depth - soil bulk density	Same algorithm as 1993 HRA Guidelines, however some chemical-specific half-life values in soil have been revised
Water	Function of: - direct deposition - material carried in by surface runoff is NOT considered	Same as 1993 HRA Guidelines
Vegetation*	Function of: - direct deposition of substance onto vegetation - root translocation or uptake from soil	Same algorithm as 1993 HRA Guidelines, however, for concentrations due to root translocation or uptake, some "root uptake" factors for inorganics (for root, leafy, and vine vegetation) have been revised
	"k", weathering constant, used to estimate concentration due to direct deposition = 0.693/14 day [20 (1/day)]	"k" = 10 (1/day)
Animal Products*	Function of: - identified complete exposure pathways for animal (e.g., inhalation, soil ingestion, ingestion of contaminated feed and pasture, and ingestion of contaminated water)	Same algorithm as 1993 HRA Guidelines, however, some specific input parameter values have been revised (CAPCOA, Table 2 vs. OEHHA, Table 5.2 - see following Table 4c). Also feed to meat, milk, and eggs transfer coefficients [Tco (d/kg)] for some chemicals have been revised (CAPCOA, Table 1 vs. OEHHA, Table 5.3)
Fish Products*	Function of: - concentration in water - bioconcentration factor (bioaccumulation is NOT considered)	Same as 1993 HRA Guidelines

* Estimates of contaminants in vegetation and animals require the use of results from the air, water, and soil environmental fate evaluation

Table 4c. Comparison of Default Values Used in Animal Product Uptake Modeling

Exposure Parameter	Units	1993 HRA Guidelines	2003 HRA Guidelines	
FOR CATTLE:		Cattle/Lactating	Beef Cattle	Lactating Dairy Cattle
Body Weight	Kg	500	500	500
Inhalation Rate	m^3/day	80	100	100
Water Ingestion	L/day	100	40	80
Feed Ingestion	kg/day	8/16	8	16
Soil Fraction of Feed	unitless	0.01	0.01	0.01
Soil Fraction of Pasture	unitless	0.05	0.05	0.05
FOR PIGS:				
Body Weight	Kg	60	60	
Inhalation Rate	m^3/day	7	7	
Water Ingestion	L/day	8	8	
Feed Ingestion	kg/day	2	2	
Soil Fraction of Feed	unitless	0.01	N/A	
Soil Fraction of Pasture	unitless	0.03	0.04	
FOR POULTRY:				
Body Weight	Kg	2	2	
Inhalation Rate	m^3/day	1	0.4	
Water Ingestion	L/day	0.6	0.2	
Feed Ingestion	kg/day	0.3	0.1	
Soil Fraction of Feed	unitless	0.01	N/A	
Soil Fraction of Pasture	unitless	0.03	0.02	

N/A = Not Applicable

3.2.4 Project Risk Limits for Dry Cleaners

Proposal

Remove existing exemptions from project risk limits for dry cleaners due to advancements in lower toxicity dry cleaning alternatives.

Discussion

Perchloroethylene, also known as tetrachloroethylene or Perc, is the most common chemical solvent used by dry cleaners to remove stains and soil from clothing and other fabrics. In 1991, OEHHA completed a toxicity review of Perc and adopted a revised CPF that was 10 times higher than the potency value used in the HRA Guidelines in effect at that time. Following this action, the District determined that the use of this revised toxicity value would result in maximum estimated lifetime cancer risks for many new and modified Perc dry cleaners that would exceed project risk levels established in the District RMP (i.e., 10 in a million). The District then completed an evaluation of risk reduction measures available to dry cleaners including the use of alternative non-Perc dry cleaning technology, and emission control technologies and work practice standards for Perc machines.

The results of this evaluation indicated that non-Perc alternative dry cleaning technologies were either: (1) not adequately advanced for the District to specify instead of Perc, or (2) slated to be phased-out as stratospheric ozone depleting compounds (e.g., CFCs). Furthermore, the District's evaluation indicated that, although a number of reasonable risk reduction measures were available to reduce the risk from Perc dry cleaners, in many cases they would not be able to reduce the risk below the 10 in a million criterion using the revised CPF. In consideration of these factors, the District established a specific RMP for Perc dry cleaners that would allow permits to be issued for maximum cancer risks up to 100 in a million if TBACT and all reasonable risk reduction measures (e.g., vapor barrier rooms with enhanced ventilation) were used.

The District is now proposing to amend the criteria for permit approval for new and modified dry cleaners to conform to those provided for other types of sources (i.e., project risk limited to 10 in a million). This proposal is based largely on an updated evaluation of non-Perc alternative dry cleaning technologies, which have improved significantly in recent years. New solvents and equipment have been developed as alternatives to Perc including high flashpoint petroleum (HFP) solvents (e.g., Exxon DF2000™), D5 siloxane (e.g., Green Earth™ solvent), glycol ether (e.g., Rynex™), aqueous (i.e., wet cleaning) processes and equipment, carbon dioxide technology, and other non-halogenated solvents used with closed-loop dry cleaning machines. A brief summary of these technologies follows.

1. High flashpoint petroleum (HFP) solvents are the most popular alternatives to Perc. About 25 percent of existing machines and 75 percent of new installations in the Bay Area use HFP solvents. The toxicity of HFP is very low and soil contamination is not a great concern (most new machines have spill pans; HFP does not migrate in soil as easily as Perc and readily biodegrades). Although Perc has higher solvency and cleans with less spotting, HFP is less damaging for some delicate garments (e.g., wedding dresses that have buttons and sequins). The new petroleum closed-loop machines typically use less solvent than Perc machines. Disadvantages include slight flammability, and its contribution to tropospheric ozone formation.

2. Green Earth™ (decamethylcyclopentasiloxane, or D5) is a relatively new solvent that can be used in petroleum closed-loop machines. Suppliers claim that D5 siloxane won't bleed colors (allows mixing colors in fewer loads) and creates very little lint and wrinkling, resulting in reduced labor costs and fewer damage claims. D5 and other siloxanes are commonly used in various consumer products (e.g., shampoo and deodorant). Based on available data, D5 seems to have relatively low toxicity. GE Silicones has, however, preliminary results from a chronic toxicity study of D5, and has indicated one "unusual result" which was a statistically significant trend for uterine tumors in female rats, which has prompted further study of the toxicity of this compound. Approximately two percent of existing

machines and ten percent of new dry cleaning machines installed in the Bay Area use D5 siloxane.

3. Wet cleaning has a negligible environmental impact. Although very few facilities use wet cleaning processes exclusively (primarily because of higher labor costs and potential damage to sensitive fabrics), improved detergents and processes have induced some dry cleaners to use wet cleaning for a portion of their cleaning. The District is currently developing a demonstration program that will provide grants to dry cleaners willing to switch to non-toxic alternative processes (professional wet cleaning or carbon dioxide). CARB is developing a statewide grant program for nontoxic alternatives to Perc that is funded by fees on Perc sales.

4. Carbon dioxide (CO_2) technology has the least environmental impact but vendors have struggled to gain market share because of the high cost of equipment, which operates at high pressures (i.e., about 700 psig). CO_2 cleans very well and does not damage most fabrics. While only a few CO_2 machines are currently in use in California, this technology is expected to greatly expand over time; incentive grant programs are expected to accelerate this trend.

5. Other potential alternative solvents include Rynex™ (glycol ether), Puredry™ (petroleum with fluoroether additives), and n-propylbromide (nPB). These solvents have less toxicity than Perc, but greater than the other alternatives listed above (possibly with the exception of D5). Puredry is being used in only one machine in the Bay Area. Rynex™ and nPB are not currently used in the Bay Area.

The District is not proposing to ban the use of Perc in new or existing dry cleaning machines. There are many Perc dry cleaners in the Bay Area that have maximum cancer risks that do not exceed 10 in a million. These facilities typically have relatively low Perc emissions, use state-of-the-art risk reduction measures (e.g., vapor barrier rooms), and/or are not in close proximity to residential and off-site worker receptor areas. The majority of new dry cleaning machines currently purchased, however, are based on non-Perc technologies; the District's proposal will likely accelerate this trend.

3.2.5 Discretionary Risk Management Provision

<u>Proposal</u>

Eliminate provisions for discretionary risk management.

<u>Discussion</u>

The existing RMP indicates that the APCO is responsible for risk management at the District and may consider a number of factors in determining whether to issue or deny a permit for a proposed project together with the results of a risk screening analysis. The District is proposing to eliminate this provision. Discretionary risk management actions will not be allowed, and all projects will be required to comply with project risk limits of 10.0 in one million for cancer risk and 1.0 for acute hazard index and 1.0 for chronic hazard index.

3.3 Other Program Changes

3.3.1 Basis for TBACT Applicability

Proposal

Change TBACT requirement from a project-level basis to a source-level basis.

Discussion

A proposed project often will include multiple sources that vary widely in the quantity and/or toxicity of their TAC emissions. In these instances, it is common for the maximum health risk for a project to be "driven" by one or two sources, with relatively insignificant contributions from other sources in the project.

The existing RMP specifies that the requirement for TBACT be based on the maximum health risks determined for all new and modified sources that are included in a project. This provision sometimes results in instances where TBACT is required for some minor new and modified sources in a project that do not cause, or contribute significantly to, adverse health risks.

The District is proposing to address this issue by changing the basis under which TBACT is required from project risk to source risk (i.e., the maximum risk for an individual source, or permit unit). The existing TBACT threshold for cancer risk (i.e., 1 in a million), and the proposed TBACT threshold for chronic non-cancer risk (i.e., HI of 0.2), are considered to be appropriate source-level applicability criteria. Under this proposal, TBACT would therefore be required for a source if it results in a maximum cancer risk that exceeds 1.0 in a million and/or a maximum chronic HI that exceeds 0.2. In order to safeguard against instances where multiple minor sources in a project might cumulatively result in a significant contribution to risk, the District is proposing to retain the project risk limits of the existing RMP.

3.3.2 Definition of Project

Proposal

Clarify the definition of "project".

Discussion

The existing REP requires that health risks be determined for all new and modified sources that make up a construction "project" plus any "related projects". A "project" includes all new and modified sources contained within a single permit application. A "related project" includes all new or modified sources at a facility that have been permitted within the two-year period immediately preceding the date a complete application is received, unless the permit applicant can demonstrate that the sources involved are not directly related to one another. In order to clarify the criteria by which sources will not be considered "related to one another", the definition of "project" in

Section 2-5-216 indicates that previously permitted sources within the two-year window can be excluded from the project if the applicant demonstrates to the satisfaction of the APCO that construction or modification of the sources included in the current application is neither (1) a reasonably foreseeable consequence of the previous project, nor (2) a critical element or integral part of the previous project.

The proposed definition of “project” given in Section 2-5-216 is otherwise similar to that provided in the REP. The term “related projects” is not used in the definition, but is included in concept within the definition of project. The “consecutive modifications” provision is clarified to indicate that it applies only to modifications that occur after January 1, 1987, which marks the start of the District’s Air Toxics NSR Program. The provision for considering a series of new and modified permits issued within a two-year period as a single project is retained, as this has proven to be a pragmatic approach to discourage potential circumvention that could be achieved by submitting permit applications in a piecemeal manner (e.g., it is unlikely that many construction projects could be drawn out in a manner such that all required construction permits would not need to be obtained within a two-year period).

3.3.3 Permit Fees

Proposal

Increase permit fees for permit applications that require an HRSA in order to fund additional District staff resources needed to implement Air Toxics NSR program enhancements. These proposed fee changes will be integrated with other contemporaneous fee changes and will be presented to the Board of Directors for consideration in a separate public hearing specifically for Regulation 3.

Discussion

The District Air Toxics NSR Program is funded by collecting permit fees from facilities that are subject to program requirements. The current fee structure, delineated in District Regulation 3: Fees, specifies that a Toxic Surcharge Fee be collected for any new and modified sources that emit one or more TAC at a rate which exceeds an established toxic trigger level. The amount of the Toxic Surcharge Fee varies depending on the type of source involved.

The proposed updates and enhancements to the Air Toxics NSR Program will require additional staff resources due to increases in the quantity and complexity of the HRSAs that will need to be conducted and reviewed. The additional staff resources needed is estimated to be between one and two full time equivalents (FTEs). The District is proposing revisions to Regulation 3: Fees that will provide sufficient revenue to cover the cost of the necessary additional staff resources.

For many permit applications, the Toxic Surcharge Fee is currently the minimum specified fee of $182 (this fee may be reduced by 50 percent if the facility qualifies for a small business discount). This minimum fee is far below the District’s cost of time and materials needed to conduct an HRSA. The proposed revisions to the fee structure will bring the minimum Toxic Surcharge Fee more in line with the District costs incurred for completing the HRSA.

The proposed amendments will increase the Toxic Surcharge Fee for permit applications that require an HRSA by $272 ($136 for facilities that qualifies for a small business discount). In addition, this fee will now be called a “Risk Screening Fee” so that it will not be confused with the Toxic Surcharge assessed for permit renewals. The minimum Risk Screening Fee for many permit applications will now be $454 (i.e., $182 plus $272), and half of this amount (i.e., $227) if the facility qualifies for a small business discount.

4. Proposed Rule and Rule Amendments

4.1 Proposed Regulation 2, Rule 5

The District is proposing to adopt a new rule, Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. The rule is organized into six sections as follows: General (section numbers in the 100’s), Definitions (200’s), Standards (300’s), Administrative Requirements (400’s), Monitoring and Records (500’s), and Manual of Procedures (600’s). A copy of this proposed rule is provided in Appendix A of this staff report. A summary of the provisions of the rule follows.

4.1.1 General Requirements

The General requirements define the applicability of the rule, beginning with Section 2-5-101: Description, which states the purpose of the rule and indicates that it applies only to new and modified sources that require District permits (these permit requirements are specified in Regulation 2, Rule 1) and that emit specific listed toxic air contaminants (these are the compounds for which health effect values have been established in applicable HRA guidelines). Section 2-5-101 also indicates that sources that are subject to this rule may also be subject to the requirements of federal Clean Air Act Section 112(g), which are specified in District Regulation 2, Rule 2, Section 317. The Section 112(g) requirements will rarely apply, however, because they are triggered only by very large increases in hazardous air pollutant (HAP) emissions (i.e., 10 tons/yr of a single HAP, or 25 tons/yr of a combination of HAPs).

Section 2-5-110: Exemption, Low Emission Levels, provides an exemption from the rule where the TAC emissions from the project do not exceed specified TAC trigger levels. The purpose of this section is to screen out applications that are unlikely to exceed any of the standards of the rule, without having to perform a site-specific HRSA. This is the same approach used in the existing REP; the trigger levels have been updated, however, based on current OEHHA toxicity values and exposure assumptions included in the 2003 HRA Guidelines. The TAC trigger levels also now include hourly TAC emission rates that are used for evaluating acute health effects.

Section 2-5-111: Limited Exemption, Emergency Standby Engines, indicates that the rule does not apply to TAC emissions occurring from emergency use of emergency standby engines and emission testing of these engines required by the APCO. The emergency use exemption is carried forward from the existing RMP for diesel-fueled engines, and is intended to avoid restricting the use of these engines during emergencies. In Section 2-5-111, this provision will now be extended to other types of emergency standby engines (e.g., natural gas-fired engines) in order to encourage the use of non-diesel alternatives. In addition, the District is proposing to expand this exemption to include emissions arising from emission testing of these engines required by the APCO; this proposal is consistent with the Airborne Toxic Control Measure for stationary diesel engines that was recently adopted by CARB. Most new engines are certified by the manufacturer to meet emission standards, therefore emission testing will be very infrequently required by the APCO and these emissions are not expected to be significant.

No other source-category based rule exemptions have been included in the proposed Air Toxics NSR Rule. As was previously indicated, the District is proposing to eliminate the existing project risk exemption for Perc dry cleaners provided in the RMP. New and modified Perc dry cleaning facilities will now either need to meet the 10 in a million cancer risk standard, or switch to less toxic non-Perc alternatives.

Section 2-5-112: Applicability and Circumvention**,** limits applicability to new or modified source of toxic air contaminants for which an application is submitted on or after July 1, 2005 and to sources of toxic air contaminants constructed or modified after January 1, 1987 for which no authority to construct or permit to operate has been issued by the District and for which the District Rules and Regulations and Risk Management Policy in effect at the time of construction or modification required an authority to construct or permit to operate. This section was added to clarify that the District would not “look-back” and retroactively apply new standards to sources that had been properly permitted.

4.1.2 Definitions

Twenty-four separate terms that are used in Regulation 2, Rule 5 are defined in alphabetical order. The term “toxic air contaminant, or TAC” (Section 2-5-222) is used to define the specific chemical compounds that are regulated under the rule. These are the substances listed in Table 2-5-1, which are air contaminants for which health effect values have been established in the 2003 HRA Guidelines. This is not the same definition of TAC that appears in Regulation 2, Rule 1, Section 222, nor in CH&SC Section 39655(a), which are used in other programs. The District believes that common usage of the term TAC is broad enough that it can be used to refer to somewhat different groups of pollutants in different programs without undue confusion.

The definition of “new source of toxic air contaminants” given in Section 2-5-215 is essentially the same as the definition of “new source” given in Regulation 2, Rule 1, Section 232, except that it applies to sources with TAC emissions and is based on a cutoff date of January 1, 1987 instead of March 7, 1979. The date of January 1, 1987, which is also used in the existing REP, marks the beginning of the District Air Toxics NSR Program. It is important to note that, under this definition, replacement sources are treated as being "new" and subject to Air Toxics NSR requirements; this is consistent with how replacement sources are handled under Regulation 2, Rule 2: New Source Review. This provision is intended to provide net health risk benefits by requiring updated control requirements when older, more highly polluting, sources are replaced.

The definition of "modified source of toxic air contaminants" given in Section 2-5-214 is similar to the definition of "modified source" given in Regulation 2, Rule 1, Section 234. The focus of the Section 2-5-214 definition is on increases in emissions of TACs, however, as opposed to "regulated air pollutants." In addition, subsection 2-5-214.4, which applies to situations where a source modification results in an increase in emissions of a TAC not previously emitted, is based on whether the emissions increase would be subject to TBACT requirements (i.e., cancer risk greater than 1.0 in a million, and/or chronic hazard index greater than 0.2), rather than the previous provision used in subsection 2-1-234.4, which was based on whether the source would "fail an air toxic risk screening analysis in accordance with the current Air Toxic Risk Screening Procedure." (Subsection 2-1-234.4 will also be amended to use the same language).

Many of the defined terms are in relatively common usage in the field of health risk assessment. The terms "Acute Hazard Index, or Acute HI" (Section 2-5-201), "Acute Hazard Quotient, or Acute HQ" (Section 2-5-202), "Chronic Hazard Index, or Chronic HI" (Section 2-5-208), Chronic Hazard Quotient, or Chronic HQ" (Section 2-5-209), and "Cancer Risk" (Section 206), are the specific estimates of health risk that are used in the standards of the rule. The definition of cancer risk does not specify the use of the high-end exposure duration assumptions given in the 2003 HRA Guidelines (i.e., 70-years for residential receptors, and 40 years for worker receptors); these parameters will be specified in the District's HRSA Guidelines for purposes of clarity because several other exposure durations are also used in OEHHA's 2003 HRA guidelines (i.e., 9 and 30 years for residential exposures).

Other HRA-related terms defined include "Health Risk" (Section 2-5-210), "Carcinogen" (Section 2-5-207), "Reference Exposure Level, or REL" (Section 2-5-219), "Receptor Location" (Section 2-5-218), "Maximally Exposed Individual" (Section 2-5-212), "Residential Receptor" (Section 2-5-220) and "Worker Receptor" (Section 2-5-224). The six-month period used in the definition of residential receptor has been used as a guideline by the District for a number of years, and is also used to define "residence" in the District's Perc dry cleaning rule (Regulation 11, Rule 16).

The definition of "Health Risk Screening Analysis, or HRSA" given in Section 2-5-211 indicates that health risks are to be "based on procedures established by the APCO." The rule indicates (in an administrative requirement specified in Section 2-5-402: Health Risk Screening Analysis Guidelines) that the District will publish and periodically update Health Risk Screening Analysis Guidelines that specify the procedures to be followed in determining health risks. The District does not intend for this document itself to contain detailed risk assessment procedures. Rather, it will adopt by reference the 2003 HRA Guidelines (and any subsequent updates) established by OEHHA for use in the ATHS Program (which is defined in Section 2-5-203). The document may also contain procedures intended to supplement the OEHHA guidelines such as clarifications on how specific procedures are to be implemented where additional details are needed, and simplified approaches that may facilitate the completion of HRSAs in some instances (e.g., look-up tables for specific types of sources). The District Health Risk Screening Analysis Guideline document is intended to be a "living" document; the HRSA guideline and Table 2-5-1 will be periodically updated, typically within one year of any new or revised toxicity values or exposure assessment procedures that are adopted by OEHHA for use in the ATHS program. A draft version of the document is included as Appendix D of this report. The document will be updated using a process similar to what is used for the District's BACT/TBACT Workbook. Updates to Table 2-5-1 will follow the formal rule development process including public review.

The terms "Source Risk" (Section 2-5-221) and "Project Risk" (Section 2-5-217) are used to determine the specific emitting equipment or operations for which health risks are to be quantified under the standards of the rule. The term "Facility risk", which appeared in a prior draft version of the rule, was deleted along with the discretionary risk management provisions; nevertheless, facility risk remains the essential risk value for ATHS Program requirements. While the terms "source" and "facility" are not defined in the proposed Regulation 2, Rule 5, their definitions are already provided in Sections 221 and 213 of the District's General Permit Rule (Regulation 2, Rule 1). The term "Project", however, is not defined elsewhere in District regulations, and so a definition is provided in Section 2-5-216 of the proposed rule. Here, the terms "project" and "related projects" used in the existing REP are combined. The proposed definition of "Project" includes all new and modified sources permitted within the previous two-year period, unless "the applicant demonstrates to the satisfaction of the APCO that_construction or modification of the sources included in the current application was neither (1) a reasonably foreseeable consequence of the previous project, nor (2) a critical element or integral part of the previous project.

The definition of TBACT given in Section 2-5-205 is the same as that defined in Regulation 2, Rule 2 Section 244 (except that the requirement for the District to publish and periodically update a BACT/TBACT Workbook has been moved to the administrative requirements in Section 2-5-403: BACT/TBACT Workbook). TBACT for a given source or source category cannot be less stringent than that established as "Maximum Achievable Control Technology, or MACT" (Section 2-5-213), or in an "Airborne Toxic Control Measure, or ATCM" (Section 2-5-203).

The terms "Net Project Health Risk Demonstration", "Risk Reduction Measures", "Risk Reduction Plan", and "Specific Findings Report", which appeared in a prior draft version of the rule, were all related to discretionary risk management provisions.

Because the discretionary risk management provisions are not included in the proposed rule, these definitions have been deleted.

4.1.3 Standards

The TBACT (Section 2-5-301) and project risk requirements (Section 2-5-302) establish the primary standards of the rule. These requirements are the same as the requirements in the existing RMP, with the following exceptions:

1. TBACT will now be required where the chronic non-cancer HI exceeds 0.20, rather than an HI of 1.0.

2. TBACT will now be required for those sources that result in incremental increases in health risks above specified levels, rather than for all sources in a project regardless of their level of TAC emissions and health risk.

3. Short-term TAC emissions from a project must not result in an acute HI in excess of 1.0. The existing RMP has no explicit limits on acute health risks.

The 100 in a million cancer risk facility risk limit which appeared in a prior draft version of the rule in subsection 2-5-304.1 (now deleted) is also the significant risk threshold established by the District for the ATHS Program above which mandatory risk reduction measures are required under CH&SC Section 44391(a).

4.1.4 Administrative Requirements

Section 2-5-401: Health Risk Screening Analysis Requirement specifies that an HRSA shall be prepared for any project subject to the rule. This would include any project with TAC emissions that exceed one or more of the listed toxic trigger levels. The applicant may submit an HRSA for the District's review, or have the District complete an HRSA for the project. The District will notify the applicant where the results of an HRSA indicate that the project, as proposed, would not meet the requirements of the rule. The applicant is then given the opportunity to perform a more refined HRSA, or to modify the project as necessary to comply with the requirements of the rule.

Sections 2-5-402: Health Risk Screening Analysis Guidelines, and 2-5-403: BACT/TBACT Workbook, specify that the District will publish and periodically update HRSA Guidelines and a BACT/TBACT Workbook, respectively. Both are intended to be "living documents" that will be updated as appropriate by the District without a formal rulemaking process. [Note that this does not include changes in the toxic trigger levels, which will be proposed periodically as rule amendments where appropriate based on updated toxicity values and exposure factors by OEHHA.] The initial District HRSA Guidelines will adopt, by reference, the 2003 HRA Guidelines, with some specific exceptions (e.g., Interim Residential Breathing Rate). Any subsequent revisions to the HRA Guidelines used in the ATHS Program will be periodically incorporated into the District HRSA Guidelines.

4.1.5 Monitoring and Records

Section 2-5-501: Monitoring Requirements, is a general requirement indicating that the District may impose monitoring and/or recordkeeping requirements deemed necessary to ensure compliance with the rule. These requirements are routinely established in the form of permit conditions specified in Regulation 2, Rule 1, Section 403.

4.1.6 Manual of Procedures

Section 2-5-601: Emission Calculation Procedures specifies emission calculation procedures for new and modified sources. The emissions for new sources represent the maximum emissions from the source considering any limiting permit conditions that are established by the District. The annual emissions for modified sources represent the maximum increase in annual emissions from the source above existing baseline emission levels considering any limiting permit conditions established by the District. The maximum one-hour emissions for modified sources represent the total maximum one-hour emissions from the source after the modification. The use of total one-hour emissions for modified sources (rather than the increase in emissions resulting from the modification) will eliminate the need for establishing short-term baseline emissions while providing additional health protection.

Section 2-5-602: Baseline Emission Calculation Procedures contains procedures for establishing baseline annual emissions for existing sources at the facility which will be modified. Section 2-5-603: Health Risk Screening Analysis Procedures specifies that any HRSA shall be prepared in accordance with the District HRSA Guidelines.

4.2 Proposed Amendments to Regulation 2, Rule 1

The District is proposing amendments to Regulation 2: Permits, Rule 1: General Requirements, to delete obsolete terminology and to ensure consistency between the applicability of permit requirements and the project approval criteria for new and modified sources of toxic air contaminants provided in the new Regulation 2, Rule 5. (The proposed rule amendments are provided in strikeout and underline format in Appendix A).

The TAC trigger level table that appears as Table 2-1-316 will be deleted from Regulation 2, Rule 1 and moved to Regulation 2, Rule 5 as Table 2-5-1. References to the current table appearing in Sections 2-1-106: Limited Exemption, Accelerated Permitting Program, and 2-1-316: New or Modified Sources of Toxic Air Contaminants or Hazardous Air Pollutants, have been updated.

There is one specific reference to the District's RMP in Regulation 2, Rule 1, which appears in Section 2-1-220: Portable Equipment. This reference has been updated to Regulation 2, Rule 5.

The definition of TAC given in Section 2-1-222 has been revised somewhat. The existing definition is limited to those toxic compounds that have been formally adopted as TACs by CARB or that are listed as HAPs in the federal Clean Air Act. There are a relatively small number of toxic compounds, however, that are regulated under Regulation 2, Rule 5 (listed in Table 2-5-1) but which have not been formally adopted as TACs or listed as HAPs. The revised definition of TAC in Section 2-1-222 includes these compounds.

The term “risk screening analysis” defined in Section 2-1-225 has been renamed “health risk screening analysis (HRSA)” to be consistent with Regulation 2, Rule 5. The definition is also being revised to be the same as that given in Section 2-5-211.

As was mentioned previously, the part of the definition of “modified source” given in subsection 2-1-234.4, which addresses sources that have an increase in one or more pollutants not previously emitted, has been revised. The existing definition is based on emissions “which would cause the source to fail an air toxic screening analysis performed in accordance with the current Air Toxic Risk Screening Procedure.” The revised definition is based on emissions which would cause the source to trigger the TBACT requirements in Regulation 2, Rule 5, Section 301.

Definitions for the terms “BACT/TBACT Workbook” and “Clean Air Act” are provided in Sections 2-1-237 and 2-1-238, respectively. These terms are used in a number of sections in the District’s permit rules.

Sections 2-1-312, 2-1-313 and 2-1-428, which pertain to exemptions from CEQA review, have been revised. Currently, subsection 2-1-312.11.4, indicates that a project for which there is no possibility of any significant non-air quality environmental effects, is exempt from CEQA review if it results in an increase in TAC emissions but “the District staff’s preliminary health risk screening analysis shows that a formal health risk assessment is not required….” The District is proposing to revise this language so that a project of this type would be exempt from CEQA review if it has health risks below the thresholds at which TBACT is required under Section 2-5-301. Section 2-1-313 limits the applicability of the CEQA review exemptions in Section 2-1-312.

Some revisions to subsection 2-1-316.1 are proposed. This subsection establishes permit requirements for sources of TAC emissions that would otherwise qualify for certain permit exemptions. The existing language indicates that permits are required for new or modified sources with TAC emissions above a listed toxic trigger level “unless the owner or operator of the source can demonstrate to the satisfaction of the APCO, within 90 days of request per Regulation 1, Section 441, that the source would pass a risk screening analysis, as defined in Section 2-1-225, performed according to the current Air Toxic Risk Screening Procedure.” The revised language indicates that permit requirements for these sources apply unless the owner or operator can demonstrate that the source will: (1) meet the TBACT requirements of Section 2-5-301 (if applicable), and (2) meet the project risk requirements of 2-5-302 (if applicable). The language has also been revised to clarify that a source is not subject to this section if it was covered by a valid permit exemption at the time that the construction or modification occurs.

Section 2-1-409: Regulations in Force Govern, has been revised to clarify that TBACT and project risk (2-5-301 and 2-5-302) would also be governing standards for the decision to grant or deny an authority to construct for those applications declared to be complete after July 1, 2005 (effective date of Regulation 2, Rule 5).

Two new subsections are being proposed to Section 2-1-428 to clarify criteria for approval of ministerial permit applications for sources with TAC emissions. Under Subsection 2-1-428.5, one criterion is meeting project risk requirements. Under Subsection 2-1-428.6, ministerial applications must have TBACT determinations based on CARB's BACT/LAER Clearinghouse, the District's BACT/TBACT Handbook, an EPA MACT standard, a CARB ATCM, or a more stringent level.

4.3 Proposed Amendments to Regulation 2, Rule 2

The District is revising Regulation 2: Permits, Rule 2: New Source Review, Section 2-2-244: Best Available Control Technology for Toxics (TBACT), to add clarity and to be consistent with Section 2-5-205.

4.4 Proposed Amendments to Regulation 2, Rule 9

Regulation 2: Permits, Rule 9: Interchangeable Emission Reduction Credits, refers to the District's Risk Management Policy in subsections 2-9-301.1.4 and 2-9-304.6. The District is proposing to update these sections by referring to Regulation 2, Rule 5 instead of the Risk Management Policy. (The proposed rule amendments are provided in strikeout and underline format in Appendix A).

4.5 Proposed Amendments to Regulation 3

The District is proposing amendments to Regulation 3: Fees, to improve clarity and to increase revenue in order to fund increases in District staff resources that will be needed to implement the proposed enhancements in the Air Toxics NSR Program. These proposed amendments have been combined with overall proposed amendments to Regulation 3 for the District's upcoming FY 2005-06. The proposed fee amendments are described in a separate staff report.

4.6 Proposed Amendments to Regulation 8, Rule 34

Regulation 8: Organic Compounds, Rule 34: Solid Waste Disposal Sites, Aeration of Contaminated Soil and Removal of Underground Storage Tanks, contains an exemption (i.e., Section 8-34-122: Limited Exemption, Permanent Collection and Control System Shutdown) that is based, in part, on the project passing a risk screening analysis performed according to the current Air Toxic Risk Screening Procedures. The District is proposing to update the reference to the appropriate health risk screening analysis procedures for consistency with Regulation 2, Rule 5.

In addition, the District is proposing to clarify that passing a health risk screening analysis, in this instance, means complying with Regulation 2, Rule 5 without triggering TBACT. The permanent shut down of a landfill gas collection and control system at a landfill that is subject to Regulation 8, Rule 34 would constitute a modified source of TAC emissions and would be subject to the RMP (currently) and Regulation 2, Rule 5 (in the future). In either case, a landfill without a landfill gas collection and control system would not comply with TBACT and would only be allowed if the health impacts from the uncontrolled landfill emissions were less than the TBACT trigger levels. (The proposed rule amendments are provided in strikeout and underline format in Appendix A).

4.7 Proposed Amendments to Regulation 8, Rule 40

Regulation 8: Organic Compounds, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks, contains an exemption (i.e., Section 8-40-118: Exemption, Aeration Projects of Limited Impact) that is based in part on project emissions being less than the toxic trigger levels listed in Table 2-1-316. The District is proposing to update this reference to the new Table 2-5-1. (The proposed rule amendments are provided in strikeout and underline format in Appendix A).

4.8 Proposed Amendments to Regulation 8, Rule 47

Regulation 8: Organic Compounds, Rule 47: Air Stripping and Soil Vapor Extraction Operations, Sections 8-47-401.4 and 8-47-402.1 discuss the circumstances under which a risk analysis must be submitted to the District. The District is proposing to revise these sections for consistency with Regulation 2, Rule 5 by changing the term “risk analysis” to “health risk screening analysis”. (The proposed rule amendments are provided in strikeout and underline format in Appendix A).

4.9 Proposed Amendments to Regulation 11, Rule 16

Regulation 11: Hazardous Pollutants, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations, contains several unnecessary and obsolete references. The District is proposing to remove or correct these references. Specific proposals are discussed below. (The proposed rule amendments are provided in strikeout and underline format in Appendix A).

Section 11-16-102: Applicability, discusses the circumstances under which dry cleaning installations or modifications would be considered ministerial under CEQA. This discussion is a redundant reference of the requirements for a ministerial permit application in Sections 2-1-311, 2-1-427, and 2-1-428 and is not necessary. This section also cites obsolete sections of the Manual of Procedures (MOP, Volume II, Chapter 6 and Appendix A). The District is proposing to delete these unnecessary references and obsolete citations.

Two sections (Section 11-16-301 and Section 11-16-302.2.1) cite an obsolete section of the Manual of Procedures (MOP, Volume II, Chapter 6, Appendix A) for the

District's Risk Management Policy for Dry Cleaners. The District is proposing to replace these obsolete citations with Section 11-16-605.

Section 11-16-605: Determination of Cancer Risk, cites an obsolete section of the Manual of Procedures (MOP, Volume II, Chapter 6, Appendix A) for the District's Risk Management Policy for Dry Cleaners. The District is proposing to replace this obsolete citation with the term "Health Risk Screening Analysis Guidelines" for consistency with Regulation 2, Rule 5.

4.10 Proposed MOP Section

The District is proposing to add a new part to the engineering permitting procedures contained in its Manual of Procedures (MOP) to address the Air Toxics NSR Program. This part of the MOP (provided in Appendix A) will contain five sections as follows.

(1) Introduction

The introduction provides a brief overview of the District Air Toxics NSR Program and the history of its development from the REP and RMP to inclusion in District regulations.

(2) Review Procedures for Sources with TAC Emissions

This section describes the District's review process for new and modified sources with TAC emissions. A list of steps in the process is provided including establishing permit requirements, estimating TAC emissions, comparison with TAC trigger levels, and completion of an HRSA.

(3) Permit Applications

This section covers permit application requirements for new and modified sources of TAC emissions. The information that needs to be submitted to the District in order to complete the engineering evaluation of compliance with Air Toxics NSR Program requirements is described in detail.

(4) Regulation 2, Rule 5: New Source Review of TACs.

This section describes the applicability of Regulation 2, Rule 5, and the primary rule requirements.

(5) Glossary

A list of acronyms used in the Air Toxics NSR Program is provided.

5. Alternative Approaches

The District Air Toxics NSR Program uses a risk-based approach where the maximum incremental health risks from new and modified sources in a project are estimated by an HRSA and compared to project risk limits. Projects that meet these project risk limits are not expected to cause, or contribute significantly to, adverse health effects. Incremental significance criteria are used widely by regulatory agencies to draw boundaries on the scope of regulation. The underlying assumption of this approach is that the burden of further regulation on a project that does not add significantly to health risks yields a gain of trivial value.

A number of other potential approaches exist to evaluate the acceptability of proposed projects with TAC emissions. Two of these alternatives are cumulative impact assessment and the precautionary principle, which are briefly summarized below.

<u>Cumulative Impact Assessment</u>

Cumulative impact assessment (CIA) is an approach that recognizes that, although certain sources may have insignificant health risks in themselves, the aggregate or accumulation of risks from multiple sources has the potential to become significant. In its broadest sense, CIA is a tremendously difficult technical issue because there are many different risk factors that contribute to an individual's overall health risks, and some are known with much greater certainty than others. For example, the cancer risks resulting from exposure to chemicals in the environment are known with much less certainty than the major known cancer risk factors such as smoking, weight and diet, exercise, and alcohol consumption.

In a much more limited sense, CIA can be used to assess health risks from specific risk factors such as exposure to air contaminants emitted from multiple local sources. Depending on its scope, an urban neighborhood-level CIA addressing local air pollution sources can itself be a difficult technical undertaking due to the diversity and number of sources typically present (e.g., industrial and commercial stationary sources, mobile sources, natural sources, and area-wide sources such as fireplaces and the use of consumer products). These technical difficulties are largely related to incompleteness of data (e.g., spatial and temporal emission patterns) needed to estimate exposures and health risks, and to ascertain source contributions. The District has recently established a new Community Air Risk Evaluation (CARE) Program that includes a limited-scope CIA for a community to be selected.

The two basic tools used for completing a CIA for exposure to air contaminants are monitoring and modeling, both of which have important uses that serve to complement one another. Monitoring is a primary method for determining air pollutant levels, and is less uncertain than modeling particularly when a diversity of sources is present. Air monitoring is costly, however, and is generally based on fixed-site monitoring locations that provide limited spatial resolution. The analytical and predictive capabilities of monitoring also are limited (e.g., in determining source contributions, or estimating the impacts of proposed sources). While the results of modeling are more uncertain than monitoring, models provide strong predictive and analytical capabilities and can provide results at a wide variety of receptor locations.

The District has, for many years, operated a network of air monitoring sites in the Bay Area where samples of a number of specific TACs are routinely taken. These air monitoring data can be used to estimate exposure levels and health risks over time, and identify spatial variations from one site to another. For example, Figure 1 shows the Bay Area network average lifetime inhalation cancer risk associated with exposure to annual average TAC levels measured from 1994 to 2000. (Note that the dramatic drop in risk occurring between 1995 and 1996 was due primarily to decreases in ambient benzene levels that resulted from the use of Phase 2 Reformulated Gasoline in the Bay Area). Figure 2 shows variations in calculated cancer risks (for the year 2000) for the network average and the four monitoring sites where toxics monitoring data were collected for the largest number of different TACs. (It should be noted that these figures do not include diesel particulate matter which is not directly measured in the ambient air, but is believed to result in average inhalation cancer risks that are about three times higher than the risk attributed to all other measured TACs combined).

The District has previously completed limited-scope dispersion modeling-based CIAs of multiple air pollution sources. One such study was the Cumulative Air Toxics Modeling Study (BAAQMD, 1993), which focused on the maximum cumulative cancer risks associated with emissions from multiple industrial and commercial facilities that had been previously evaluated in facility-wide HRAs completed under the ATHS Program. A total of 54 facilities were evaluated in 12 different study areas. Among the findings of this CIA were that the maximum cancer risks were typically dominated by a single facility's emissions. For example, for the sub areas where cancer risks were estimated to be above 10 in a million, over 90 percent of the maximum cancer risk was attributable to a single facility's emissions, on average.

The District has also completed limited-scope CIAs that focus on common scenarios where multiple facilities may be located in close proximity to one another. One such study evaluated the following: (1) a gasoline dispensing facility scenario consisting of four individual gasoline stations located at the corners of an intersection, (2) a back-up generator scenario consisting of a large number of nearby facilities with diesel engine back-up generators located in urban and suburban settings, and (3) a strip mall scenario consisting of a gasoline station, furniture stripper, dry cleaner, and a facility with a back-up generator, located adjacent to one another in a strip mall. The results of these scenario evaluations indicated that the maximum cumulative health risks from multiple facilities (with equal toxicity-weighted emissions) ranged from 1.4 to 2.2 times higher than the maximum health risks determined from individual facility analysis (e.g., if the maximum cancer risk from each individual facility were 10 in a million, then the maximum cumulative cancer risk from all facilities considered was between 14 and 22 in a million, depending on the scenario).

Figure 1. Lifetime Cancer Risk Due to Inhalation of Network Average Ambient Levels of Toxic Air Contaminants Measured in the Bay Area

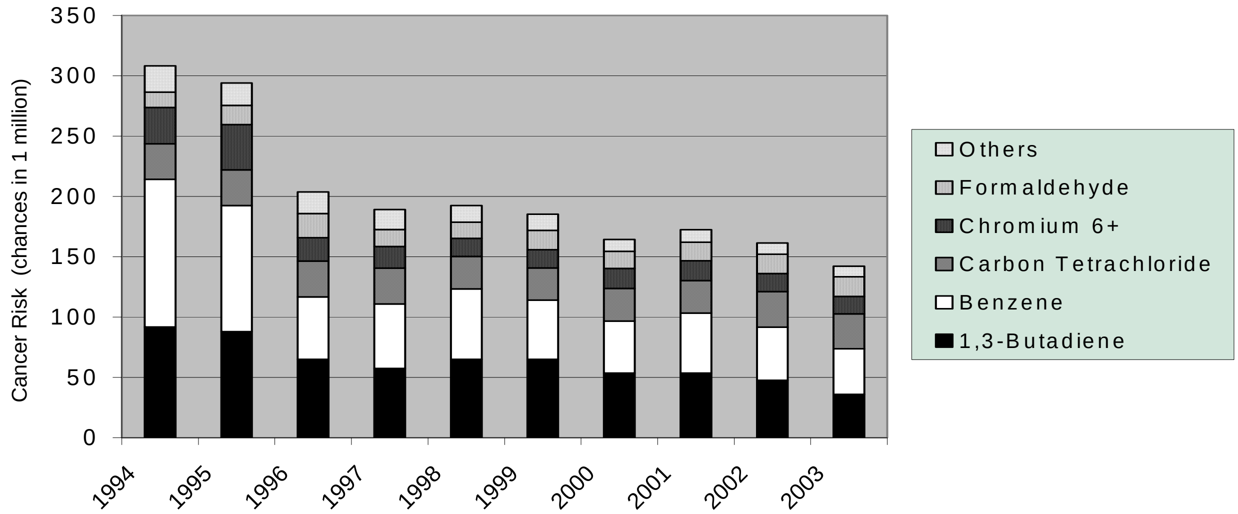
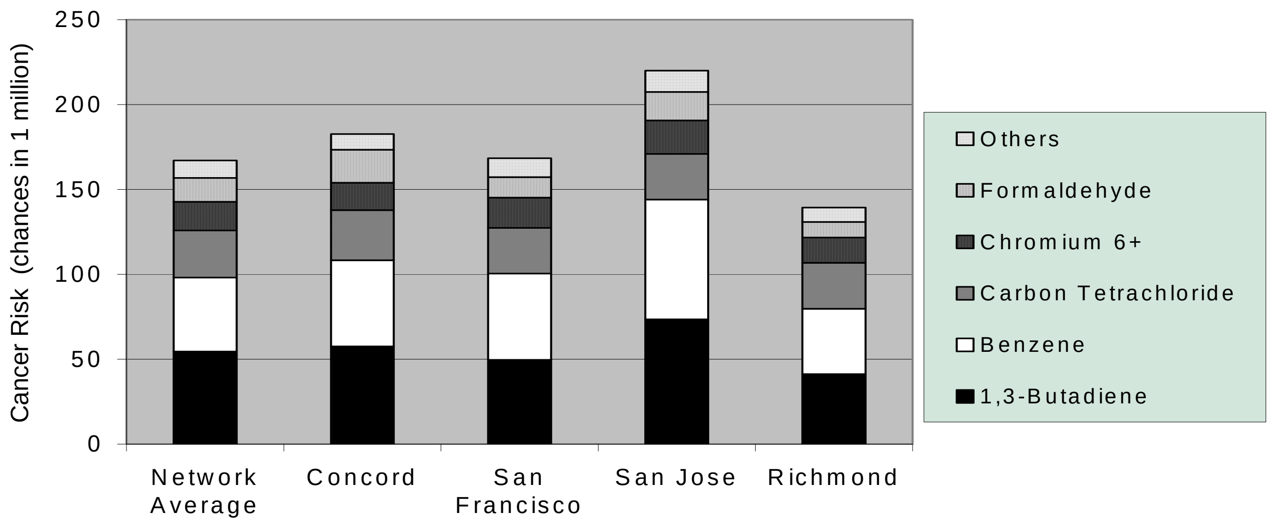


Figure 2. Lifetime Cancer Risk Due to Inhalation of Average Ambient Levels of Toxic Air Contaminants Measured in the Bay Area in 2000



Notes for charts: Cancer risks were calculated assuming continuous 70-year exposure using Unit Risk Factors adopted by OEHHA for use in the Air Toxics Hot Spots Program. Others include: acetaldehyde, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chloroform, dibenzo(a,h)anthracene, dichloromethane, indeno(1,2,3-cd)pyrene, lead, MTBE, nickel, perchloroethylene, and trichloroethylene. Some data used to calculate risk for Richmond were collected at the San Pablo monitoring site. Network average excludes Fort Cronkhite site.

CARB is currently involved, through their Neighborhood Assessment Program, in developing guidelines to support uniform, science-based, assessments of the health risks that result from multiple air emissions sources, including mobile sources, occurring within a neighborhood. CARB has indicated that the results of this type of CIA could be used by local decision-makers to assess policy options for addressing neighborhood-scale environmental concerns.

It should be noted that the completion of a comprehensive CIA using the CARB guidelines will likely require extensive efforts to collect, store, and maintain detailed air dispersion modeling input data. The District intends on evaluating the resource requirements required for their use, and to determine their value in terms of potential improvements to the Air Toxics NSR Program.

In addition to the technical difficulties posed by CIA, there are also policy issues that need to be addressed before CIA can be used in regulatory programs. Criteria for judging the significance of cumulative health risks would have to be established (the significance levels currently used in most regulatory programs are considered appropriate for use in judging incremental health risks at the source, project, or facility level). This includes both defining adverse cumulative health risk thresholds, and establishing the level at which a proposed source, or group of sources, would be considered to have a significant contribution to that adverse impact.

Precautionary Principle

The “precautionary principle” has received considerable attention in a number of international discussions on human health and the environment. Although some statements of the principle are more detailed than others, each has at its core the idea that action should be taken to prevent or minimize harm to human health and the environment even if scientific evidence is inconclusive. For example, the 1998 Wingspread Statement on the Precautionary Principle summarizes the principle in the following manner: "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." The February 2, 2000, European Commission Communication on the Precautionary Principle indicates: "The precautionary principle applies where scientific evidence is insufficient, inconclusive or uncertain and preliminary scientific evaluation indicates that that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the high level of protection chosen by the EU."

Unfortunately, the precautionary principle does not specify what should trigger action (e.g., how is a potential health threat established, and how is it determined if existing scientific information is inadequate or inconclusive?), nor does it specify what action should be taken after it is triggered. The precautionary principle is therefore difficult to craft into workable policies or regulations. Three common elements generally have emerged, however, regarding the process by which the precautionary principle should be applied: (1) the process should put the burden of proof on the proponent of an activity, rather than the public, to prove that the activity will not have adverse impacts, (2) the process should involve an examination of the full range of alternatives to the proposed project, and (3) the process must be open, informed and democratic and must include potentially affected parties.

The District believes that many elements of the precautionary principle are built into the proposed Regulation 2, Rule 5. The methods used to estimate health risks are not without uncertainty, but are based on well-established scientific principles, and are intended to err on the side of health protection. The program is designed so that updates in HRA methodology can be used based on improvements in scientific knowledge. (The ATHS program provides a mechanism for the District to address updated HRA information for sources that have already received District permits). The stringent project risk limits are set at levels that the District believes do not warrant more detailed alternatives assessment and public scrutiny within the preconstruction permitting process. The District intends on monitoring any workable applications of the precautionary principle that may emerge and serve to further improve the Air Toxics NSR Program.

6. Economic Impacts

The District must, in some cases, consider the socioeconomic impacts and incremental costs of proposed rules or amendments. These economic impacts are discussed below.

Socioeconomic Impacts

California CH&SC Section 40728.5 (a) states:

> **40728.5. (a)** Whenever a district intends to propose the adoption, amendment, or repeal of a proposed rule or regulation that will significantly affect air quality or emissions limitations, that agency shall, to the extent the data are available, perform an assessment of the socioeconomic impacts of the adoption, amendment, or repeal of the rule or regulation. The district board shall actively consider the socioeconomic impacts, as defined below. This section does not apply to the adoption, amendment, or repeal of any rule or regulation that results in any less restrictive emissions limit if the action does not interfere with the district's adopted plans to attain ambient air quality standards, or does not result in any significant increase in emissions.

The proposed Regulation 2, Rule 5 will apply to new and modified sources of TACs only. This rule may affect air quality or emission limitations for future projects, but it will have no impacts on existing unmodified operations.

The use of the 2003 HRA Guidelines, rather than the 1993 HRA Guidelines, to determine cancer and chronic non-cancer health risks for proposed new and modified sources will affect air quality and emission limitations in some cases. The transition to use of the 2003 HRA Guidelines is required under the existing REP, however, so that changes in calculated health risks are not a direct effect of the adoption of Regulation 2, Rule 5. (For example, the District has already begun using the updated CPFs and RELs in HRSAs, following their adoption by OEHHA over the past several years).

The primary anticipated effect of adopting Regulation 2, Rule 5, is that some future new and modified sources may be subject to more stringent control requirements than would be the case under the existing REP and RMP due to the more stringent TBACT trigger-level for chronic non-cancer health risks, the addition of acute project risk limits, and the elimination of project risk exemptions for Perc dry cleaners. Facilities would also be subject to higher permit fees for permit applications that require an HRSA.

The District believes that this regulatory action, relative to the existing baseline Air Toxics NSR Program under the REP and RMP, is unlikely to result in significant socioeconomic impacts.

Incremental Costs

Under CH&SC Section 40920.6, the District is required to perform an incremental cost analysis for a proposed rule, if the purpose of the rule is to meet the requirement for best available retrofit control technology or for a feasible measure pursuant to CH&SC Section 40914. The proposed Regulation 2, Rule 5 and related rule amendments are not best available retrofit control technology requirements or a feasible measure. Therefore, an incremental cost analysis is not required for this regulatory action.

7. Environmental Impacts

The proposed Regulation 2, Rule 5 retains the fundamental approach used in the REP and RMP, but includes several program updates and enhancements that in some cases will result in more stringent air emissions limitations and/or other measures to reduce health risks.

The District prepared a draft Initial Study for the proposed adoption of Regulation 2, Rule 5, and the proposed amendments to Regulation 2, Rule 1, and Regulation 3. Based on this Study, the District made a preliminary decision that the proposed rule and rule amendments will not result in any significant adverse impacts to the environment. Nonetheless, the District decided to prepare a draft Environmental Impact Report (EIR) to more comprehensively evaluate the potential for environmental impacts. The draft EIR indicates that the District's proposal, to require new and modified dry cleaners meet project risk limits of 2-5-302, may result in a potentially significant increase in emissions of a precursor to a criteria air pollutant (ozone) because many dry cleaners may switch from perchloroethylene (a negligibly reactive organic compound) to less toxic cleaning solvents (i.e., VOCs) that may be precursors to ozone formation. Even though the District proposal is expected to reduce emissions of perchloroethylene and other toxic air contaminants, the potential for this increase in VOC emissions is considered significant under CEQA. No other potentially significant adverse impacts were identified in the EIR.

8. District Staff Impacts

The proposed program updates and enhancements will require additional staff resources due to expected increases in the quantity and complexity of the health risk screening analyses that will need to be conducted and reviewed. The additional staff resources needed for the Air Toxic NSR program is estimated to be between one and two FTEs. The District proposed revisions to Regulation 3 would provide sufficient revenue to cover the costs of these additional staff resources. The amendments will increase the permit fees for permit applications that require an HRSA, and bring the minimum fees more in line with the District costs incurred for completing an HRSA.

9. Statutory Findings

Pursuant to CH&SC Section 40727, adopted or amended rules and regulations must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. A summary of these findings follows.

- There is need for the proposed rule and rule amendments in order to provide an objective, legally defensible, basis for evaluating whether proposed projects involving new and modified sources with TAC emissions would cause, or contribute significantly to, adverse health effects. The requirements are also needed to satisfy the program objectives established by the District's Board of Directors.
- The proposed rule and rule amendments are authorized by CH&SC Sections 39659, 42300, 42301, 41700, and 42311.
- The requirements of the Air Toxics NSR Program are based on the results of site-specific HRSAs, which are technical analyses that may be difficult for many permit applicants to understand. The applicant is not required to complete an HRSA, however, and the District staff will provide assistance to permit applicants, where the results of an initial HRSA for a proposed project does not meet rule requirements, to identify various permitting options that may be available. The District believes that the proposed rule and rule amendments are written so that their meaning can be easily understood by the persons directly affected by them.
- The proposed rule and rule amendments are in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state and federal regulations.

- The proposed rule and rule amendments do not impose the same requirements as an existing state or federal regulation.
- The proposed rule and rule amendments are intended to interpret and make specific the provisions of CH&SC Sections 42300(a), 42301(b) and 41700, specific to the manner in which the APCO evaluates permits for proposed new and modified sources in terms of compliance with prohibitions on TAC emissions which cause injury to, or which endanger the health of, the public.

CH&SC Section 40727.2 establishes requirements for the District to prepare a written analysis identifying differences between proposed new or amended rules or regulations and any existing air pollution control requirement or guideline applicable to the same equipment or source type.

The proposed rule and rule amendments discussed in this report are general in nature, both in terms of the manner in which the requirements are expressed (e.g., TBACT and project risk limits) and the many different types of sources covered. As such, they do not allow for a detailed comparison of the regulatory elements specified in CH&SC Section 40727.2(d) (i.e., averaging provisions and units of emission limits; operating parameters and work practice requirements; monitoring, reporting and recordkeeping requirements), which are more relevant for making comparisons between source-specific rules.

Comparisons can be made between the proposed Regulation 2, Rule 5, and the federal Clean Air Act Section 112(g) regulation given in 40 CFR Part 63, Subpart B, Sections 63.40 through 63.44. Section 112(g) is a transitional measure that applies to new and reconstructed major sources of HAPs that are in a source category for which a MACT standard has not yet been promulgated. It also applies to major modifications that would increase HAP emissions in quantities that would exceed the major source thresholds (10 tons per year or more of a listed HAP, or 25 tons per year or more of a combination of HAPs, based on potential to emit). Section 112(g) requires that affected sources be subject to stringent air pollution control requirements, referred to as "new source MACT." Under the Clean Air Act, new source MACT control is required to be no less stringent than the best controlled similar source or facility (note that new source MACT and TBACT are considered to be equivalent).

The TBACT requirements in Regulation 2, Rule 5 are not based on exceeding any pre-determined emission thresholds. Rather, the emission thresholds at which TBACT is required are established on a case-by-case basis from the results of a site-specific HRSA for the source being evaluated. In most cases, TBACT will be required under Regulation 2, Rule 5 at emission levels that are significantly below the federal major source thresholds. Exceptions to this include sources that emit HAPs that are not listed in Table 2-5-1, and sources that emit HAPs that are relatively non-toxic and/or which are located in remote areas where public exposure to locally elevated air concentrations would not occur.

10. Summary of Rule Development Process

10.1 Public Input

On May 2, 2004, the District issued an initial draft Air Toxics NSR rule proposal. A series of public workshops were held in May and June of 2003 to discuss this proposal with interested parties. A workshop was held at the District Office, followed by evening workshops at community locations in Richmond, Oakland, San Francisco, and East Palo Alto.

A number of public comments were submitted on the 2003 proposal. The most extensive comments submitted were from the Golden Gate University School of Law Environmental Law and Justice Clinic (ELJC) on behalf of the Environmental Justice Air Quality Coalition, Bayview Hunters Point Community Advocates, and Our Children's Earth Foundation. The California Council for Environmental and Economic Balance (CCEEB) also submitted detailed comments. District staff subsequently met on several occasions with ELJC and their clients, as well as with representatives of CCEEB, in order to clarify and resolve issues.

Further work on the rule was delayed for a period of time pending the release of revised risk assessment guidelines and tools from OEHHA and CARB. On March 16, 2005, the District issued a revised Air Toxics NSR rule proposal. The revised proposal was made in response to public comments and updates in State risk assessment guidelines occurring since the initial proposal was issued. A public workshop to discuss the revised proposal was held on April 8, 2005 at the District Office. Staff subsequently met separately with ELJC and their clients, and with representatives of CCEEB, to further discuss issues. Several changes to the revised proposal were made based on comments received, and a final proposed rule was issued on May 13, 2005.

In January 2005, staff determined that the requirements of CEQA would be most appropriately met for this rule development project by the preparation of an EIR. On January 26, 2005, a Notice of Preparation of a Draft EIR was issued. The Draft EIR was completed on April 18, 2005. The public comment period on the Draft EIR ended on May 23, 2005.

District staff has worked to address a wide variety of public comments submitted, and has incorporated a number of suggested changes into the final rule proposal. A summary of the public comments received in conjunction with the Air Toxics NSR rule development project, and District staff responses to these comments, are included in Appendix E.

10.2 Changes from Initial 2003 Proposal

The major differences between the District's final regulatory proposal and the initial 2003 proposal are highlighted below.

- In 2003, the District proposed to clarify and expand discretionary risk management provisions authority found in the existing Risk Management Policy, and to provide new opportunity for public participation in these discretionary decisions. Projects that complied with the specific findings requirements would have been allowed, at the APCO's discretion, to meet facility risk limits of 100 in one million for cancer risk, and 10.0 for acute and chronic hazard indices, instead of the project risk limits of 10.0 in one million for cancer risk and 1.0 for hazard indices. The District has deleted the specific findings exemption, the risk reduction measures requirement, the facility risk limits, and all related definitions, administrative requirements, and procedural provisions from the proposed Regulation 2, Rule 5. Discretionary risk management actions will not be allowed, and all projects will be required to comply with project risk limits of 10.0 in one million for cancer risk, 1.0 for acute hazard index, and 1.0 for chronic hazard index.
- The District has augmented Table 2-5-1 by adding the RELs and CPFs that were used to calculate the Acute and Chronic Trigger Levels. Since 2003, OEHHA has updated health effects values for several compounds. These revised health effects values and the resulting revised trigger levels (as of January 1, 2005) have been incorporated into Table 2-5-1. In addition, the trigger level calculation procedures have been amended due to OEHHA's recent adoption of modified breathing rate assumptions into the State risk assessment procedures and due to numerous enhancements of the HARP software that have occurred since 2003. These trigger level calculation modifications resulted in revised trigger levels for many compounds.
- The District also amended Section 2-5-402: Health Risk Screening Analysis Guidelines, by describing how and when Table 2-5-1 and the District's HRSA guidelines will be modified in the future. The District will periodically review, through a rule development process, the feasibility of compliance with project risk limits, for any new or revised health effects values adopted by OEHHA, or any other revised exposure factors (e.g., breathing rate factors, exposure durations), that affect the emission trigger levels, prior to use of the new or revised health effects values or exposure factors in Regulation 2, Rule 5.
- The District clarified in Section 2-5-301 that the TBACT threshold for chronic hazard index is 0.20 rather than 0.2. In practice, this change reduces the TBACT threshold from a possible high of 0.25 (which rounds down to 0.2 for one significant figure) to 0.205 (which rounds down to 0.20 for two significant figures).
- The District made numerous improvements to the emission calculations procedures in Sections 2-5-601 and 2-5-602 to ensure clarity and consistency.

The Manual of Procedures was revised to clarify that accidental releases were not considered routine or predictable.

- Emissions due to emergency use of emergency standby engines are exempt from the current risk management policy and were proposed for exemption from Regulation 2, Rule 5 in 2003 pursuant to Section 2-5-111. The District is proposing to expand this exemption to include emissions arising from emission testing of these engines that is required by the APCO. This proposed emissions testing exemption for diesel engines is consistent with the ATCM for stationary diesel engines that was recently adopted by CARB. Most new engines are certified by the manufacturer to meet emission standards, therefore testing is very infrequently required by the APCO and these emissions are not expected to be significant.
- The District added definitions for acute hazard quotient and chronic hazard quotient and has clarified the related definitions for hazard index.
- The District revised the definition of cancer risk by removing the quantitative discussion of exposure duration for residential and worker receptors. The appropriate exposure durations will be identified in the District's HRSA Guidelines rather than this definition.
- For the definition of "project" (Section 2-5-216), the District clarified the circumstances under which a previously permitted source will be considered part of the current project. In addition, the District revised Section 2-1-409 and added a new Section 2-5-112 to clarify applicability.
- The District clarified the definitions of "Health Risk Screening Analysis", "modified source of toxic air contaminants", "receptor location", "reference exposure level", and "worker receptor" and made numerous other editorial revisions to the proposed rule.

11. Conclusions

The proposed new rule, associated rule amendments, and new MOP section described in this report are expected to achieve the goals of this rule development project which are to: (1) improve the legal defensibility of the District's permitting decisions concerning new and modified sources of TACs, (2) increase the clarity and public visibility of the Air Toxics NSR Program requirements, and (3) update and enhance the existing Air Toxics NSR Program and increase conformity with updated State health risk assessment and risk management guidelines.

The regulatory proposal is not expected to result in significant economic or environmental impacts. Some additional District staff resources will be needed to implement the proposals, but the necessary funds for these resources will be provided through increases in permit fees for affected facilities. The proposals are believed to meet the required findings of necessity, authority, clarity, consistency, non-duplication, and reference.

The District conducted a series of workshops to discuss the proposal with interested parties, and has considered all public comments in establishing the final proposal. District staff recommends that the regulatory proposal be adopted with an effective date of July 1, 2005.

12. References

BAAQMD, 1993. Cumulative Air Toxics Modeling Study, Bay Area Air Quality Management District, July 1993.

CARB, 1993. Risk Management Guidelines for New and Modified Sources of Toxic Air Pollutants, California Air Resources Board, July 1993.

CARB, 2000. Risk Management Guidance for the Permitting of New Stationary Diesel Fueled-Engines, California Air Resources Board, October 2000.

CARB, 2003a. HARP User Guide, Software for Emission Inventory Database Management, Air Dispersion Modeling Analyses, and Health Risk Assessment, California Air Resources Board, December 2003.

CARB, 2003b. Air Resources Board Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk, California Air Resources Board, Office of Environmental Health Hazard Assessment, October 9, 2003.

CAPCOA, 1987. Air Toxics Assessment Manual, California Air Pollution Control Officer’s Association, August 1987.

CAPCOA, 1993. Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, California Air Pollution Control Officer's Association, October 1993.

EPA, 1982. Regional Workshops on Air Quality Modeling: A Summary Report, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, 1982. (EPA-450/4-82-015).

EPA, 1992. Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, October 1992. (EPA-454/R-92-019).

EPA, 1995. SCREEN3 Model User’s Guide, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, September 1995. (EPA-454/B-95-004).

OEHHA, 1999. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Determination of Acute Reference Exposure Levels for Airborne Toxicants, California Environmental Protection Agency Office of Environmental Health Hazard Assessment, March 1999.

OEHHA, 2000. Air Toxics Hot Spots Program Risk Assessment Guidelines, Part IV: Technical Support Document for Exposure Assessment and Stochastic Analysis, California Environmental Protection Agency Office of Environmental Health Hazard Assessment, September 2000.

OEHHA, 2003. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, California Environmental Protection Agency Office of Environmental Health Hazard Assessment , August 2003.

Bay Area Air Quality Management District

May 12, 2005

Proposed Regulatory Language

Adoption of:

BAAQMD Regulation 2: Permits,
Rule 5: New Source Review of Toxic Air Contaminants

BAAQMD Manual of Procedures
Volume II: Engineering Permitting Procedures,
Part 4: New and Modified Sources of Toxic Air Contaminants

Amendments to:

BAAQMD Regulation 2: Permits,
Rule 1: General Requirements
Rule 2: New Source Review
Rule 9: Interchangeable Emission Reduction Credits

BAAQMD Regulation 8, Organic Compounds,
Rule 34: Solid Waste Disposal Sites
Rule 40: Aeration of Contaminated Soils and Removal of Underground Storage Tanks
Rule 47: Air Stripping and Soil Vapor Extraction Operations

BAAQMD Regulation 11, Hazardous Pollutants,
Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations

REGULATION 2
PERMITS
RULE 5
NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

INDEX

REGULATION 2
PERMITS
RULE 5
NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

2-5-100 GENERAL

2-5-101 Description: The purpose of this rule is to provide for the review of new and modified sources of toxic air contaminant (TAC) emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. The rule applies to a new or modified source of toxic air contaminants that is required to have an authority to construct or permit to operate pursuant to Regulation 2, Rule 1. New and modified sources with Hazardous Air Pollutant emissions may also be subject to the Maximum Achievable Control Technology (MACT) requirement of Regulation 2, Rule 2, Section 317.

2-5-110 Exemption, Low Emission Levels: A source shall not be subject to the provisions of this rule if, for each toxic air contaminant, the increase in emissions from the project is below the trigger levels listed in Table 2-5-1.

2-5-111 Limited Exemption, Emergency Standby Engines: This rule shall not apply to toxic air contaminant emissions occurring from emergency use of emergency standby engines, as defined in Regulation 9, Rule 8, Section 231, or from emission testing of emergency standby engines required by the APCO.

2-5-112 Applicability and Circumvention: This rule applies to the following:

112.1 A new or modified source of toxic air contaminants for which an application is submitted on or after July 1, 2005;

112.2 A source of toxic air contaminants constructed or modified after January 1, 1987 for which no authority to construct or permit to operate has been issued by the District and for which the District Rules and Regulations and Risk Management Policy in effect at the time of construction or modification required an authority to construct or permit to operate.

2-5-200 DEFINITIONS

2-5-201 Acute Hazard Index, or Acute HI: Acute hazard index is the sum of the individual acute hazard quotients for toxic air contaminants identified as affecting the same target organ or organ system.

2-5-202 Acute Hazard Quotient, or Acute HQ: Acute hazard quotient is the ratio of the estimated short-term average concentration of the toxic air contaminant to its acute reference exposure level (estimated for inhalation exposure).

2-5-203 Airborne Toxic Control Measure, or ATCM: A recommended method and, where appropriate, a range of methods, established by the California Air Resources Board (CARB) pursuant to the Tanner Act, California Health and Safety Code beginning at Section 39650, that reduces, avoids, or eliminates the emissions of a toxic air contaminant.

2-5-204 Air Toxics Hot Spots Program: The Air Toxics "Hot Spots" Information and Assessment Act of 1987, California Health and Safety Code beginning at Section 44300.

2-5-205 Best Available Control Technology for Toxics, or TBACT: For any new or modified source of toxic air contaminants, except cargo carriers, the most stringent of the following emission controls, provided that under no circumstances shall the controls be less stringent than the emission control required by any applicable provision of federal, State or District laws, rules, regulations or requirements:

205.1 The most effective emission control device or technique which has been successfully utilized for the type of equipment comprising such a source; or

205.2 The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source; or

205.3 Any control device or technique or any emission limitation that the APCO has determined to be technologically feasible for the type of equipment comprising such a source, while taking into consideration the cost of achieving emission reductions, any non-air quality health and environmental impacts, and energy requirements; or

205.4 The most stringent emission control for a source type or category specified as MACT by U.S. EPA, or specified in an ATCM by CARB.

2-5-206 **Cancer Risk:** An estimate of the probability that an individual will develop cancer as a result of lifetime exposure to emitted carcinogens at a given receptor location.

2-5-207 **Carcinogen:** For the purpose of this rule, a carcinogen is any compound for which Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) has established a cancer potency factor for use in the Air Toxics Hot Spots Program.

2-5-208 **Chronic Hazard Index, or Chronic HI:** Chronic hazard index is the sum of the individual chronic hazard quotients for toxic air contaminants identified as affecting the same target organ or organ system.

2-5-209 **Chronic Hazard Quotient, or Chronic HQ:** Chronic hazard quotient is the ratio of the estimated annual average exposure of the toxic air contaminant to its chronic reference exposure level (estimated for inhalation and non-inhalation exposures).

2-5-210 **Health Risk:** The potential for adverse human health effects resulting from exposure to emissions of toxic air contaminants and ranging from relatively mild temporary conditions, such as eye or throat irritation, shortness of breath, or headaches, to permanent and serious conditions, such as birth defects, cancer or damage to lungs, nerves, liver, heart, or other organs. Measures of health risk include cancer risk, chronic hazard index, and acute hazard index.

2-5-211 **Health Risk Screening Analysis, or HRSA:** An analysis that estimates the increased likelihood of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic air contaminants, determined in accordance with Section 2-5-603.

2-5-212 **Maximally Exposed Individual, or MEI:** A person that may be located at the receptor location where the highest exposure to toxic air contaminants emitted from a given source or project is predicted, as shown by an APCO-approved HRSA.

2-5-213 **Maximum Achievable Control Technology, or MACT:** An emission standard promulgated by U.S. EPA pursuant to Section 112(d) of the Clean Air Act.

2-5-214 **Modified Source of Toxic Air Contaminants:** An existing source that undergoes a physical change, change in method of operation, or increase in throughput or production that results or may result in any of the following:

214.1 An increase in the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate toxic air contaminant emission levels, above emission or production levels approved by the District in any authority to construct.

214.2 An increase in the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate toxic air contaminant emission levels, above levels contained in a permit condition in any current permit to operate or major facility review permit.

214.3 For a source that has never been issued a District authority to construct and that does not have conditions limiting daily or annual toxic air contaminant emissions, an increase in the daily or annual emission level of any toxic air contaminant, or the production rate or capacity that is used to estimate the emission level, above the lower of the authorized capacity as established pursuant to Section 2-5-214.3.1 or the functional capacity as established pursuant to 2-5-214.3.2:

3.1 The authorized capacity is the highest of the following:

3.1.1 The highest attainable design capacity, as shown in pre-construction design drawings, including process design drawings and vendor specifications.

3.1.2 The capacity listed in the District permit to operate.

3.1.3 The highest documented actual levels attained by the source prior to July 1, 2005.

3.2 The functional capacity is the capacity of the source as limited by the capacity of any upstream or downstream process that acts as a bottleneck (a grandfathered source with an emission increase due to debottlenecking is considered to be modified).

For the purposes of applying Section 2-5-214.3, only increases in annual emission levels shall be considered for storage vessels.

214.4 The emission of any toxic air contaminant not previously emitted in a quantity that would result in a cancer risk greater than 1.0 in a million (10^{-6}) or a chronic hazard index greater than 0.20.

For the purposes of applying this definition, a daily capacity may be converted to an annual capacity or limit by multiplication by 365 days/year.

2-5-215 **New Source of Toxic Air Contaminants:** A source of toxic air contaminant emissions, except a source that loses a permit exemption or exclusion in accordance with Regulations 2-1-424 or 2-1-425, that is one or more of the following:

215.1 A source constructed or proposed to be constructed that never had a valid District authority to construct or permit to operate.

215.2 A source that has not been in operation for a period of one year or more and that has not held a valid District permit to operate during this period of non-operation.

215.3 A relocation of an existing source, except for a portable source, to a non-contiguous property.

215.4 A replacement of a source, including an identical replacement of a source, regardless when the original source was constructed.

215.5 A replacement of an identifiable source within a group of sources permitted together under a single source number for the purpose of District permitting convenience.

215.6 A “rebricking” of a glass furnace where changes to the furnace design result in a change in heat generation or absorption.

2-5-216 **Project:** Any source, or group of sources, at a facility that: (a) is part of a proposed construction or modification, (b) is subject to the requirements of Regulation 2-1-301 or 302, and (c) emits one or more toxic air contaminants. All new or modified sources of TACs included in a single permit application will be considered as a project. In addition, in order to discourage circumvention that might be achieved by breaking a project into smaller pieces and submitting more than one permit application over a period of time, a project shall include those new or modified sources of TACs at a facility that have been permitted within the two-year period immediately preceding the date a complete application is received, unless the applicant demonstrates to the satisfaction of the APCO that construction or modification of the sources included in the current application was neither (1) a reasonably foreseeable consequence of the previous project, nor (2) a critical element or integral part of the previous project. For modified sources, any consecutive modifications of a source (e.g., increasing a source’s permitted throughput), occurring after January 1, 1987, shall be considered together as a project.

2-5-217 **Project Risk:** The health risk resulting from the increase in emissions of toxic air contaminants from a given project, as indicated by an HRSA for the MEI.

2-5-218 **Receptor Location:** A location where an individual may live (residential receptor) or work (worker receptor) or otherwise reasonably be expected to be exposed to toxic air contaminants for the particular chronic or acute exposures being evaluated in an HRSA. Locations include (a) locations outside of the property boundary of the facility being evaluated and (b) locations inside the property boundary where a person may reside (e.g., at military base housing, prisons, or universities). The APCO shall consider the potential for public exposure in determining appropriate receptor locations.

2-5-219 **Reference Exposure Level, or REL:** The air concentration or exposure level (for a specified exposure duration) at or below which adverse non-cancer health effects are not anticipated to occur in the general human population.

2-5-220 **Residential Receptor:** Any receptor location where an individual may reside for a period of six months or more out of a year.

2-5-221 **Source Risk:** The health risk resulting from: (a) the emissions of all toxic air contaminants from a new source of toxic air contaminants, or (b) the increase in emissions of all toxic air contaminants from a modified source of toxic air contaminants, as indicated by an HRSA for the MEI.

2-5-222 **Toxic Air Contaminant, or TAC:** An air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a present or potential hazard to human health. For the purposes of this rule, TACs consist of the substances listed in Table 2-5-1.

2-5-223 **Trigger Level:** The emission threshold level for each TAC listed in Table 2-5-1 below which the resulting health risks are not expected to cause, or contribute significantly to, adverse health effects.

2-5-224 **Worker Receptor:** Any receptor location that is an occupational setting or place where an individual may work and that is located outside of the boundary of the facility being evaluated.

2-5-300 STANDARDS

2-5-301 **Best Available Control Technology for Toxics (TBACT) Requirement:** The applicant shall apply TBACT to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million (10^{-6}), and/or a chronic hazard index greater than 0.20.

2-5-302 **Project Risk Requirement:** The APCO shall deny an Authority to Construct or Permit to Operate for any new or modified source of TACs if the project risk exceeds any of the following project risk limits:

302.1 A cancer risk of 10.0 in one million (10^{-5}).
302.2 A chronic hazard index of 1.0.
302.3 An acute hazard index of 1.0.

2-5-400 ADMINISTRATIVE REQUIREMENTS

2-5-401 **Health Risk Screening Analysis Requirement:** An application for an Authority to Construct or Permit to Operate for any project subject to this rule shall contain an HRSA conducted in accordance with Section 2-5-603 or the information necessary for the APCO to conduct an HRSA. The APCO shall prepare an HRSA where the applicant submits none. The APCO shall notify the applicant if the results of an HRSA completed by the APCO indicate that the project, as proposed, would not meet the requirements of this rule. The applicant shall be given the opportunity to perform a more refined HRSA, modify the project, or submit any required plans or information, as necessary to comply with the requirements of this rule.

2-5-402 **Health Risk Screening Analysis Guidelines:** The APCO shall publish Health Risk Screening Analysis Guidelines that specify the procedures to be followed for estimating health risks including acute hazard index, chronic hazard index, and cancer risk. These guidelines will generally conform to the Health Risk Assessment Guidelines adopted by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) for use in the Air Toxics Hot Spots Program. The Health Risk Screening Analysis Guidelines and Table 2-5-1 will be periodically updated, typically within one year of any significant revision to OEHHA's Health Risk Assessment Guidelines, including any new or revised health effects value.

2-5-403 **BACT/TBACT Workbook:** The APCO shall publish and periodically update a BACT/TBACT Workbook specifying the requirements for commonly permitted sources. TBACT will be determined for a source by using the workbook as a guidance document or, on a case-by-case basis, using the most stringent definition of Section 2-5-205.

2-5-500 MONITORING AND RECORDS

2-5-501 **Monitoring Requirements:** The APCO may impose any reasonable monitoring or record keeping requirements deemed necessary to ensure compliance with this rule.

2-5-600 MANUAL OF PROCEDURES

2-5-601 **Emission Calculation Procedures:** The APCO shall determine annual TAC emissions (expressed as pounds per year), to be used for comparison with chronic trigger levels and in estimating cancer risk and chronic hazard index, and one-hour TAC emissions (expressed as pounds per hour), to be used for comparison with acute trigger levels and in estimating acute hazard index as follows:

601.1 Emission calculations shall include emissions resulting from routine operation of a source or emissions that are predictable, including, but not limited to continuous and intermittent releases and predictable process upsets or leaks, subject to enforceable limiting conditions.

601.2 Emission calculations for a new source shall be based on the maximum emitting potential of the new source or the maximum permitted emission level of the new source, approved by the APCO, subject to enforceable limiting conditions.

601.3 Emission calculations for a modified source shall be based on:

3.1 For one-hour emissions, the maximum emitting potential of the modified source or the maximum permitted emission level of the modified source, approved by the APCO, subject to enforceable limiting conditions.

3.2 For annual emissions, by subtracting the adjusted baseline emission rate, as calculated using the methodology in Section 2-5-602, from the new maximum permitted emission level of the modified source, approved by the APCO, subject to enforceable limiting conditions.

601.4 Emission calculations for a project shall be performed by summing the emission increases from all new and modified sources of TACs that are considered part of the project pursuant to Section 2-5-216. For a modified source within the project, the APCO may consider contemporaneous reductions of other emissions from the modified source when estimating the project risk (e.g., a modified source may have a decrease in benzene emissions that would mitigate an increase in toluene emissions).

2-5-602 **Baseline Emission Calculation Procedures:** The following methodology shall be used to calculate baseline emissions for modified sources of TACs.

602.1 For a source that has, contained in a permit condition, an emission cap or emission rate limit, the baseline throughput and baseline emission rate (expressed in the units of mass of emissions per unit of throughput) shall be based on the levels allowed by the permit condition.

602.2 For sources without an emission cap or emission rate limit, baseline throughput and emission rate shall be determined as follows:

2.1 The baseline period consists of the 3-year period immediately preceding the date that the application is complete (or shorter period if the source is less than 3 years old or longer period if the applicant demonstrates to the District's satisfaction that a longer period is appropriate when considering such factors as operational problems and economic conditions). The applicant must have sufficient verifiable records of the source's operation or credible engineering analyses that substantiate to the District's satisfaction the emission rate and throughput during the entire baseline period.

2.2 Baseline throughput is either the:

2.2.1 Actual average throughput during the baseline period, if throughput is not limited by permit condition; or

2.2.2 Maximum throughput as allowed by permit conditions on the date the application is complete.

2.3 Baseline emission rate (expressed in the units of mass of emissions per unit of throughput) is the average actual emission rate during the baseline period.

Periods where the actual emission rate exceeded regulatory or permitted limits shall be excluded from the average.

602.3 The adjusted baseline emission rate shall be determined by adjusting the baseline emission rate downward, if necessary, to comply with the most stringent emission rate or emission limit from a MACT, ATCM, or District rule or regulation that is applicable to the type of source being evaluated and that is in effect, has been adopted by U.S. EPA, CARB, or the District, or is contained in the most recently adopted Clean Air Plan for the District.

602.4 The adjusted baseline emissions shall be the adjusted baseline emission rate multiplied by the baseline throughput.

2-5-603 Health Risk Screening Analysis Procedures: Each HRSA shall be prepared following the District's Health Risk Screening Analysis Guidelines.

Table 2-5-1 Toxic Air Contaminant Trigger Levels

Chemical	CAS Number [1]	Acute Inhalation REL ($\mu g/m^3$)	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Oral Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
Acetaldehyde	75-07-0		9.0E+00		1.0E-02			6.4E+01
Acetamide	60-35-5				7.0E-02			9.1E+00
Acrolein	107-02-8	1.9E-01	6.0E-02				4.2E-04	2.3E+00
Acrylamide	79-06-1		7.0E-01		4.5E+00			1.4E-01
Acrylic acid	79-10-7	6.0E+03	1.0E+00				1.3E+01	3.9E+01
Acrylonitrile	107-13-1		5.0E+00		1.0E+00			6.4E-01
Allyl chloride	107-05-1		1.0E+00		2.1E-02			3.0E+01
Aminoanthraquinone, 2-	117-79-3				3.3E-02			1.9E+01
Ammonia	7664-41-7	3.2E+03	2.0E+02				7.1E+00	7.7E+03
Aniline	62-53-3		1.0E+00		5.7E-03			3.9E+01
Antimony compounds	7440-36-0		2.0E-01					7.7E+00
antimony trioxide	1309-64-4		2.0E-01					7.7E+00
Arsenic and compounds (inorganic) [3, 4]	7440-38-2	1.9E-01	3.0E-02	3.0E-04	1.2E+01	1.5E+00	4.2E-04	1.2E-02
Arsine	7784-42-1	1.6E+02	5.0E-02				3.5E-01	1.9E+00
Asbestos [5]	1332-21-4				2.2E+02			2.9E-03
Benzene [3]	71-43-2	1.3E+03	6.0E+01		1.0E-01		2.9E+00	6.4E+00
Benzidine (and its salts)	92-87-5		1.0E+01		5.0E+02			1.3E-03
benzidine based dyes			1.0E+01		5.0E+02			1.3E-03
direct black 38	1937-37-7		1.0E+01		5.0E+02			1.3E-03
direct blue 6	2602-46-2		1.0E+01		5.0E+02			1.3E-03
direct brown 95 (technical grade)	16071-86-6		1.0E+01		5.0E+02			1.3E-03
Benzyl chloride	100-44-7	2.4E+02	1.2E+01		1.7E-01		5.3E-01	3.8E+00
Beryllium and compounds [4]	7440-41-7		7.0E-03	2.0E-03	8.4E+00			8.0E-02
Bis (2-chloroethyl) ether (Dichloroethyl ether)	111-44-4				2.5E+00			2.6E-01
Bis (chloromethyl) ether	542-88-1				4.6E+01			1.4E-02
Bromine and compounds	7726-95-6		1.7E+00					6.6E+01
Bromine pentafluoride	7789-30-2		1.7E+00					6.6E+01
hydrogen bromide	10035-10-6		2.4E+01					9.3E+02

Chemical	CAS Number [1]	Acute Inhalation REL (µg/m³)	Chronic Inhalation REL (µg/m³)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)$^{-1}$	Oral Cancer Potency Factor (mg/kg-day)$^{-1}$	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
potassium bromate	7758-01-2		1.7E+00		4.9E-01			1.3E+00
Butadiene, 1,3-	106-99-0		2.0E+01		6.0E-01			1.1E+00
Cadmium and compounds [4]	7440-43-9		2.0E-02	5.0E-04	1.5E+01			4.5E-02
Carbon disulfide [3]	75-15-0	6.2E+03	8.0E+02				1.4E+01	3.1E+04
Carbon tetrachloride [3] (Tetrachloromethane)	56-23-5	1.9E+03	4.0E+01		1.5E-01		4.2E+00	4.3E+00
Chlorinated paraffins	108171-26-2				8.9E-02			7.2E+00
Chlorine	7782-50-5	2.1E+02	2.0E-01				4.6E-01	7.7E+00
Chlorine dioxide	10049-04-4		6.0E-01					2.3E+01
Chloro-o-phenylenediamine, 4-	95-83-0				1.6E-02			4.0E+01
Chloroacetophenone, 2-	532-27-4		3.0E-02					1.2E+00
Chlorobenzene	108-90-7		1.0E+03					3.9E+04
Chlorodifluoromethane (Freon 22) [see Fluorocarbons]								
Chlorofluorocarbons [see Fluorocarbons]								
Chloroform [3]	67-66-3	1.5E+02	3.0E+02		1.9E-02		3.3E-01	3.4E+01
Chlorophenol, 2-	95-57-8		1.8E+01					7.0E+02
Chloropicrin	76-06-2	2.9E+01	4.0E-01				6.4E-02	1.5E+01
Chloroprene	126-99-8		1.0E+00					3.9E+01
Chloro-o-toluidine, p-	95-69-2				2.7E-01			2.4E+00
Chromium, (hexavalent, 6+) [4]	18540-29-9		2.0E-01	2.0E-02	5.1E+02			1.3E-03
barium chromate [4]	10294-40-3		2.0E-01	2.0E-02	5.1E+02			1.3E-03
calcium chromate [4]	13765-19-0		2.0E-01	2.0E-02	5.1E+02			1.3E-03
lead chromate [4]	7758-97-6		2.0E-01	2.0E-02	5.1E+02			1.3E-03
sodium dichromate [4]	10588-01-9		2.0E-01	2.0E-02	5.1E+02			1.3E-03
strontium chromate [4]	7789-06-2		2.0E-01	2.0E-02	5.1E+02			1.3E-03
Chromium trioxide (as chromic acid mist) [4]	1333-82-0		2.0E-03	2.0E-02	5.1E+02			1.3E-03
Copper and compounds	7440-50-8	1.0E+02	2.4E+00				2.2E-01	9.3E+01
Cresidine, p-	120-71-8				1.5E-01			4.3E+00
Cresols (m-, o-, p-)	1319-77-3		6.0E+02					2.3E+04
Cupferron	135-20-6				2.2E-01			2.9E+00

Chemical	**CAS Number** [1]	**Acute Inhalation REL ($\mu g/m^3$)**	**Chronic Inhalation REL ($\mu g/m^3$)**	**Chronic Oral REL (mg/kg-day)**	**Inhalation Cancer Potency Factor (mg/kg-day)$^{-1}$**	**Oral Cancer Potency Factor (mg/kg-day)$^{-1}$**	**Acute (1-hr. max.) Trigger Level [2] (lb/hour)**	**Chronic Trigger Level [2] (lb/year)**
Cyanide and compounds (inorganic)	57-12-5	3.4E+02	9.0E+00				7.5E-01	3.5E+02
hydrogen cyanide (hydrocyanic acid)	74-90-8	3.4E+02	9.0E+00				7.5E-01	3.5E+02
Diaminoanisole, 2,4-	615-05-4				2.3E-02			2.8E+01
Diaminotoluene, 2,4-	95-80-7				4.0E+00			1.6E-01
Dibromo-3-chloropropane, 1,2- (DBCP)	96-12-8		2.0E-01		7.0E+00			9.1E-02
Dichlorobenzene, 1,4-	106-46-7		8.0E+02		4.0E-02			1.6E+01
Dichlorobenzidine, 3,3-	91-94-1				1.2E+00			5.3E-01
Dichloroethane, 1,1- (Ethylidene dichloride)	75-34-3				5.7E-03			1.1E+02
Dichloroethylene, 1,1- [see vinylidene chloride]								
Diesel exhaust particulate matter [6]			5.0E+00		1.1E+00			5.8E-01
Diethanolamine	111-42-2		3.0E+00					1.2E+02
Di(2-ethylhexyl)phthalate (DEHP) [4]	117-81-7		7.0E+01		8.4E-03	8.4E-03		6.9E+01
Dimethylaminoazobenzene, p-	60-11-7				4.6E+00			1.4E-01
Dimethyl formamide, N,N-	68-12-2		8.0E+01					3.1E+03
Dinitrotoluene, 2,4-	121-14-2				3.1E-01			2.1E+00
Dioxane, 1,4- (1,4-diethylene dioxide)	123-91-1	3.0E+03	3.0E+03		2.7E-02		6.6E+00	2.4E+01
Epichlorohydrin (1-chloro-2,3-epoxypropane)	106-89-8	1.3E+03	3.0E+00		8.0E-02		2.9E+00	8.0E+00
Epoxybutane, 1,2-	106-88-7		2.0E+01					7.7E+02
Ethyl acrylate	140-88-5		4.8E+01					1.9E+03
Ethyl benzene	100-41-4		2.0E+03					7.7E+04
Ethyl chloride (chloroethane)	75-00-3		3.0E+04					1.2E+06
Ethylene dibromide (1,2-dibromoethane)	106-93-4		8.0E-01		2.5E-01			2.6E+00
Ethylene dichloride (1,2-dichloroethane)	107-06-2		4.0E+02		7.2E-02			8.9E+00
Ethylene glycol	107-21-1		4.0E+02					1.5E+04
Ethylene glycol butyl ether – EGBE [see Glycol ethers]								
Ethylene oxide (1,2-epoxyethane)	75-21-8		3.0E+01		3.1E-01			2.1E+00
Ethylene thiourea	96-45-7				4.5E-02			1.4E+01
Fluorides and compounds		2.4E+02	1.3E+01	4.0E-02			5.3E-01	5.0E+02
hydrogen fluoride (hydrofluoric acid)	7664-39-3	2.4E+02	1.4E+01	4.0E-02			5.3E-01	5.4E+02
Fluorocarbons (chlorinated)			7.0E+02					2.7E+04

Chemical	CAS Number [1]	Acute Inhalation REL (µg/m³)	Chronic Inhalation REL (µg/m³)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)$^{-1}$	Oral Cancer Potency Factor (mg/kg-day)$^{-1}$	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
chlorinated fluorocarbon (CFC-113)	76-13-1		7.0E+02					2.7E+04
chlorodifluoromethane (Freon 22)	75-45-6		5.0E+04					1.9E+06
dichlorofluoromethane (Freon 21)	75-43-4		7.0E+02					2.7E+04
trichlorofluoromethane (Freon 11)	75-69-4		7.0E+02					2.7E+04
fluorocarbons (brominated)			7.0E+02					2.7E+04
Formaldehyde	50-00-0	9.4E+01	3.0E+00		2.1E-02		2.1E-01	3.0E+01
Freons [see Fluorocarbons]								
Glutaraldehyde	111-30-8		8.0E-02					3.1E+00
Glycol ethers								
ethylene glycol butyl ether – EGBE (2-butoxy ethanol; butyl cellosolve)	111-76-2	1.4E+04	2.0E+01				3.1E+01	7.7E+02
ethylene glycol ethyl ether – EGEE (2-ethoxy ethanol; cellosolve) [3]	110-80-5	3.7E+02	7.0E+01				8.2E-01	2.7E+03
ethylene glycol ethyl ether acetate – EGEEA (2-ethoxyethyl acetate; cellosolve acetate) [3]	111-15-9	1.4E+02	3.0E+02				3.1E-01	1.2E+04
ethylene glycol methyl ether – EGME (2-methoxy ethanol; methyl cellosolve) [3]	109-86-4	9.3E+01	6.0E+01				2.1E-01	2.3E+03
ethylene glycol methyl ether acetate – EGMEA (2-methoxyethyl acetate; methyl cellosolve acetate)	110-49-6		9.0E+01					3.5E+03
Hexachlorobenzene	118-74-1		2.8E+00		1.8E+00			3.6E-01
Hexachlorocyclohexanes (mixed or technical grade) [4]	608-73-1		1.0E+00	3.0E-04	4.0E+00	4.0E+00		1.2E-01
Hexachlorocyclohexane, alpha- [4]	319-84-6		1.0E+00	3.0E-04	4.0E+00	4.0E+00		1.2E-01
Hexachlorocyclohexane, beta- [4]	319-85-7		1.0E+00	3.0E-04	4.0E+00	4.0E+00		1.2E-01
Hexachlorocyclohexane, gamma- (lindane) [4]	58-89-9		1.0E+00	3.0E-04	1.1E+00	1.1E+00		4.2E-01
Hexachlorocyclopentadiene	77-47-4		2.4E-01					9.3E+00
Hexane, n-	110-54-3		7.0E+03					2.7E+05
Hydrazine	302-01-2		2.0E-01		1.7E+01			3.8E-02
Hydrochloric acid (hydrogen chloride)	7647-01-0	2.1E+03	9.0E+00				4.6E+00	3.5E+02
Hydrogen bromide [see bromine & compounds]								
Hydrogen cyanide (hydrocyanic acid) [see cyanide & compounds]								

Chemical	CAS Number [1]	Acute Inhalation REL (µg/m³)	Chronic Inhalation REL (µg/m³)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Oral Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
Hydrogen fluoride (hydrofluoric acid) [see fluorides & compounds]								
Hydrogen selenide [see selenium compounds]								
Hydrogen sulfide	7783-06-4	4.2E+01	1.0E+01				9.3E-02	3.9E+02
Isophorone	78-59-1		2.0E+03					7.7E+04
Isopropyl alcohol (isopropanol)	67-63-0	3.2E+03	7.0E+03				7.1E+00	2.7E+05
Lead and compounds (inorganic) [4]	7439-92-1				4.2E-02	8.5E-03		5.4E+00
lead acetate [4]	301-04-2				4.2E-02	8.5E-03		5.4E+00
lead phosphate [4]	7446-27-7				4.2E-02	8.5E-03		5.4E+00
lead subacetate [4]	1335-32-6				4.2E-02	8.5E-03		5.4E+00
Lindane [see hexachlorocyclohexane, gamma]								
Maleic anhydride	108-31-6		7.0E-01					2.7E+01
Manganese and compounds	7439-96-5		2.0E-01					7.7E+00
Mercury and compounds (inorganic) [4]	7439-97-6	1.8E+00	9.0E-02	3.0E-04			4.0E-03	5.6E-01
mercuric chloride [4]	7487-94-7	1.8E+00	9.0E-02	3.0E-04			4.0E-03	5.6E-01
Mercury and compounds (organic)								
methyl mercury	593-74-8		1.0E+00					3.9E+01
Methanol (methyl alcohol)	67-56-1	2.8E+04	4.0E+03				6.2E+01	1.5E+05
Methyl bromide (bromomethane)	74-83-9	3.9E+03	5.0E+00				8.6E+00	1.9E+02
Methyl chloroform (1,1,1-trichloroethane)	71-55-6	6.8E+04	1.0E+03				1.5E+02	3.9E+04
Methyl ethyl ketone (MEK) (2-butanone)	78-93-3	1.3E+04	1.0E+03				2.9E+01	3.9E+04
Methyl isocyanate	624-83-9		1.0E+00					3.9E+01
Methyl mercury [see mercury & compounds]								
Methyl methacrylate	80-62-6		9.8E+02					3.8E+04
Methyl tertiary-butyl ether (MTBE)	1634-04-4		8.0E+03		1.8E-03			3.6E+02
Methylene bis (2-chloroaniline), 4,4'- (MOCA)	101-14-4				1.5E+00			4.3E-01
Methylene chloride (dichloromethane)	75-09-2	1.4E+04	4.0E+02		3.5E-03		3.1E+01	1.8E+02
Methylene dianiline, 4,4'- (and its dichloride) [4]	101-77-9		2.0E+01		1.6E+00	1.6E+00		4.1E-01
Methylene diphenyl isocyanate	101-68-8		7.0E-01					2.7E+01
Michler's ketone (4,4'-bis(dimethylamino)benzophenone)	90-94-8				8.6E-01			7.4E-01

Chemical	CAS Number [1]	Acute Inhalation REL (µg/m³)	Chronic Inhalation REL (µg/m³)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)⁻¹	Oral Cancer Potency Factor (mg/kg-day)⁻¹	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
Mineral fibers (<1% FREE SILICA)			2.4E+01					9.3E+02
ceramic fibers (man-made)			2.4E+01					9.3E+02
glasswool (man-made fibers)			2.4E+01					9.3E+02
mineral fibers (fine: man-made)			2.4E+01					9.3E+02
rockwool (man-made fibers)			2.4E+01					9.3E+02
slagwool (man-made fibers)			2.4E+01					9.3E+02
Naphthalene [see polycylcic aromatic hydrocarbons]								
Nickel and compounds [4] *(values also apply to:)*	7440-02-0	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel acetate [4]	373-02-4	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel carbonate [4]	3333-39-3	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel carbonyl [4]	13463-39-3	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel hydroxide [4]	12054-48-7	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
Nickelocene [4]	1271-28-9	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel oxide [4]	1313-99-1	6.0E+00	1.0E-01	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel refinery dust from the pyrometallurgical process [4]		6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
nickel subsulfide [4]	12035-72-2	6.0E+00	5.0E-02	5.0E-02	9.1E-01		1.3E-02	7.3E-01
Nitric acid	7697-37-2	8.6E+01					1.9E-01	
Nitrobenzene	98-95-3		1.7E+00					6.6E+01
Nitropropane, 2-	79-46-9		2.0E+01					7.7E+02
Nitrosodi-n-butylamine, N-	924-16-3				1.1E+01			5.8E-02
Nitrosodi-n-propylamine, N-	621-64-7				7.0E+00			9.1E-02
Nitrosodiethylamine, N-	55-18-5				3.6E+01			1.8E-02
Nitrosodimethylamine, N-	62-75-9				1.6E+01			4.0E-02
Nitrosodiphenylamine, N-	86-30-6				9.0E-03			7.1E+01
Nitroso-n-methylethylamine, N-	10595-95-6				2.2E+01			2.9E-02
Nitrosomorpholine, N-	59-89-2				6.7E+00			9.6E-02
Nitrosopiperidine, N-	100-75-4				9.4E+00			6.8E-02
Nitrosopyrrolidine, N-	930-55-2				2.1E+00			3.0E-01

Chemical	CAS Number [1]	Acute Inhalation REL (µg/m³)	Chronic Inhalation REL (µg/m³)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)$^{-1}$	Oral Cancer Potency Factor (mg/kg-day)$^{-1}$	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
Nitrosodiphenylamine, p-	156-10-5				2.2E-02			2.9E+01
Ozone	10028-15-6	1.8E+02	1.8E+02				4.0E-01	7.0E+03
Pentachlorophenol	87-86-5		2.0E-01		1.8E-02			7.7E+00
Perchloroethylene (tetrachloroethylene)	127-18-4	2.0E+04	3.5E+01		2.1E-02		4.4E+01	3.0E+01
Phenol	108-95-2	5.8E+03	2.0E+02				1.3E+01	7.7E+03
Phosgene	75-44-5	4.0E+00					8.8E-03	
Phosphine	7803-51-2		8.0E-01					3.1E+01
Phosphoric acid	7664-38-2		7.0E+00					2.7E+02
Phosphorus (white)	7723-14-0		7.0E-02					2.7E+00
Phthalic anhydride	85-44-9		2.0E+01					7.7E+02
PCBs (polychlorinated biphenyls) [low risk] [4, 7]	1336-36-3		1.2E+00	2.0E-05	7.0E-02	7.0E-02		8.0E-01
PCBs (polychlorinated biphenyls) [high risk] [4, 7]	1336-36-3		1.2E+00	2.0E-05	2.0E+00	2.0E+00		2.8E-02
Polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and dioxin-like polychlorinated biphenyls (PCBs) (as 2,3,7,8-PCDD equivalent) [4, 8]	See Footnote 8		4.0E-05	1.0E-08	1.3E+05	1.3E+05		5.7E-07
Polycyclic aromatic hydrocarbon (PAH) (as B(a)P-equivalent) [4, 9]	See Footnote 9				3.9E+00	1.2E+01		1.1E-02
naphthalene	91-20-3		9.0E+00		1.2E-01			5.3E+00
Potassium bromate [see bromine & compounds]								
Propane sultone, 1,3-	1120-71-4				2.4E+00			2.7E-01
Propylene (propene)	115-07-1		3.0E+03					1.2E+05
Propylene glycol monomethyl ether	107-98-2		7.0E+03					2.7E+05
Propylene oxide	75-56-9	3.1E+03	3.0E+01		1.3E-02		6.8E+00	4.9E+01
Selenium and compounds	7782-49-2		2.0E+01					7.7E+02
hydrogen selenide	7783-07-5	5.0E+00					1.1E-02	
selenium sulfide	7446-34-6		2.0E+01					7.7E+02
Sodium hydroxide	1310-73-2	8.0E+00	4.8E+00				1.8E-02	1.9E+02
Styrene	100-42-5	2.1E+04	9.0E+02				4.6E+01	3.5E+04
Sulfates		1.2E+02	2.5E+01				2.6E-01	9.7E+02
Sulfuric acid and oleum	7664-93-9	1.2E+02	1.0E+00				2.6E-01	3.9E+01

Chemical	CAS Number [1]	Acute Inhalation REL (µg/m^3)	Chronic Inhalation REL (µg/m^3)	Chronic Oral REL (mg/kg-day)	Inhalation Cancer Potency Factor (mg/kg-day)$^{-1}$	Oral Cancer Potency Factor (mg/kg-day)$^{-1}$	Acute (1-hr. max.) Trigger Level [2] (lb/hour)	Chronic Trigger Level [2] (lb/year)
sulfuric acid	7664-93-9	1.2E+02	1.0E+00				2.6E-01	3.9E+01
sulfur trioxide	7446-71-9	1.2E+02					2.6E-01	
oleum	8014-95-7	1.2E+02	1.0E+00				2.6E-01	3.9E+01
Tetrachloroethane, 1,1,2,2-	79-34-5				2.0E-01			3.2E+00
Tetrachlorophenols	25167-83-3		8.8E+01					3.4E+03
Thioacetamide	62-55-5				6.1E+00			1.0E-01
Toluene	108-88-3	3.7E+04	3.0E+02				8.2E+01	1.2E+04
Toluene diisocyantates	26471-62-5		7.0E-02		3.9E-02			2.7E+00
toluene-2,4-diisocyanate	584-84-9		7.0E-02		3.9E-02			2.7E+00
toluene-2,6-diisocyanate	91-08-7		7.0E-02		3.9E-02			2.7E+00
Trichloroethane, 1,1,1 (see methyl chloroform)								
Trichloroethane, 1,1,2- (vinyl trichloride)	79-00-5				5.7E-02			1.1E+01
Trichloroethylene	79-01-6		6.0E+02		7.0E-03			9.1E+01
Trichlorophenol, 2,4,6-	88-06-2				7.0E-02			9.1E+00
Triethylamine	121-44-8	2.8E+03	2.0E+02				6.2E+00	7.7E+03
Urethane (ethyl carbamate)	51-79-6				1.0E+00			6.4E-01
Vanadium Compounds								
vanadium (fume or dust)	7440-62-2	3.0E+01					6.6E-02	
vanadium pentoxide	1314-62-1	3.0E+01					6.6E-02	
Vinyl acetate	108-05-4		2.0E+02					7.7E+03
Vinyl bromide	593-60-2		7.0E+00					2.7E+02
Vinyl chloride (chloroethylene)	75-01-4	1.8E+05	2.6E+01		2.7E-01		4.0E+02	2.4E+00
Vinylidene chloride (1,1-dichloroethylene)	75-35-4		7.0E+01					2.7E+03
Xylenes (mixed isomers)	1330-20-7	2.2E+04	7.0E+02				4.9E+01	2.7E+04
m-xylene	108-38-3	2.2E+04	7.0E+02				4.9E+01	2.7E+04
o-xylene	95-47-6	2.2E+04	7.0E+02				4.9E+01	2.7E+04
p-xylene	106-42-3	2.2E+04	7.0E+02				4.9E+01	2.7E+04
Zinc and compounds	7440-66-6		3.5E+01					1.4E+03
zinc oxide	1314-13-2		3.5E+01					1.4E+03

[1] **Chemical Abstract Number (CAS):**
CAS numbers are not available for many chemical groupings and mixtures.

[2] **Trigger Levels:**
All trigger levels are presented in scientific notation (i.e., exponential form based on powers of the based number 10.) For example: 4.9E+01 is equivalent to $4.9X10^{1}$, or 49; 6.6E-02 is equivalent to $6.6X10^{-2}$, or 0.066; and 5.8E+00 is equivalent to $5.8X10^{0}$, or 5.8.

[3] **Averaging Period for Non-Cancer Acute Trigger Levels:**
The averaging period for non-cancer acute trigger levels is generally a one-hour exposure. However, some are based on several hours of exposure. The screening levels for the following substances should be compared to estimated emissions occurring over a time period other than maximum one-hour emissions (e.g., a 4-hour trigger level should be compared to the maximum 4-hour average concentration estimated from the maximum emissions occurring in a 4-hour period). However, for conservative screening purposes, a maximum one-hour emission level can be compare to all acute trigger levels.
4-hour: arsenic and inorganic arsenic compounds
6-hour: benzene, carbon disulfide, ethylene glycol ethyl ether, ethylene glycol ethyl ether acetate, ethylene glycol methyl ether
7-hour: carbon tetrachloride, chloroform

[4] **Chemicals for Which Multi-Pathway Risks are Assessed:**
Trigger levels are adjusted to include the impact from default non-inhalation pathways.

[5] **Asbestos:**
The units for the inhalation cancer potency factor for asbestos are (100 PCM fibers/m^3)$^{-1}$. A conversion factor of 100 fibers/0.003 μg can be multiplied by a receptor concentration of asbestos expressed in μg/m^3. Unless other information necessary to estimate the concentration (fibers/m^3) of asbestos at receptors of interest is available, an inhalation cancer potency factor of 220 (mg/kg-day)$^{-1}$ is available.

[6] **Diesel Exhaust Particulate Matter:**
Diesel exhaust particulate matter should be used as a surrogate for all TAC emissions from diesel-fueled compression-ignition internal combustion engines. However, diesel exhaust particulate matter should not be used for other types of diesel-fueled combustion equipment, such as boilers or turbines. For equipment other than diesel-fueled compression-ignition internal combustion engines, emissions should be determined for individual TACs and compared to the appropriate trigger level for each TAC.

[7] **Polychlorinated Biphenyls:**
Low Risk: Use in cases where congeners with more than four chlorines comprise less than one-half percent of total polychlorinated biphenyls.
High Risk: Use in cases where congeners with more than four chlorines do not comprise less than one-half percent of total polychlorinated biphenyls.

[8] **Polychlorinated Dibenzo-p-Dioxins (PCDDs), Polychlorinated Dibenzofurans (PCDFs), and Dioxin-like Polychlorinated Biphenyls (PCBs):** These substances are PCDDs, PCDFs, and dioxin-like PCBs for which OEHHA has adopted the World Health Organization (WHO_{97}) Toxicity Equivalency Factor (TEF) scheme for evaluating cancer risk due to exposure to samples containing mixtures of PCDDs, PCDFs, and dioxin-like PCBs. PCDDs, PCDFs, and dioxin-like PCBs should be evaluated as PCDD-equivalent. This evaluation process consists of multiplying individual PCDD-, PCDF-, and dioxin-like PCB-specific emission levels with their corresponding TEFs listed below. The sum of these products is the PCDD-equivalent and should be compared to the PCDD-equivalent trigger level.

PCDD	CAS Number	TEF
2,3,7,8-tetrachlorodibenzo-p-dioxin	1746-01-6	1.0
1,2,3,7,8-pentachlorodibenzo-p-dioxin	40321-76-4	1.0
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	39227-28-6	0.1
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	57653-85-7	0.1
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	19408-74-3	0.1
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	35822-46-9	0.01
1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin	3268-87-9	0.0001

PCDF	CAS Number	TEF
2,3,7,8-tetrachlorodibenzofuran	5120-73-19	0.1
1,2,3,7,8-pentachlorodibenzofuran	57117-41-6	0.05
2,3,4,7,8-pentachlorodibenzofuran	57117-31-4	0.5
1,2,3,4,7,8-hexachlorodibenzofuran	70648-26-9	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	57117-44-9	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	72918-21-9	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	60851-34-5	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	67562-39-4	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	55673-89-7	0.01
1,2,3,4,6,7,8,9-octachlorodibenzofuran	39001-02-0	0.0001

Dioxin-like PCBs (coplanar PCBs)	CAS Number	TEF
PCB 77 (3,3'4,4'-tetrachlorobiphenyl)	32598-13-3	0.0001
PCB 81 (3,4,4',5-tetrachlorobiphenyl)	70362-50-4	0.0001
PCB 105 (2,3,3'4,4'-pentachlorobiphenyl)	32598-14-4	0.0001
PCB 114 (2,3,4,4'5-pentachlorobiphenyl)	74472-37-0	0.0005
PCB 118 (2,3',4,4',5-pentachlorobiphenyl)	31508-00-6	0.0001
PCB 123 (2',3,4,4',5-pentachlorobiphenyl)	65510-44-3	0.0001
PCB 126 (3,3',4,4',5-pentachlorobiphenyl)	57465-28-8	0.1
PCB 156 (2,3,3',4,4',5-hexachlorobiphenyl)	38380-08-4	0.0005
PCB 157 (2,3,3',4,4',5'-hexachlorobiphenyl)	69782-90-7	0.0005
PCB 167 (2,3',4,4',5,5'-hexachlorobiphenyl)	52663-72-6	0.00001
PCB 169 (3,3',4,4',5,5'-hexachlorobiphenyl)	32774-16-6	0.01
PCB 170 (2,2',3,3',4,4',5-heptachlorobiphenyl)	35065-30-6	0
PCB 180 (2,2',3,4,4',5,5'-heptachlorobiphenyl)	35065-29-3	0

PCB 189 (2,3,3',4,4',5,5'-heptachlorobiphenyl)	39635-31-9	0.0001

9 **Polycyclic Aromatic Hydrocarbons (PAHs):**
These substances are PAH-derivatives that have OEHHA-developed Potency Equivalency Factors (PEFs). PAHs should be evaluated as benzo(a)pyrene-equivalents. This evaluation process consists of multiplying individual PAH-specific emission levels with their corresponding PEFs listed below. The sum of these products is the benzo(a)pyrene-equivalent level and should be compared to the benzo(a)pyrene equivalent trigger level.

PAH or derivative	CAS Number	PEF
benz(a)anthracene	56-55-3	0.1
benzo(b)fluoranthene	205-99-2	0.1
benzo(j)fluoranthene	205-82-3	0.1
benzo(k)fluoranthene	207-08-9	0.1
benzo(a)pyrene	50-32-8	1.0
chrysene	218-01-9	0.01
dibenz(a,j)acridine	224-42-0	0.1
dibenz(a,h)acridine	226-36-8	0.1
dibenz(a,h)anthracene	53-70-3	1.05
7H-dibenzo(c,g)carbazole	194-59-2	1.0
dibenzo(a,e)pyrene	192-65-4	1.0
dibenzo(a,h)pyrene	189-64-0	10
dibenzo(a,i)pyrene	189-55-9	10
dibenzo(a,l)pyrene	191-30-0	10
7,12-dimethylbenz(a)anthracene	57-97-6	64
indeno(1,2,3-cd)pyrene	193-39-5	0.1
5-methylchrysene	3697-24-3	1.0
3-methylcholanthrene	56-49-5	5.7
5-nitroacenaphthene	602-87-9	0.03
1-nitropyrene	5522-43-0	0.1
4-nitropyrene	57835-92-4	0.1
1,6-dinitropyrene	42397-64-8	10
1,8-dinitropyrene	42397-65-9	1.0
6-nitrocrysene	7496-02-8	10
2-nitrofluorene	607-57-8	0.01

REGULATION 2
PERMITS
RULE 1
GENERAL REQUIREMENTS

INDEX

REGULATION 2
PERMITS
RULE 1
GENERAL REQUIREMENTS

2-1-100 GENERAL

2-1-106 Limited Exemption, Accelerated Permitting Program: Unless subject to any of the provisions of Sections 2-1-316 through 319, any new or modified source is exempt from the Authority to Construct requirements of Section 2-1-301, provided that the owner or operator submits a complete application under the Accelerated Permitting Program. A complete permit application under this program consists of: a completed permit application form and source data form(s); payment of applicable fees (the minimum permit fee required to install and operate each source); and certification that the source meets all of the criteria set forth in Sections 2-1-106.1 through 106.3. Such a source is still subject to the Permit to Operate requirements of Section 2-1-302, but will be evaluated under the Accelerated Permitting Program, as described in Section 2-1-302.2.

106.1 Uncontrolled emissions of POC, NPOC, NOx, SO2, PM_{10}, and CO are each less than 10 pounds per highest day; or the source is pre-certified per Section 2-1-415; and

106.2 Emissions of toxic compounds do not exceed the trigger levels identified in Table ~~2-1-316~~2-5-1 of Regulation 2, Rule 5; and

106.3 The source is not subject to the public notice requirements of Section 2-1-412.

In addition to the above, the replacement of any abatement device is exempt from the Authority to Construct requirements of Section 2-1-301 and will be evaluated under the Accelerated Permitting Program in Section 2-1-302.2, provided that the owner or operator certifies for all pollutants that the abatement device is as efficient as, or more efficient than, the abatement device being replaced. In addition to the above, any alteration of a source is exempt from the Authority to Construct requirements of Section 2-1-301 and will be evaluated under the Accelerated Permitting Program in Section 2-1-302.2, provided that the owner or operator certifies for all pollutants that the alteration does not result in an increase in emissions.

(Adopted 6/7/95; Amended 10/7/98; 5/17/00)

2-1-200 DEFINITIONS

2-1-220 Portable Equipment: This definition is provided exclusively for determining applicability of Section 2-1-413: Portable Equipment Operated Within the District. "Portable equipment" means any emission unit that, by itself or, in or on a piece of equipment, is portable, meaning designed to be and capable of being carried or moved from one location to another. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly trailer, platform or mounting. A piece of equipment is portable, for purposes of obtaining a portable permit under Section 2-1-413, if all of the following are met:

220.1 The equipment will not remain at any single location for a period in excess of twelve consecutive months, following the date of initial operation. Any emission unit, such as back up or standby unit, which replaces an emission unit at that location and is intended to perform the same function as the unit being replaced, will be counted toward the time limitation.

220.2 The source (emission unit) remains or will remain at a location for no more than twelve months, following the date of initial operation, where such a period does not represent the full length of normal annual source operations, such as operations which are seasonal.

220.3 The equipment is not removed from, or stored at, one location for a period and then returned to the same location in an attempt to circumvent the portable equipment residence time requirement.

220.4 The equipment is not operated within 1000 feet of the outer boundary of any K-12 school site, unless the applicable notice requirements of Health and Safety Code Section 42301.6 have been met.

220.5 The operation complies with ~~the Toxic Risk Management Policy~~Regulation 2, Rule 5.

220.6 No air contaminant is released into the atmosphere in sufficient quantities as to cause a public nuisance per Regulation 1-301.

220.7 The operation of the portable equipment in the Air District shall emit no more than 10 tons per year of each pollutant, including POC, CO, NOx, PM_{10}, NPOC or SO_2. For PM_{10}, fugitive particulate emissions from haul road traffic shall not be counted toward the annual limit.

220.8 The operation must be exempt from CEQA, or must be covered by a chapter in the District's Permit Handbook.

220.9 The equipment will not cause a Synthetic Minor Facility to exceed a federally enforceable emission limit.

220.10 If this equipment remains at any fixed location for more than twelve months, the portable permit will automatically revert to a conventional permanent location permit and will lose its portability. To obtain another portable permit for the equipment, the owner must re-permit the equipment for the next location of intended operations. Upon written request, the APCO may exclude reasonable storage periods before the date of initial operation and/or following the date of final operation from the twelve month time limitation.

(Adopted 6/7/95; Amended 10/7/98)

2-1-222 Toxic Air Contaminant (TAC): An air pollutant~~, which~~ that may cause or contribute to an increase in mortality or in serious illness~~,~~ or ~~which~~ that may pose a present or potential hazard to human health. For the purposes of this rule, TACs ~~Toxic air contaminants~~ consist of ~~those substances identified by the Air Resources Board under Section 39662 of the State Health and Safety Code, and those substances listed as hazardous air pollutants under subsection (b) of Section 112 of the federal Clean Air Act~~ the substances listed in Table 2-5-1 of Regulation 2, Rule 5.

(Adopted 6/7/95; Amended 5/17/00)

2-1-225 Health Risk Screening Analysis (HRSA): ~~An assessment of the measure of health risk for individuals in the affected population that may be exposed to emissions of toxic air contaminants from a given source. For the purposes of this Rule, a risk screening analysis may be a simplified analysis or, where available, a more refined health risk assessment utilizing appropriate site-specific information.~~ An analysis that estimates the increased likelihood of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic air contaminants, determined in accordance with Regulation 2-5-603. (Adopted June 7, 1995)

2-1-234 Modified Source: Any existing source ~~which~~ that undergoes a physical change, change in ~~the~~ method of operation ~~of~~, increase in throughput or production, or addition ~~which~~ and that results or may result in any of the following:

234.1 An increase ~~of~~ in either the daily or annual emission level of any regulated air pollutant, or an increase in the production rate or capacity that is used to estimate the emission level, that exceeds emission or production levels approved by the District in any authority to construct.

234.2 An increase ~~of~~ in either the daily or annual emission level of any regulated air pollutant, or the production rate or capacity that is used to estimate the emission level, above levels contained in a permit condition in any current permit to operate or major facility review permit.

234.3 For sources ~~which~~ that have never been issued a District authority to construct~~,~~ and ~~which~~ that do not have conditions limiting daily or annual emissions, an increase ~~of~~ in either daily or annual emission level of any regulated air pollutant, or the production rate or capacity that is used to estimate the emission level, above the ~~lowest~~ lower of the following:

3.1 The highest of the following:

3.1.1 The highest attainable design capacity, as shown in pre-construction design drawings, including process design drawings and vendor specifications.

3.1.2 The capacity listed in the District permit to operate.

3.1.3 The highest documented actual levels attained by the source prior to March 1, 2000.

3.2 The capacity of the source, as limited by the capacity of any upstream or downstream process that acts as a bottleneck (a grandfathered source with an emission increase due to debottlenecking is considered to be modified).

For the purposes of applying Section 234.3, only increases in annual emission levels shall be considered for storage vessels.

234.4 The emission of any regulated air pollutant or toxic air contaminant not previously emitted in a quantity ~~which~~ that would ~~cause the source to fail an air toxic screening analysis performed in accordance with the current Air Toxic Risk Screening Procedure~~ result in a cancer risk (as defined in Regulation 2-5-206) greater than 1.0 in a million (10^{-6}) or a chronic hazard index (as defined in Regulation 2-5-208) greater than 0.20.

For the purposes of applying this definition, an hourly limit or capacity may be converted to a daily limit or capacity by multiplication by 24 hours/day; a daily capacity may be converted to an annual capacity or limit by multiplication by 365 days/year.

(Adopted 5/17/00; Amended 11/15/00)

2-1-237 BACT/TBACT Workbook: The District guidelines, which set forth emission limitations and/or control technologies constituting BACT and TBACT for a number of source types or categories.

2-1-238 Clean Air Act: The federal Clean Air Act, as amended in 1990, including the implementing regulations.

2-1-300 STANDARDS

2-1-309 Canceled Application: The APCO may cancel an application for an authority to construct and a permit to operate if, within 90 days after the application was deemed incomplete, the applicant fails to furnish the requested information or pay all appropriate fees. The 90 day period may be extended for an additional 90 days upon receipt of a written request from the applicant and written approval thereof by the APCO. The APCO shall notify the applicant in writing of a cancellation, and the reasons therefore. A cancellation shall become effective 10 days after the applicant has been notified. The cancellation shall be without prejudice to any future applications.
(Adopted April 6, 1988)

2-1-312 Other Categories of Exempt Projects: In addition to ministerial projects, the following categories of projects subject to permit review by the District will be exempt from the CEQA review, either because the category is exempted by the express terms of CEQA (subsections 2-1-312.1 through 312.9) or because the project has no potential for causing a significant adverse environmental impact (subsections 2-1-312.10 and 312.11). Any permit applicant wishing to qualify under any of the specific exemptions set forth in this Section 2-1-312 must include in its permit application CEQA-related information in accordance with subsection 2-1-426.1. In addition, the CEQA-related information submitted by any permit applicant wishing to qualify under subsection 2-1-312.11 must demonstrate to the satisfaction of the APCO that the proposed project has no potential for resulting in a significant environmental effect in connection with any of the environmental media or resources listed in Section II of Appendix I of the State CEQA Guidelines.

312.1 Applications to modify permit conditions for existing or permitted sources or facilities that do not involve any increases in emissions or physical modifications.

312.2 Permit applications to install air pollution control or abatement equipment.

312.3 Permit applications for projects undertaken for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District or of any other local, state or federal agency.

312.4 Permit applications submitted by existing sources or facilities pursuant to a loss of a previously valid exemption from the District's permitting requirements.

312.5 Permit applications submitted pursuant to the requirements of an order for abatement issued by the District's Hearing Board or of a judicial enforcement order.

312.6 Permit applications relating exclusively to the repair, maintenance or minor alteration of existing facilities, equipment or sources involving negligible or no expansion of use beyond that previously existing.

312.7 Permit applications for the replacement or reconstruction of existing sources or facilities where the new source or facility will be located on the same site as the source or facility replaced and will have substantially the same purpose and capacity as the source or facility replaced.

312.8 Permit applications for cogeneration facilities which meet the criteria of Section 15329 of the State CEQA Guidelines.

312.9 Any other project which is exempt from CEQA review pursuant to the State CEQA Guidelines.

312.10 Applications to deposit emission reductions in the emissions bank pursuant to Regulation 2, Rule 4 or Regulation 2, Rule 9.

312.11 Permit applications for a proposed new or modified source or sources or for process changes which will satisfy the “No Net Emission Increase" provisions of District Regulation 2, Rule 2, and for which there is no possibility that the project may have any significant environmental effect in connection with any environmental media or resources other than air quality. Examples of such projects include, but are not necessarily limited to, the following:

11.1 Projects at an existing stationary source for which there will be no net increase in the emissions of air contaminants from the stationary source and for which there will be no other significant environmental effect;

11.2 A proposed new source or stationary source for which full offsets are provided in accordance with Regulation 2, Rule 2, and for which there will be no other significant environmental effect;

11.3 A proposed new source or stationary source at a small facility for which full offsets are provided from a small facility bank established by the APCO pursuant to Regulation 2-4-414, and for which there will be no other significant environmental effect;

11.4 Projects satisfying the "no net emission increase" provisions of District Regulation 2, Rule 2 for which there will be some increase in the emissions of any toxic air contaminant, but for which the District staff's ~~preliminary~~ health risk screening analysis shows that ~~a formal health risk assessment is not required~~ the project will not result in a cancer risk (as defined in Regulation 2-5-206) greater than 1.0 in a million (10^{-6}) and will not result in a chronic hazard index (as defined in Regulation 2-5-208) greater than 0.20, and for which there will be no other significant environmental effect.

(Adopted 7/17/91; Amended 5/17/00; 12/21/04)

2-1-313 Projects Not Exempt From CEQA Review: Notwithstanding the exemptions from CEQA review set forth in Section 2-1-312, such exemptions shall not apply~~: (i) to any project for which the District staff''s preliminary health risk screening analysis shows that a formal health risk assessment must be submitted by the applicant, or (ii)~~ to any project covered by the categories set forth in subsections 2-1-312.1 through 312.9 where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances, or due to cumulative impacts of successive projects of the same type in the same place over time. Such projects shall be reviewed in accordance with the requirements of CEQA.

(Adopted July 17, 1991)

2-1-316 New or Modified Sources of Toxic Air Contaminants or Hazardous Air Pollutants: Notwithstanding any exemption contained in Section 2-1-103 or Section 114 through 128, any new or modified source meeting any of the following criteria shall be subject to the requirements of Regulation 2, Rule 1, Section 301 and/or 302.

316.1 If a new or modified source emits one or more toxic air contaminants in quantities that exceed the ~~limits~~ trigger levels listed in Table ~~2-1-316~~2-5-1 of Regulation 2, Rule 5 and the source did not have a valid exemption from Regulation 2-1-302 when the source was constructed or modified, then the source shall be subject to the requirements of Sections 2-1-301 and 302, unless the owner or operator of the source can demonstrate to the satisfaction of the APCO, ~~within 90 day of request per Regulation 1, Section 441,~~ that the source: ~~would pass a risk screening analysis, as defined in Section 2-1-225, performed according to the current Air Toxic Risk Screening Procedure.~~

1.1 Will comply with the TBACT requirement of Regulation 2-5-301 (if applicable); and

1.2 Will comply with the project risk limits of Regulation 2-5-302 (if applicable).

316.2 If a new or modified source, or group of related sources, ~~as defined in the District's current Risk Management Policy,~~ in a proposed construction or modification will emit 2.5 or more tons per year of any single hazardous air pollutant or 6.25 or more tons per year of any combination of hazardous air pollutants, then the source or group of sources shall be subject to the requirements of Sections 2-1-301 and 302.

(Adopted 4/16/86; Amended 7/17/91;Renumbered and Amended 6/7/95; Amended 5/17/00)

2-1-400 ADMINISTRATIVE REQUIREMENTS

2-1-409 Regulations in Force Govern: The decision as to whether an authority to construct shall be granted or denied shall be based on federal, state and District BACT, ~~and~~

offset, TBACT and project risk regulations or standards in force on the date the application is declared by the APCO to be complete.

2-1-428 Criteria for Approval of Ministerial Permit Applications: If the District classifies a permit application as ministerial pursuant to Section 2-1-427, and as a result of its evaluation of that permit application, the District determines that all of the following criteria are met, the issuance by the District of an Authority to Construct for the proposed new or modified source will be a mandatory ministerial duty.

428.1 The proposed new or modified source will comply with all applicable provisions of the District's Rules and Regulations and with all applicable provisions of state and federal law and regulations which the District has the duty to enforce;

428.2 The emissions from the proposed project can be calculated using standardized emission factors from published governmental sources, District source test results, established formulas from published engineering and scientific handbooks, material safety data sheets or other similar published literature, manufacturer's warranties or other fixed standards as set forth in the District's Permit Handbook and BACT/TBACT Workbook;

428.3 Where Best Available Control Technology is required, BACT for the proposed new or modified source can be determined based on the latest edition of the ARB's BACT/LAER Clearinghouse, on the District's own compilations of BACT levels for specific types of sources as set forth in the District's Permit Handbook and BACT/TBACT Workbook or on a more stringent BACT level proposed by the project proponent; and

428.4 If the proposed new or modified source involves the shutdown of an existing source, the Reasonably Available Control Technology applicable to the source to be shut down can be determined from existing provisions of the District's Rules and Regulations or from the District's own compilations of BACT levels for specific types of sources as set forth in District's Permit Handbook and BACT/TBACT Workbook.

428.5 For proposed new or modified sources that are subject to Regulation 2, Rule 5, the project meets the project risk requirement of Regulation 2-5-302.

428.6 Where Best Available Control Technology for Toxics (TBACT) is required pursuant to Regulation 2-5-301, TBACT for the proposed new or modified source can be determined based on TBACT determinations in the District's BACT/TBACT Workbook, an EPA MACT standard, a CARB ATCM, or a more stringent TBACT level proposed by the applicant that is applicable to the specific source type or source category being evaluated.

In addition, when the District has issued an authority to construct for a proposed new or modified source as a ministerial project, the issuance of the permit to operate for that source will also be a mandatory ministerial duty if the source will meet all the conditions imposed in connection with the issuance of the authority to construct and all applicable laws, rules and regulations enforced by the District.

(Adopted 11/20/91; Amended 10/7/98)

Table 2-1-316
Toxic Air Contaminant Trigger Levels

This table has been superceded by Table 2-5-1 in Regulation 2, Rule 5.

~~**Compound**~~	~~**CAS Number**~~	~~**Trigger Level (lb/year)**~~
~~Acetaldehyde~~	~~75070~~	~~7.2E+01~~
~~Acetamide~~	~~603505~~	~~9.7E+00~~
~~Acrolein~~	~~107028~~	~~3.9E+00~~
~~Acrylamide~~	~~79061~~	~~1.5E-01~~
~~Acrylonitrile~~	~~107131~~	~~6.7E-01~~
~~Allyl chloride~~	~~107051~~	~~3.3E+01~~
~~Aminoanthraquinone, 2~~	~~117793~~	~~2.1E+01~~
~~Ammonia~~	~~7664417~~	~~1.9E+04~~
~~Aniline~~	~~62533~~	~~1.2E+02~~
~~Arsenic and arsenic compounds (inorganic)~~	~~7440382*~~	~~2.5E-02~~
~~Asbestos~~	~~1332214~~	~~3.0E-03~~
~~Benzene~~	~~71432~~	~~6.7E+00~~
~~Benzidine (and its salts)~~	~~92875*~~	~~1.4E-03~~
~~Benzyl chloride (see chlorotoluenes)~~	~~100447~~	~~3.9E+00~~
~~Beryllium and beryllium compounds~~	~~7440417*~~	~~1.4E-02~~
~~Bis(2-chloro-ethyl)ether~~	~~111444~~	~~2.7E-01~~
~~Bis(chloro-methyl)ether~~	~~542881~~	~~1.5E-02~~
~~Bromine and bromine compounds (inorganic)~~	~~7726956*~~	~~3.3E+02~~
~~Butadiene, 1,3-~~	~~106990~~	~~1.1E+00~~
~~Butyl alcohol, tert-~~	~~75650~~	~~1.4E+05~~
~~Cadmium and cadmium compounds~~	~~7440439*~~	~~4.6E-02~~
~~Carbon disulfide~~	~~75150~~	~~1.4E+04~~
~~Carbon tetrachloride~~	~~56235~~	~~4.6E+00~~
~~Chlorinated dibenzodioxins and dibenzofurans (TCDD equivalent)~~	~~1746016*~~	~~1.2E-06~~
~~Chlorinated paraffins~~	~~*~~	~~7.7E+00~~
~~Chlorine~~	~~7782505~~	~~1.4E+03~~
~~Chlorobenzene~~	~~108907~~	~~1.4E+04~~
~~Chlorofluorocarbons~~	~~*~~	~~1.4E+05~~
~~Chloroform~~	~~67663~~	~~3.6E+01~~
~~Chloro-o-phenylenediamine, 4-~~	~~95830~~	~~4.2E+01~~
~~Chloro-o-toluidine, p-~~	~~95692~~	~~2.5E+00~~
~~Chlorophenol, 2-~~	~~108430~~	~~3.5E+03~~
~~Chloropicrin~~	~~76062~~	~~3.3E+02~~
~~Chloroprene~~	~~126998~~	~~1.9E+03~~
~~Chlorotoluenes~~	~~100447*~~	~~2.3E+03~~
~~Chromium (hexavalent) and chromium (hexavalent) compounds~~	~~18540299*~~	~~1.3E-03~~
~~Copper and copper compounds~~	~~7440508*~~	~~4.6E+02~~
~~Cresidine, p-~~	~~120718~~	~~4.4E+00~~
~~Cresol~~	~~1319773~~	~~3.5E+04~~
~~Cupferron~~	~~135206~~	~~3.1E+00~~
~~Diaminoanisole, 2,4-~~	~~96128~~	~~2.9E+01~~
~~Dibromo-3-chloropropane,1,2- (DBCP)~~	~~96128~~	~~9.7E-02~~
~~Dichlorobenzene, 1,4-~~	~~106467~~	~~1.8E+01~~
~~Dichlorobenzidene, 3,3'-~~	~~91941~~	~~5.6E-01~~
~~Dichloroethane, 1,1-~~	~~75343~~	~~1.2E+02~~

~~Compound~~	~~CAS Number~~	~~Trigger Level (lb/year)~~
~~Dichloroethylene, 1,1- (see vinylidene chloride)~~		
~~Diesel exhaust particulate matter~~	~~n/a~~	~~6.4E-01~~
~~Diethylaminoethanol~~	~~100378~~	~~2.1E+04~~
~~Diethylhexylphthalate (DEHP)~~	~~117817~~	~~8.1E+01~~
~~Dimethylaminoazobenzene, p-~~	~~60117~~	~~1.5E-01~~
~~Dimethyl phthalate~~	~~131113~~	~~2.3E+03~~
~~Dimethylamine~~	~~124403~~	~~3.8+02~~
~~Dinitrotoluene, 2,4-~~	~~121142~~	~~2.1E+00~~
~~Dioctyl phthalate~~	~~117840~~	~~2.3E+03~~
~~Dioxane, 1,4-~~	~~123911~~	~~2.5E+01~~
~~Epichlorohydrin~~	~~106898~~	~~8.3E+00~~
~~Ethyl acetate~~	~~141786~~	~~6.6E+05~~
~~Ethyl acrylate~~	~~140885~~	~~9.3E+03~~
~~Ethyl chloride~~	~~75003~~	~~1.9E+06~~
~~Ethylene dibromide (1,2-dibromoethane)~~	~~106934~~	~~2.7E+00~~
~~Ethylene dichloride (1,2-dichloroethane)~~	~~107062~~	~~8.7E+00~~
~~Ethylene oxide~~	~~75218~~	~~2.1E+00~~
~~Ethylene thiourea~~	~~96457~~	~~1.5E+01~~
~~Formaldehyde~~	~~50000~~	~~3.3E+01~~
~~Freons (see Chlorofluorocarbons)~~		
~~Glutaraldehyde~~	~~111308~~	~~3.3E+02~~
~~Glycol ethers:~~		
~~2-Ethoxy ethanol (cellosolve; ethylene glycol monoethyl ether)~~	~~110805~~	~~3.9E+04~~
~~2-Ethoxyethyl acetate (cellosolve acetate; ethylene glycol monoethyl ether acetate)~~	~~111159~~	~~1.3E+04~~
~~2-Methoxy ethanol (methyl cellosolve; ethylene glycol monomethyl ether)~~	~~109864~~	~~3.9E+03~~
~~2-Methoxyethyl acetate (methyl cellosolve acetate; ethylene glycol monomethyl ether acetate)~~	~~110496~~	~~1.1E+04~~
~~2-Butoxy ethanol (Butyl cellosolve; ethylene glycol monobutyl ether)~~	~~111762~~	~~3.9E+03~~
~~Hexachlorobenzene~~	~~118741~~	~~3.9E-01~~
~~Hexachlorocyclohexanes~~	~~58899*~~	~~1.8E-01~~
~~Hexachlorocyclopentadiene~~	~~77474~~	~~4.6E+01~~
~~Hexane, n-~~	~~110543~~	~~8.3E+04~~
~~Hydrazine~~	~~302012~~	~~3.9E-02~~
~~Hydrogen bromide (hydrobromic acid)~~	~~10035106~~	~~4.6E+03~~
~~Hydrogen chloride~~	~~7647010~~	~~1.4E+03~~
~~Hydrogen cyanide~~	~~74908~~	~~1.4E+04~~
~~Hydrogen fluoride~~	~~7664393~~	~~1.1E+03~~
~~Hydrogen sulfide~~	~~7783064~~	~~8.1E+03~~
~~Isocyanates:~~		
~~Methylene-bis-phenyl isocyanate~~	~~101688~~	~~1.8E+01~~
~~Methyl isocyanate~~	~~624839~~	~~7.0E+01~~
~~Toluene diisocyanates~~	~~26471625*~~	~~1.8E+01~~
~~Isophorone~~	~~78591~~	~~6.6E+04~~
~~Isopropyl alcohol~~	~~67630~~	~~4.4E+05~~
~~Lead, inorganic, and lead compounds~~	~~7439921*~~	~~1.60E+01~~

~~Compound~~	~~CAS Number~~	~~Trigger Level (lb/year)~~
~~Maleic anhydride~~	~~108316~~	~~4.6E+02~~
~~Manganese and manganese compounds~~	~~7439965*~~	~~7.7E+01~~
~~Mercury and mercury compounds (inorganic)~~	~~7439976*~~	~~5.8E+01~~
~~Methyl alcohol (methanol)~~	~~67561~~	~~1.2E+05~~
~~Methyl bromide~~	~~74839~~	~~1.2E+03~~
~~Methyl chloroform (1,1,1-TCA)~~	~~71556~~	~~6.2E+04~~
~~Methyl mercury~~	~~593748~~	~~1.9E+02~~
~~Methyl methacrylate~~	~~80626~~	~~1.9E+05~~
~~Methylene bis(2-chloroaniline), 4,4'-~~	~~101144~~	~~4.4E-01~~
~~Methylene chloride~~	~~75092~~	~~1.9E+02~~
~~Methylene dianiline, 4,4'-~~	~~101779*~~	~~4.2E-01~~
~~Methylethylketone (MEK)~~	~~78933~~	~~1.5E+05~~
~~Methylpyrrolidone, N-~~	~~872504~~	~~1.8E+05~~
~~Michler's ketone~~	~~90948~~	~~7.7E-01~~
~~Naphthalene~~	~~91203~~	~~2.7E+02~~
~~Nickel and nickel compounds~~	~~7440020*~~	~~7.3E-01~~
~~Nitric acid~~	~~7697372~~	~~2.3E+03~~
~~Nitrobenzene~~	~~98953~~	~~3.3E+02~~
~~Nitropropane, 2-~~	~~79469~~	~~3.9E+03~~
~~Nitrosodiethylamine, N-~~	~~55185~~	~~1.9E-02~~
~~Nitrosodimethylamine, N-~~	~~62759~~	~~4.2E-02~~
~~Nitroso-n-dibutylamine, N-~~	~~924163~~	~~1.6E-03~~
~~Nitrosodiphenylamine, N-~~	~~86306~~	~~7.3E+01~~
~~Nitrosodiphenylamine, p-~~	~~156105~~	~~3.1E+01~~
~~Nitroso-N-methylethylamine, N-~~	~~10595956~~	~~3.1E-02~~
~~Nitroso-morpholine, N-~~	~~59892~~	~~1.0E-01~~
~~Nitroso-piperidine, N-~~	~~100754~~	~~7.1E-02~~
~~Nitrosodi-n-propylamine, N-~~	~~621647~~	~~9.7E-02~~
~~Nitrosopyrrolidine, N-~~	~~930552~~	~~3.3E-01~~
~~PAHs (including but not limited to):~~	~~*~~	
~~Benz[a]anthracene~~	~~56553~~	~~4.4E-02~~
~~Benzo[b]fluoroanthene~~	~~205992~~	~~4.4E-02~~
~~Benzo[k]fluoroanthene~~	~~205823~~	~~4.4E-02~~
~~Benzo[a]pyrene~~	~~50328~~	~~4.4E-02~~
~~Dibenz[a,h]anthracene~~	~~53703~~	~~4.4E-02~~
~~Indeno[1,2,3-cd]pyrene~~	~~193395~~	~~4.4E-02~~
~~PCBs (polychlorinated biphenyls)~~	~~1336363*~~	~~6.8E-03~~
~~Pentachlorophenol~~	~~87865~~	~~3.8E+01~~
~~Perchloroethylene (tetrachloroethylene)~~	~~127184~~	~~3.3E+01~~
~~Phenol~~	~~108952~~	~~8.7E+03~~
~~Phosgene~~	~~75445~~	~~1.8E+02~~
~~Phosphine~~	~~7803512~~	~~1.9E+03~~
~~Phosphoric acid~~	~~7664382~~	~~4.6E+02~~
~~Phosphorus (white)~~	~~7723140~~	~~1.4E+01~~
~~Phthalic anhydride~~	~~85449~~	~~1.4E+06~~
~~Potassium bromate~~	~~7758012~~	~~1.4E+00~~
~~Propane sultone, 1,3-~~	~~1120714~~	~~2.7E-01~~
~~Propylene oxide~~	~~75569~~	~~5.2E+01~~
~~Selenium and selenium compounds~~	~~7782492*~~	~~9.7E+01~~
~~Sodium hydroxide~~	~~1310732~~	~~9.3E+02~~

~~Compound~~	~~CAS Number~~	~~Trigger Level (lb/year)~~
~~Styrene monomer~~	~~100425~~	~~1.4E+05~~
~~Tetrachloroethane, 1,1,2,2-~~	~~79345~~	~~3.3E+00~~
~~Tetrachlorophenols~~	~~25167833*~~	~~1.7E+04~~
~~Tetrahydrofuran~~	~~109999~~	~~2.7E+05~~
~~Thioacetamide~~	~~62555~~	~~1.1E-01~~
~~Toluene~~	~~108883~~	~~3.9E+04~~
~~Toluene diisocyanate, 2,4-~~	~~584849~~	~~1.8E+01~~
~~Toluene diisocyanate, 2,6-~~	~~91087~~	~~1.8E+01~~
~~Trichlorobenzene, 1,2,4-~~	~~120821~~	~~1.8E+04~~
~~Trichloroethane, 1,1,1- (see Methyl chloroform)~~		
~~Trichloroethane, 1,1,2- (vinyl trichloride)~~	~~79005~~	~~1.2E+01~~
~~Trichloroethylene~~	~~79016~~	~~9.7E+01~~
~~Trichlorophenol, 2,4,6-~~	~~88062~~	~~9.7E+00~~
~~Urethane (ethyl carbamate)~~	~~51796~~	~~6.6E-01~~
~~Vapam (sodium methyldithiocarbamate)~~	~~137428~~	~~2.2E+04~~
~~Vinyl chloride~~	~~75014~~	~~2.5E+00~~
~~Vinylidene chloride~~	~~75354~~	~~6.2E+03~~
~~Xylenes~~	~~1330207*~~	~~5.8E+04~~
~~Zinc and zinc compounds~~	~~7440666*~~	~~6.8E+03~~

~~* -- This is a chemical compound group. If a CAS number is listed, it represents only a single chemical within the chemical class (for metallic compounds, the CAS number of the elemental form is listed; for other compounds, the CAS number of a predominant compound in the group is given).~~

~~n/a --No CAS number is available for this compound or compound group.~~

~~(Amended 5/17/00; 11/15/00)~~

2-2-244 Best Available Control Technology for Toxics (TBACT): For any new or modified source, except cargo carriers, the ~~more~~ most stringent of the following emission controls, provided that under no circumstances shall the controls be less stringent than the emission control required by any applicable provision of federal, state or District laws, rules, regulations or requirements:

244.1 The most effective emission control device or technique which has been successfully utilized for the type of equipment comprising such a source; or

244.2 The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source; or

244.3 Any control device or technique or any emission limitation that the APCO has determined to be technologically feasible for the type of equipment comprising such a source, while taking into consideration the cost of achieving emission reductions, any non-air quality health and environmental impacts, and energy requirements; or

244.4 The most stringent emission control for a source type or category for which a Maximum Achievable Control Technology (MACT) standard has been proposed, or for which the CARB has developed an Airborne Toxic Control Measure (ATCM). ~~Under no circumstances shall the emission control required be less stringent than the emission control required by any applicable provision of federal, state or District laws, rules, regulations or requirements.~~

~~The APCO shall publish and periodically update a BACT/TBACT Workbook specifying the requirements for commonly permitted sources. TBACT will be determined for a source by using the workbook as a guidance document or, on a case-by-case basis, using the most stringent definition of this Section 2-2-244.~~

(Adopted May 17, 2000)

REGULATION 2
PERMITS

RULE 9
INTERCHANGEABLE EMISSION REDUCTION CREDITS

2-9-301 Bankable Interchangeable Emission Reduction Credits – General Provisions:

301.1 An emission reduction of a bankable pollutant may be banked as an Interchangeable Emission Reduction Credit, if it meets the following criteria:

1.1 The emission reduction is generated by a stationary source that the District includes in its Emission Inventory. A source is included in the Emission Inventory if it has a District Permit to Operate (if one is required) or is a member of a source category included in the Emission Inventory (if no permit is required).

1.2 The emission reduction is real, permanent, quantifiable, enforceable and surplus.

1.3 The emission reduction did not result from the shutdown or curtailment of a source.

1.4 Any secondary emissions resulting from the emission reduction comply with ~~the District's Toxic Risk Management Policy for new sources~~ Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants.

2-9-304 Restrictions on the Use of IERC's: An IERC may not be used to fully or partially comply with:

304.1 Any emission standard at any facility other than the facility at which the IERC is generated.

304.2 Best Available Control Technology requirements in Regulation 2-2-301.

304.3 New Source Performance Standards in Regulation 10.

304.4 National Emission Standards for Hazardous Air Pollutants (NESHAP).

304.5 Federal Maximum Achievable Control Technology (MACT) standards.

304.6 Emission limitations or control requirements on toxic emissions imposed by ~~the District's Risk Management Policy~~ Regulation 2, Rule 5.

304.7 Any requirement in Regulation 9 with an implementation date before April 7, 1999.

304.8 Any requirement in Regulation 9 that has been approved by EPA for inclusion in the California SIP, unless this Regulation has been approved by EPA for inclusion in the SIP.

REGULATION 3

FEES

Regulation 3 Fees is being revised in a separate concurrent rule revision package. Please refer to the 2005 general fee amendments proposals for the specific proposed revisions to Regulation 3.

8-34-122 Limited Exemption, Permanent Collection and Control System Shutdown: The requirements of Sections 8-34-301, 303, 304, and 305 shall not apply to closed landfills which meet all of the following requirements:

122.1 The landfill last accepted waste at least 30 years ago,

122.2 The gas collection system and emission control system have been in operation for a minimum of fifteen years,

122.3 The landfill has an NMOC emission rate of less than 50 megagrams per year (55 tons per year) as determined using the procedures in 40 CFR 60.752(b)(2)(v)(C) and 60.754(b),

122.4 The operator can demonstrate to the satisfaction of the APCO, by conducting a health risk screening analysis performed according to the District's Health Risk Screening Analysis Guidelines, that the landfill, without a gas collection system, would ~~pass a risk screening analysis, as defined in Regulation 2-1-225, performed according to the current Air Toxic Risk Screening Procedure~~ not require TBACT pursuant to Regulation 2-5-301, and

122.5 The APCO has approved the Equipment Removal Report required pursuant to Section 8-34-410.

(Adopted October 6, 1999)

REGULATION 8
ORGANIC COMPOUNDS

RULE 40
AERATION OF CONTAMINATED SOIL AND REMOVAL OF UNDERGROUND STORAGE TANKS

8-40-118 Exemption, Aeration Projects of Limited Impact: The requirements of Sections 8-40-403 and 8-40-405 shall not apply to any aeration project in which total project emissions of volatile organic compounds are less than 150 ~~lbs~~ pounds, and total project emissions of toxic air contaminants are less than the ~~limits~~ trigger levels listed in Table ~~2-1-316~~ 2-5-1 in District Regulation 2, Rule ~~1~~5.

(Adopted December 15, 1999)

8-47-401 Reporting, Superfund Amendments and Reauthorization Act (SARA) Sites: Any person responsible for air stripping or soil vapor extraction operations which have not applied for a District permit shall provide written notification to the APCO of intention to operate. This notice shall include:

401.1 Address of the remediation site.

401.2 Schedule of starting date 30 days prior to start-up.

401.3 Written certification that the proposed operation will be in compliance with the requirements of this Rule.

401.4 Any person seeking to satisfy the conditions of Section 8-47-113 shall submit the health risk screening analysis for APCO approval as required in Section 8-47-402.

8-47-402 Less Than 1 Pound Per Day Petition: Any person seeking to satisfy the conditions of Section 8-47-113 shall:

402.1 Submit a petition to the APCO in writing requesting review and written approval of a health risk screening analysis for the benzene, vinyl chloride, perchloroethylene, methylene chloride and/or trichloroethylene organic compound emissions that are less than 1 pound per day.

REGULATION 11
HAZARDOUS POLLUTANTS

RULE 16
PERCHLOROETHYLENE AND SYNTHETIC SOLVENT DRY CLEANING OPERATIONS

11-16-102 Applicability: Any person who performs dry cleaning or other related operations (water repellent treatment and dip tank operations) that use perchloroethylene or any other synthetic solvent shall comply with this rule. Operation of any equipment associated with dry cleaning that uses or contains synthetic solvent is subject to this rule. The requirements of this rule may be in addition to those found in other District rules and regulations. New, modified, relocated, or replacement equipment shall be given pre-construction review and granted authority to construct in accordance with Regulation 2, Rule 1-301.~~ Dry cleaning installations or modifications may be considered ministerial in accordance with Regulation 2, Rule 1, sections 311, 427, and 428 if reviewed, constructed, and operated in accordance with the District's Permit Handbook for Synthetic Solvent Dry Cleaners (Manual of Procedures, Volume II, Chapter 6) and Risk Management Policy for Dry Cleaners (MOP, Vol. II, Ch. 6, Appendix A).~~

11-16-301 Final Equipment Requirements, Existing Non-residential Facilities: Except as prohibited in Section 304, any person using synthetic solvent to dry clean materials in an existing non-residential facility shall use only the following equipment:

301.1 For an existing machine (operated prior to October 1, 1994):
 1. A converted machine, or
 2. A closed–loop machine, or
 3. A secondary control machine, or
 4. Until prohibited on October 1, 1998:
 a. A vented machine, or
 b. A transfer machine;

301.2 For a machine that replaces an existing machine:
 1. A closed–loop machine, or
 2. A secondary control machine;

301.3 For an additional machine (new installation; not replacing an existing machine):
 1. A secondary control machine;

301.4 For any existing facility that requests an increase in permitted solvent usage for an existing machine or replacement machine:
 1. A secondary control machine or
 2. A closed–loop machine with a fugitive control system that meets the provisions of subsection 305.4;

301.5 Except as provided in subsections 301.5.1 and 301.5.2 below, in addition to the dry cleaning equipment above, a ventilation system that meets the requirements of subsection 307.2 and Regulation 2, Rule 1, Section 301 shall be installed and operated.
 1. Subsection 301.5 shall be waived by APCO, for a facility subject to subsection 301.3 or 301.4, if the off-site cancer risk caused by the facility is less than 100 in a million and the increase in off-site cancer risk caused by an additional machine or an increase in permitted solvent usage is less than 10 in a million.
 2. For a facility that is only subject to subsections 301.1 or 301.2: subsection 301.5 becomes effective on October 1, 1998 but shall be

waived by APCO if the off-site cancer risk caused by the facility is less than 100 in a million.

3. A fugitive control system that meets the requirements of subsection 305.4 may be installed and operated as a component of the ventilation system to reduce risk, particularly for co-commercial facilities.

Risk shall be determined by procedures outlined in ~~the District's Risk Management Policy for Dry Cleaners (Manual of Procedures, Volume II, Chapter 6, Appendix A)~~ Section 11-16-605.

11-16-302 Equipment Requirements, New Non-residential Facilities: Any person using synthetic solvent to dry clean materials in a new non-residential facility shall use only the following equipment:

302.1 A secondary control machine;

302.2 Except as provided in subsections 302.2.1, in addition to the dry cleaning equipment above, a ventilation system that meets the requirements of subsection 307.2 and Regulation 2, Rule 1, Section 301 shall be installed and operated.

1. Section 302.2 shall be waived by APCO if the off-site cancer risk caused by the facility is less than 10 in a million. Risk shall be determined by procedures outlined in ~~the District's Risk Management Policy for Dry Cleaners (Manual of Procedures, Volume II, Chapter 6, Appendix A)~~ Section 11-16-605.

11-16-605 Determination of Cancer Risk: Determination of cancer risk for subsections 301.5 and 302.2.1 shall be conducted using the District's ~~Risk Management Policy for Dry Cleaners (Manual of Procedures, Volume II, Chapter 6, Appendix A)~~ Health Risk Screening Analysis Guidelines.

MANUAL OF PROCEDURES

INDEX

VOLUME II ENGINEERING PERMITTING PROCEDURES

MANUAL OF PROCEDURES

VOLUME II

ENGINEERING PERMITTING PROCEDURES

INDEX

ENGINEERING PERMITTING PROCEDURES

PART I

INTRODUCTION

This document provides the information that an applicant may need to prepare and file an application with the BAAQMD. It describes the information required for a complete application. Please be aware that the Permit Regulations may be revised; any inconsistencies between this document and the Regulations shall be resolved in favor of the Regulations.

ENGINEERING PERMITTING PROCEDURES

PART II

PERMITS, GENERAL

1. TYPES OF PERMITS

The District issues different permits for different purposes. An operator who plans to install a new non-exempt source, or modify an existing one in a way that will increase emissions, must first obtain an Authority to Construct (A/C). Each operating non-exempt source of air pollution at a facility (each individual piece of equipment), requires a Permit to Operate (P/O). Certain kinds of portable equipment require registration before they can operate within the District. Major facilities are subject to the Title V Federal Permitting Program.

1.5 Title V Permitting Program (Synthetic Minor Permit)

Facilities with a potential to emit more than 100 tons per year may accept ~~enforeceable~~enforceable limits on their emissions to stay below the 100 ton per year threshold for a MFR permit. The resulting permit is a Synthetic Minor permit, so–called because the limitation on emissions is administrative and not inherent in the equipment.

2. PROCEDURES

District staff review the application to determine whether it meets the District's emission criteria. Call our Public Information Office at (415) 749-4900 for copies of the District's regulations. District Regulations are also available on the District's Website at http://www.baaqmd.gov.

For most applications, the evaluation will be completed within 49 calendar days of receipt and the applicant will be notified of the District's decision. The decision can be any one of the following:

- Issue an Authority to Construct with Conditions.
- Waive the Authority to Construct and issue a Permit to Operate with Conditions.
- Find part or all of the application Exempt from permit requirements.
- Deny the application.

Applications for large projects requiring offsets or other specialized treatment or approvals, may require more than 60 days for District review~~.~~; and 30 additional days will be required for public comment and for review by EPA and the California Air Resources Board. Either of these agencies may ask for extensions.

If the equipment is in compliance, the District will issue the Permit to Operate within a few days after the compliance determination. It is valid for one year from the date of startup and is renewable on the facility's anniversary date.
If the source is at a facility with a synthetic minor or MFR permit, the process of amending that permit will be conducted concurrently.

4. INFORMATION REQUIRED FOR A PERMIT APPLICATION

In order to carry out its statutory responsibilities, the District must obtain sufficient information from each applicant to enable it to determine what the emissions would be and whether the emissions will comply with District regulations. The nature of the information required varies considerably between various types of equipment and processes and between small projects and large projects.

6. CRITERIA TO DETERMINE COMPLETENESS

A complete application provides sufficient information to enable the District to estimate what the emissions from the new or modified source will be. The following completeness list is provided for your assistance; not all of the items refer to every application. If you have fully answered all of the questions referring to your proposed installation, your application will be complete.

8. DEFINITIONS

Source: The equipment used to perform the operations preceding the emission of an air contaminant, which ~~operations~~ result in the creation or separation of the air contaminants or determine or substantially affect the quantity of air contaminant emitted, but not including air pollution control operations.

Facility: A unit or an aggregation of units of non-vehicular air contaminant emitting equipment located on one property or on contiguous properties under the same ownership or entitlement to use and operate; and, in the case of an aggregation of units, those units which are related to one another. Units shall be deemed related to one another if the operation of one is dependent upon, or affects the process of, the other; if the operation involves a common or similar raw material product, or function; or if they have the same first two digits in their Standard Industrial Classification Codes as determined from the Standard Industrial Classification Manual published in 1972 by the Executive Office of the President, Office of Management and Budget. In addition, in cases where all or part of a stationary source is a facility used to load cargo onto or unload cargo from cargo carriers, other than motor vehicles, the APCO shall consider such carriers to be parts of the stationary source. Accordingly, all emissions from such carriers (excluding motor vehicles) while operating within the District and within California Coastal waters adjacent to the Air Basin shall be considered to be emissions from such stationary source. Emissions from such carriers shall include those that result from the purging or other method of venting vapors; and from the loading, unloading, storage, processing and transfer of cargo. However, emissions from the operation of the carriers' engines shall be considered only while such carriers are operating within the District.

9. GOOD ENGINEERING PRACTICE STACK HEIGHT

Good Engineering Practice (GEP) Stack Height: The greater of the following:

(2) For stacks in existence on January 12, 1979 and for which the owner or operator had obtained an Authority to Construct under Section 2-1-301 for the source venting to the stack. Two and one-half times the height of the highest nearby structure measured from the ~~groundlevel~~ground level elevation at the base of the stack; or

Bay Area Air Quality Management District

MANUAL OF PROCEDURES

VOLUME II

ENGINEERING PERMITTING PROCEDURES

PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

MANUAL OF PROCEDURES

VOLUME II

ENGINEERING PERMITTING PROCEDURES

PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

INDEX

VOLUME II
ENGINEERING PERMITTING PROCEDURES

PART 4
NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINATS

REF: BAAQMD Regulation 2, Rule 1
BAAQMD Regulation 2, Rule 5

1. INTRODUCTION

In 1986, the Bay Area Air Quality Management District Board of Directors adopted a plan to reduce public exposure to toxic air contaminants (TACs) in the San Francisco Bay Area. One of the plan elements was for District staff to begin reviewing permit applications for new and modified sources for potential health risks associated with any emitted TACs. The goals of this review were to: (1) prevent significant increases in health risks from newly constructed or modified stationary sources, and (2) reduce health risks by requiring improved air pollution controls when older, more highly emitting, sources were modified or replaced. After holding a public workshop on the matter, the District adopted a Risk Evaluation Procedure (REP) and Risk Management Policy (RMP) in 1987.

The REP established a methodology for completing health risk screening analyses (HRSA) for new and modified sources that was based on guidelines developed by a statewide working group (Air Toxics Assessment Manual, CAPCOA, 1987). The RMP established specific criteria for permit issuance under which it was determined that the TAC emissions from a proposed project would not cause, or contribute significantly to, an unacceptable adverse health risk for a member of the public. The RMP also specified that the District's Air Pollution Control Officer was ultimately responsible for risk management, and could consider a variety of factors when determining the acceptability of a proposed project and whether to issue or deny a permit.

The District's REP and RMP were updated several times since their original adoption, primarily in response to revisions in statewide health risk assessment and risk management guidelines. These revisions included risk assessment guidelines adopted for use in the Air Toxics Hot Spots (ATHS) Program, and risk management guidelines for new and modified sources adopted by CARB. The District established a specific RMP for dry cleaners that allowed permits to be issued for health risks within the action range identified in the CARB risk management guidelines, provided that the Best Available Control Technology and all reasonable risk reduction measures were employed. The District also established a specific risk management policy for diesel-fueled engines so that limitations would not need to be placed on standby engines during emergency use.

In 2005, the District's REP and RMP were codified into Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. A number of program enhancements were also made, primarily to conform with risk assessment guideline revisions made by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA), and risk management guidelines adopted by CARB. This Part of the Manual of Procedures (MOP) provides guidance on the District's Air Toxics NSR Program, and on permit application requirements for sources that emit TACs. The guidance provided in this Part is intended to be a companion to Regulation 2, Rules 1 and 5, and to clarify the requirements contained therein. None of the procedures described in this Part may be construed to relieve any person of the obligation to comply with any applicable requirement of Regulation 2, Rule 1, or Regulation 2, Rule 5.

2. REVIEW PROCEDURES FOR SOURCES WITH TAC EMISSIONS

The District requires that the health impacts from all new and modified sources that emit TACs be evaluated before an Authority to Construct or Permit to Operate is issued, in order to ensure that a proposed project will not cause, or contribute significantly to, an unacceptable adverse health risk for an individual. This evaluation program is referred to as new source review of toxic air contaminants. The health impact review requirements and the criteria for an acceptable project are implemented through the District's Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.

This section describes the District's review process for sources with TAC emissions. Permit application requirements for sources with TAC emissions are discussed in Section 3. The applicability of Regulation 2, Rule 5 and its requirements are clarified in Section 4.

2.1 Review Process

The following list of steps provides an overview of the District's review process for new and modified sources with TAC emissions. Steps or review procedures that are unique to sources with TAC emissions are discussed in more detail in the following sections.

- Identify all sources and/or abatement devices that will emit TACs.
- Use the Regulation 2, Rule 1 Permit / Exemption Flow Chart to determine if any of the proposed equipment is excluded from permit requirements pursuant to Regulation 1-110 or exempt

from permit requirements pursuant to Regulations 2-1-105 or 2-1-113.

- Calculate the maximum hourly and maximum annual TAC emissions from each source and/or abatement device.
- Compare the TAC emissions from each source or abatement device to the TAC trigger levels in Table 2-5-1.
- Determine if a permit application is required for any of the proposed equipment pursuant to Regulations 2-1-316 through 319.
- Submit permit application, if required.
- Determine if any sources are new or modified sources of toxic air contaminants as defined in Regulations 2-5-214 and 2-5-215.
- Identify any related permit applications and all new or modified sources of toxic air contaminants that constitute the project as defined in Regulation 2-5-216.
- Determine the TAC emission increases for the project in accordance with Regulation 2-5-601.
- Compare the TAC emission increases for the project to the TAC trigger levels in Table 2-5-1.
- If a TAC emission increase for a source or the project exceeds a Table 2-5-1 TAC trigger level, conduct a Health Risk Screening Analysis for the project.
- Evaluate project for compliance with Regulation 2, Rule 5.

2.2 Permit Requirements

General permit requirements for equipment and operations are discussed in MOP, Volume II, Part 2. The procedures for identifying sources and abatement devices and determining when permit applications are required for sources with TAC emissions are much the same as the procedures for other types of sources. Unusual cases, where the permit requirements for TAC sources may differ from the requirements for sources without TAC emissions, are discussed below in Section 3.

2.3 TAC Emissions

The applicability of many permitting and new source review requirements depends of the level of TAC emissions from the source or project. Sections 3.3.1 and 3.3.2 describe the information that the District needs in order to calculate the TAC emissions from sources and projects.

2.4 TAC Trigger Levels

Due to the large number of new and modified sources that emit TACs and the finite resources available for evaluating the health impacts from these sources, the District has developed several tools to streamline the health impact evaluation process. One of these tools is the District's table of toxic air contaminant trigger levels (Regulation 2, Rule 5, Table 2-5-1).

The TAC trigger levels are emission rate thresholds below which it would be very unlikely that a source or project would cause, or contribute significantly to, an adverse health risk to the surrounding community. The TAC trigger levels were developed based on de minimis health risks using conservative assumptions regarding how emissions are released to the atmosphere, how they are transported and dispersed to off-site locations, and the duration of a person's exposure. Sources emitting TACs at emission rates below these trigger levels are not expected to cause, or contribute significantly to, an unacceptable adverse health risk for any individual.

In June 1995, the District adopted a set of TAC Trigger Levels in Regulation 2, Rule 1 (Table 2-1-316: Toxic Air Contaminant Trigger Levels). These trigger levels have been revised several times since 1995, as new information about health impacts and other data became available. Upon adoption of Regulation 2, Rule 5, Table 2-1-316 was replaced by Table 2-5-1. Table 2-5-1 includes both acute trigger levels (in units of pounds per hour) and chronic trigger levels (in units of pounds per year).[1] These acute and chronic trigger levels are used to determine if permit requirements apply to certain new and modified sources that otherwise would be exempt from the need to obtain District permits. Permit application requirements are discussed below in Section 3. The trigger levels are also used to determine whether new and modified sources that are subject to District permit requirements must comply with Regulation 2, Rule 5. The applicability of Regulation 2, Rule 5 is discussed below in Section 4.

2.5 Health Risk Screening Analysis Requirements and Procedures

In general, a health risk screening analysis (HRSA) is required for any permit applications involving new or modified sources, where the TAC emissions from a source or project exceed one or more TAC trigger levels. An HRSA may also be required for other reasons such as determining permit requirements for sources subject to Regulation 2-1-316, or for CEQA purposes.

[1] Table 2-1-316 contained only chronic trigger levels.

If an HRSA is required by Regulation 2, Rules 1 or 5, the analysis will be conducted in accordance with the District's Health Risk Screening Analysis Guidelines. These guidelines will be maintained on the District's web site [link to web site address for these guidelines will be inserted when available] and will specify, or contain references to, the procedures to be followed for determining acute hazard index, chronic hazard index, and cancer risk. In general, these guidelines will conform to the Health Risk Assessment Guidelines established by OEHHA for use in the Air Toxics Hot Spots Program.

The information the District requires in order to conduct an HRSA is listed in Section 3.3.3 below.

3. PERMIT APPLICATIONS

Permit applications are required for all new and modified sources emitting TACs that are subject to the District's permit requirements (Regulations 2-1-301 and 2-1-302). A permit application is not required for a new or modified source if the source is determined to be exempt from permitting requirements because:

(a) the source qualifies for an exemption from permit requirements pursuant to Regulation 2, Rule 1, Sections 103 or Sections 114-128, and

(b) the source has no TAC emissions exceeding an acute or chronic trigger level listed in Table 2-5-1, and

(c) the source does not otherwise require a permit under the requirements of Regulation 2-1-316.2, 317, 318, or 319.

In accordance with Regulation 2-1-316.1, permits may be required for new and modified sources that would otherwise qualify for an exemption from permit requirements pursuant to Regulations 2-1-103 or 2-1-114 through 1-1-128, if the source emits a TAC at an emission rate that exceeds an acute or chronic trigger level listed in Table 2-5-1. For such sources, an evaluation of the health risks resulting from TAC emissions needs to be completed to determine if permits are required. The District may request that the owner or operator of a new or modified source that is potentially subject to Regulation 2-1-316 demonstrate that the source complies with the requirements of Regulations 2-1-316.1 and 316.2. The owner/operator of such a source may also submit a permit application and the District will evaluate the health impacts from the source, and any control measures used by the source, to determine if the source satisfies the requirements of Regulations 2-1-316.1 and 316.2 and is thereby allowed to retain an exemption from permit requirements.

Any new or modified sources that are constructed without an Authority to Construct or operated without a Permit to Operate may be subject to enforcement action and additional permit application fees. Existing un-permitted sources that do not have a current exemption from District permit requirements are also subject to enforcement action and additional application fees, unless the source was covered by a valid exemption and the source lost its exempt status due to changes in District, California, or federal regulations.

Permit applications for sources with TAC emissions are subject to the general requirements and procedures discussed in MOP Volume II, Part 2 “Permits, General”. The specific permit application requirements and procedures that apply only to sources that emit TACs are discussed in more detail below.

3.1 Procedures

Most applications for sources with TAC emissions can be handled within the typical permitting time frames discussed in MOP, Volume II, Part 2, Section 2. The District will generally make a completeness determination within 15 working days of receiving the application, and make a final decision within 35 working days of the date that the application is declared complete (the “completeness” date). However, applications involving sources with TAC emissions over a trigger level require additional information (i.e., risk screening analysis form, including a plot plan or map showing source locations, property boundaries and nearby receptor locations) before the application will be declared complete. Applicants should ensure that all of the forms, maps, data, and other information requested in Sections 3.3 and 3.4 are included in the application package in order to avoid delays due to submission of an incomplete application.

3.2 Fees

Permit application fees are established in Regulation 3. In accordance with Regulation 3, Schedules B - K, sources that emit a TAC at a rate in excess of a trigger level listed in Table 2-5-1 are subject to risk screening fees and toxic surcharges. The risk screening fee is a one-time fee that shall be paid for each permit application (similar to filing and initial fees), while the toxic surcharge is an annual fee for each permitted source (similar to the permit to operate fee). These fees are discussed in more detail in Sections 3.2.1 and 3.2.2 below.

3.2.1 Risk Screening Fee (RSF)

The risk screening fee applies to any permit applications for new or modified sources, where the emissions from the project require a health risk screening analysis pursuant to Regulation 2-5-401. This fee consists of a flat charge per application plus a charge per source that is generally equal to the initial fee for that source. For gasoline dispensing facilities, the RSF is a flat charge per application. Consult the appropriate fee schedule for each type of source in the application to determine the applicable risk screening fee. The appropriate risk screening fee for a source should be based on the maximum permitted usage levels or maximum potential to emit for that source and should also include any secondary TAC emissions from abatement equipment that control emissions from that source.

As discussed in Section 3.3.1, a project, as defined in Regulation 2-5-216, includes any new or modified sources of TACs in the current application and may also include new or modified sources of TACs that were permitted in previous permit applications. For the purposes of calculating the risk screening fee for the current application, any sources that are considered part of the project but that were permitted under previous applications are not subject to the risk screening fee, unless the source is being modified under the current application.

The risk screening fee shall be included when calculating any applicable late fees (Regulation 3-310) or the small business discount (Regulation 3-302.1).

3.2.2 Toxic Surcharge

The toxic surcharge applies to any source that emits a TAC at a rate above a chronic trigger level listed in Table 2-5-1. Consult the appropriate fee schedule for the source to determine the applicable toxic surcharge. This fee must be paid, in addition to the permit to operate fee, for each year of source operation. For new and modified sources, the toxic surcharge should be based on the maximum permitted usage levels or maximum potential to emit for that source and should also include any secondary TAC emissions from abatement equipment that control emissions from that source. For permit renewals, the toxic surcharge should be based on actual usage or emission levels that have been reported to the District.

The toxic surcharge shall be included when calculating any applicable back fees (Regulation 3-303).

As with permit to operate fees, the toxic surcharge shall be refunded if an applicant cancels or withdraws a permit application or the Authority to Construct expires and the source was never operated.

3.3 Application Information

Permit applications must contain all the information necessary to determine the scope of the project, characterize the emissions from the project, and determine compliance with all applicable requirements. For projects emitting TACs, sufficient information must be submitted in order to: identify the project, calculate emissions increases for compounds listed in Table 2-5-1, conduct a health risk screening analysis (if project emission increases exceed a trigger level), and determine compliance with TBACT requirements (if applicable).

The application requirements for projects involving TAC emissions are discussed in more detail below. In addition, the District has published several documents that may be useful for preparing permit application packages. The District's Permit Handbook contains guidance regarding application forms, fees, emission calculations, applicable regulations, and permit conditions for various different source types. The Permit Handbook is available on line at: http://www.baaqmd.gov/pmt/handbook/default.htm. The District maintains a BACT/TBACT Workbook that specifies TBACT requirements for commonly permitted sources. The BACT/TBACT Workbook also describes the procedures for calculating the cost effectiveness of a control measure and making a BACT/TBACT determination for a specific source or project. This document is intended to be used as a guide by BAAQMD staff engineers, the regulated community, and interested members of the public in determining the specific emission limits and emission control devices or techniques needed to meet BACT and TBACT requirements. The BACT/TBACT Workbook is available online at: http://www.baaqmd.gov/pmt/bactworkbook/default.htm. The District's Health Risk Screening Analysis Guidelines describe the procedures to be followed when conducting a health risk screening analysis. Generally, these guidelines are based on the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines. These guidelines discuss the types of air dispersion models that may be used, the selection of meteorological data and other input parameters for the models, the types of receptors that may be involved, the criteria for establishing receptor locations, approved health effects values for the compounds listed in Table 2-5-1, and the procedures for calculating acute hazard index, chronic hazard index, and cancer risk. The

Health Risk Screening Analysis Guidelines are available on line at: [insert web site link, when it is available]. All documents are/will be available from the District's Public Information Department (415-749-4900). Consult the District's website (http://www.baaqmd.gov) for additional information about rules, regulations, permitting requirements, and other programs.

3.3.1 Project Identification

As with any permit application, the applicant must identify the sources, abatement devices, operational changes, and/or permit condition changes, which are the subject of the permit application. For large or complicated projects, the applicant should include plot plans showing the locations of equipment and emission points and process, material, and pollutant flow diagrams. For all projects, the applicant should provide completed data forms for each source, abatement device, and emission point (http://www.baaqmd.gov/pmt/forms/index.asp) and equipment specifications, vendor literature, process descriptions, or other written material, as necessary, to explain or establish maximum possible or maximum permitted capacities (storage volumes, operating rates, throughput rates, fuel usage rates, etc.).

For applications involving new or modified sources of TACs that are subject to Regulation 2, Rule 5 (see Section 2 above), the applicant should also identify any equipment or modifications that are considered to be part of the project, as defined in Regulation 2-5-216. In addition to all new or modified sources in the current application, the project shall include new or modified sources of TACs that were permitted within two years prior to the completeness date for the current application, unless the applicant demonstrates to the satisfaction of the APCO that the construction or modification covered by the current application was neither (1) a reasonable foreseeable consequence of the previous project(s), nor (2) a critical element or integral part of the previous project(s). For modified sources, any successive modifications of a source occurring after January 1, 1987 - including increases in permitted throughput levels, changes in raw materials, products, fuels, or the formulations of these materials, and debottlenecking actions - are considered to be part of the project. Sources that are determined to be exempt from permitting requirements are not part of the project, even if the exempt source will emit a TAC.

Regulation 2-5-215 defines a new source of TAC. This definition is essentially the same as the definition of new source in Regulation 2-1-232, except that the applicability date for a new source of TAC is January 1, 1987 instead of March 7, 1979.[2]

Regulation 2-5-214 describes how to determine whether or not a physical or operational change constitutes a modified source of TAC.

3.3.2 Emissions Characterization

The applicant must supply sufficient information for the District to determine maximum hourly and/or maximum annual emissions for any TAC listed in Table 2-5-1 that is emitted from the source or abatement device. Although many TACs have both acute and chronic trigger levels, some TACs have only a chronic trigger level or, in a few cases, only an acute trigger level. Maximum hourly emissions need to be determined only for a TAC that has an acute trigger level. Likewise, maximum annual emissions need to be determined only for a TAC that has chronic trigger level.

As stated in Regulation 2-5-601.1, the TAC emissions that are subject to Regulation 2, Rule 5 requirements include any emissions that result from routine operation of a source or emissions that are predictable. These routine or predictable emissions may include continuous and intermittent releases or may result from predictable process upsets or leaks and may be subject to enforceable limiting conditions. Emissions resulting from accidental releases and unpredictable circumstances (such as earthquakes, fires, or floods) are not subject to Regulation 2, Rule 5 requirements. Emissions that may occur due to accidental releases are subject to other regulatory requirements such as federal and state emergency planning and pollution prevention laws. For example, a broken pipe could result in an accidental release that would not be subject to Regulation 2, Rule 5. However, emissions from relief valves could be intermittent but reasonably predictable and would be subject to Regulation 2, Rule 5. Emissions that may occur during a fire are unpredictable and are not subject to Regulation 2, Rule 5. Furthermore, Regulation 2-5-111 specifically exempts TAC emissions resulting from emergency

[2] January 1, 1987 is the initial effective date of the District's Toxic NSR program, which was first adopted as a policy and procedure document in 1987 and later codified as Regulation 2, Rule 5 in 2005.

use of emergency standby engines from the requirements of Regulation 2, Rule 5.

The District typically uses maximum hourly and maximum annual capacities and TAC emission factors in order to determine the maximum hourly and maximum annual emission rates. The emission factors may be derived from source test data, certified emission rates, vendor guarantees, AP-42 [3], the California Air Toxic Emission Factors (CATEF) database [4], or other literature.

If desired, the applicant may propose maximum hourly and maximum annual emission rates for a source or abatement device. The applicant should provide emission calculations to support the proposed emission rates and supply copies of any source test data, vendor guarantees, or literature citations that were used in the emission calculations.

3.3.3 Health Risk Screening Analysis Information

For any source or project that emits a TAC in excess of a Table 2-5-1 TAC trigger level, the applicant must submit a complete risk screening analysis (RSA) form (http://www.baaqmd.gov/pmt/forms/rsa_request.pdf), or the equivalent information. One RSA form should be completed for each source with TAC emissions. If a source has multiple emission points or if multiple sources vent to a single emission point, an RSA form should be completed for each stack or emission point. If the emissions are fugitive in nature with no specific emission point, the RSA form should also be completed, with the source considered to be an area or volume source.

The RSA form specifies that a plot plan or map be included showing the location of the sources in the project, the facility boundaries, the nearest businesses, and the nearest residences. Aerial photographs may also be acceptable for this purpose. The maps should be drawn to scale with compass directions correctly indicated. The maps should identify the location of each stack (or area of release for an area or volume source) that emits a TAC, the property lines for the facility,

[3] AP-42 is an EPA publication of emission factors for many different source types. The report is entitled Compilation of Air Pollution Emission Factors, fifth edition, and is available on line at: www.epa.gov/ttn/chief/ap42/index.html.

[4] The California Air Resources Board (CARB) maintains a database of emission factors for many different source types. It is organized similar to AP-42 and is also available on line at: www.arb.ca.gov/emisinv/catef/catef.htm.

areas zoned for commercial/industrial use, the locations of the nearest worker receptors, areas zoned for residential use, and the locations of the nearest residential receptors. For stack sources, the location and dimensions (including heights) of the stacks and any nearby buildings (generally within 250 feet of the stack) should be provided so that the effects of aerodynamic downwash can be evaluated. The application should also contain information regarding the expected operating schedule of each source, so that temporal variations of TAC emission rates can be evaluated (e.g., based on time of day, season, etc.).

An applicant may elect to submit a completed health risk screening analysis that follows the specified guideline procedures. Submittal of such an analysis does not, however, eliminate the need to provide the basic health risk screening analysis information previously described. Applicants are encouraged to submit copies of all model input files used in a risk screening analysis in electronic format. For larger projects, it is recommended that a protocol describing the details of the proposed health risk assessment methodology be submitted for District review prior to the completion of the analysis.

For a modified source, the APCO may take into consideration reductions in health risks that have occurred since January 1, 1987 (at that modified source only) due to reformulations, material substitutions, process changes, equipment upgrades, or other emission reduction measures or due to changes in health effects values. These health risk reductions shall only be used to correctly identify the overall change in health risks for the modified source (health risks for the proposed configuration of the modified source compared to the baseline health risks from the source as it existed on January 1, 1987). These health risk reductions cannot be used to net out of any Regulation 2, Rule 5 requirements.

3.3.4 TBACT Determinations

New and modified sources with health risks exceeding a threshold in Regulation 2-5-301 are required to have Best Available Control Technology for Toxics (TBACT). TBACT can include emissions control equipment, process modifications, material substitutions, control procedures, work practice standards, or a combination of these methods of reducing TAC emissions. For guidance on TBACT requirements for commonly permitted sources, consult the District's

BACT/TBACT Workbook, which is available online at: http://www.baaqmd.gov/pmt/bactworkbook/default.htm.

Applications for sources that are subject to the TBACT requirement must include adequate information for the District to determine whether this requirement is met. Applicants are encouraged to provide documentation that can be used to support TBACT determinations for affected sources. Appropriate documentation may include: descriptions of the control methods, alternative materials, or abatement devices that will be used and source test data, vendor guaranteed emission rates, destruction efficiencies, or other data for the chosen control method. For diesel-fired IC engines, EPA or CARB certified emission factors should be submitted for the proposed engine model and model year. If the applicant is claiming that a control method is infeasible or too costly, the applicant should provide capital and operating costs for each rejected control method and/or any documentation necessary to justify that a control method is infeasible.

3.4 Additional Completeness Criteria

As discussed in MOP, Volume II, Part 2, Section 6, a permit application will be declared complete when the applicant has provided sufficient information for the District to fully characterize the emissions from all new or modified sources and to determine whether or not these devices will comply with all applicable requirements. The completeness criteria checklist for general permit applications (see MOP, Volume II, Part 2, Section 6) should be used as a starting place for applications involving new and modified sources of TACs. The checklist below should be used for applications with new or modified sources of TAC in addition to the general permit application completeness criteria checklist. The following checklist expands on a few items listed in the general checklist and identifies additional criteria that are necessary before an application involving new/modified sources of TACs will be declared complete.

Additional Completeness Criteria
for Projects with TAC Emissions

- ❑ Identify all sources, abatement devices, and emission points in the current application that emit TACs. Provide the application numbers for any potentially related projects (new or modified sources permitted within the last two years and, for a modified source, any previous applications for that modified source submitted since January 1, 1987).

- Provide maximum hourly and maximum annual TAC emission rates or sufficient information for the District to calculate these TAC emission rates. These maximum TAC emission rates include routine or predictable TAC emissions but exclude emissions occurring due to accidental releases or other unpredictable circumstances such as emergency use of emergency standby engines. Supply all necessary supporting documentation: data forms; maximum operating times; maximum storage capacities, fuel usage rates, or other operating rates; equipment specifications; vendor guarantees; emission calculations; source test data; and emission factor citations.

- For any proposed modification of a source that was permitted prior January 1, 1987 or for any proposed modification of a source that was permitted after January 1, 1987 pursuant to a loss of exemption, provide sufficient information for the District to calculate the baseline TAC emission rates for that modified source.

- For any source or project with a TAC emission rate that exceeds a Table 2-5-1 TAC trigger level, complete a Risk Screening Analysis (RSA) form (http://www.baaqmd.gov/pmt/forms/rsa_request.pdf). One RSA form is required for each source of TAC emissions in the project. If a source has multiple emission points or if multiple sources vent to a single emission point, one RSA form is required for each stack or emission point. RSA forms are also required for any fugitive emission sources or area or volume sources. The information requested on the RSA form may be alternatively provided in tabular form.

- Provide maps and/or aerial photographs of the facility and surrounding community. The maps should be drawn to scale, specify compass directions, and identify the location of each stack (or area for an area source) that emits a TAC, the property lines for the facility, and the nearest residential and worker receptors. For any stacks or emission points that are located near buildings or structures, the map should also indicate the location, dimensions, and height of each of the nearby structures.

- Provide information necessary to demonstrate compliance with TBACT requirements, such as: descriptions of control methods or abatement devices, vendor guarantees, certified emission factors, emission calculations, destruction efficiencies, source test results, or other data.

4. REGULATION 2, RULE 5: NEW SOURCE REVIEW OF TACs

District Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants (TACs) implements the District's Air Toxics New Source Review Program for new and modified sources of TAC emissions. This rule includes health impact review requirements and sets criteria for acceptable projects. The applicability of this rule and the standards are discussed in more detail below.

4.1 Applicability

As described in Regulation 2-5-101, Regulation 2, Rule 5 applies to a new or modified source that: (a) is required to obtain a District authority to construct or permit to operate and (b) emits a TAC listed in Table 2-5-1. These applicability criteria are discussed in more detail below.

4.1.1 Sources That Are Subject To Regulation 2, Rule 5

In general, the requirements of Regulation 2, Rule 5 are evaluated and imposed on a source only during the permit application process for that source. In accordance with Regulation 2-5-112.1, any permit applications for new or modified sources of TACs that are submitted after July 1, 2005 will be evaluated for compliance with Regulation 2, Rule 5. However, a source that was permitted within two years of the date that a complete application is received for a new project will be subject to Regulation 2, Rule 5, unless the applicant demonstrates that the previous project and the current project are not related. As identified in Regulation 2-5-216, the applicant must demonstrate that the current project was not a reasonably foreseeable consequence of the previous project and that the current project is not an integral part or critical element of the previous project. Per Regulation 2-5-112.2, the requirements of this rule also apply to a source that was constructed or modified after January 1, 1987, if the operator of the source fails to obtain the required Authority to Construct or Permit to Operate for that source or modification.

Any new or modified source, which has an emission rate of a TAC that is greater than an acute or chronic trigger level listed in Table 2-5-1, is subject to Regulation 2, Rule 5 when the source is required to obtain a District permit. Any new or modified source that has an emission rate of a TAC exceeding a TAC trigger level may be required to have a permit to operate pursuant to Regulation 2-1-316.1. Therefore most new and modified sources with TAC emissions over a trigger level are subject to Regulation 2, Rule 5, except as described in Section 4.1.2 below.

If a new and modified source has no TAC emissions over the trigger levels, the source may possibly be subject to Regulation 2, Rule 5, if the source is part of a larger related project. Sections 4.1.2 and 4.1.3 below describe the criteria that must be met before a source with emissions less than the TAC trigger levels can be excluded or exempted from the requirements of Regulation 2, Rule 5.

4.1.2 Sources That Are Not Subject To Regulation 2, Rule 5

In accordance with Regulations 2-5-101 and 2-5-112, Regulation 2, Rule 5 only applies to new and modified sources. Any source, which is determined to be not a new source and not a modified source pursuant to the definitions in Regulations 2-5-215 and 2-5-214, respectively, is not subject to Regulation 2, Rule 5. Sources meeting these criteria include grandfathered sources that have not been modified since January 1, 1987 and sources that have lost an exemption from permitting requirements pursuant to Regulation 2-1-424 or 2-1-425.

Existing permitted equipment that has been permitted or modified after January 1, 1987 but that is not part of a current project will not be subject to Regulation 2, Rule 5, provided the owner/operator has obtained all required permits for this equipment. In other words, Regulation 2, Rule 5 will not be retroactively applied to existing permitted equipment unless (a) the permit holder applies for a modification of an existing permitted source, or (b) the permit holder modifies an existing source but fails to apply for a modification that required a permit, or (c) the APCO finds that the source is related to a current project. Regulation 2-5-216 explains that existing permitted sources will be deemed related to a current project if the existing source was permitted within the two years immediately prior to the completeness date of the current application. However, at the applicant's request, the APCO will also consider other factors about the relationship between the existing permitted source and the current project before determining whether or not the existing source will be deemed part of the current project. For such applications, the applicant must show that the current project is not a reasonably foreseeable consequence of the previous project and is not a critical element or integral part of the previous project.

In accordance with Regulation 2-5-101, sources that are exempt from permitting requirements pursuant to Regulation 2, Rule 1 are not subject to Regulation 2, Rule 5. Sources that are exempt from permit requirements (pursuant to Regulation 2, Rule 1, Sections 103 - 128) and that emit TACs at less than the Table 2-5-1 trigger levels are clearly exempt from permit requirements; and are therefore not subject to Regulation 2, Rule 5.

Most sources with emissions exceeding a TAC trigger level are subject to Regulation 2, Rule 5. However, sources that would normally be exempt from permit requirements (pursuant to Regulation 2, Rule 1, Sections 103 or 114-128), but that have an emission rate over a TAC trigger may potentially retain an exemption from permit requirements as described in Regulation 2-1-316.1. The owner/operator of any such potentially exempt sources should submit a permit application in accordance with MOP, Volume II, Parts 2 and 4. The procedures in Section 2.4 above shall be used to determine the health impacts of the potentially exempt source. If this analysis indicates that the source will comply with the TBACT requirements (if applicable) of Regulation 2-5-301 and that the project will comply with the project risk limits of Regulation 2-5-302, then the source will be allowed to retain the exemption from permit requirements. Any source which is found to be exempt from permit requirements using these procedures, is thereafter not subject to Regulation 2, Rule 5, pursuant to Regulation 2-5-101, unless the source is modified and the modification results in new or additional TAC emissions.

4.1.3 Sources That Are Exempt From Regulation 2, Rule 5

Although new and modified sources that have emissions above a TAC trigger level are generally subject to Regulation 2, Rule 5, new or modified sources that have emissions below all the TAC trigger levels are not necessarily exempt from Regulation 2, Rule 5. Sources with emissions less than the TAC trigger levels are only exempt from Regulation 2, Rule 5 (pursuant to Regulation 2-5-110), if TAC emissions from the entire project are less than the Table 2-5-1 TAC trigger levels. A project is defined in Regulation 2-5-216 as all new and modified sources within an application, any modified source in the project with consecutive modifications occurring after January 1, 1987, and all new or modified sources permitted within two years of the completeness date of the current application (if the current project is related to a previous application). In other words, a source with emissions less than the TAC trigger levels could be subject to Regulation 2, Rule 5, if it is part of a larger project that has total combined emissions over a TAC trigger level. These requirements were put in place to prevent circumvention of Regulation 2, Rule 5.

The requirements of Regulation 2, Rule 5 are intended to apply to routine and predictable emissions from a source or operation. Emissions arising from a non-routine or unpredictable process upset, an unintentional spill, leak, or other emergency situation are generally not subject to Regulation 2, Rule 5. Regulation 2-5-111 clarifies the applicability of the Toxic NSR rule for emergency standby engines. Pursuant to Regulation 2-5-111, emissions arising from emergency use of an emergency standby engine or from emission testing required by the APCO are exempt from the requirements of Regulation 2, Rule 5. Emissions arising from non-emergency use are subject to Regulation 2, Rule 5. Regulation 9, Rule 8, Sections 230 to 233 contain the pertinent definitions for emergency and non-emergency use of engines.

4.2 Best Available Control Technology for Toxics (TBACT)

Any source that is subject to this rule and that results in a cancer risk of more than 1.0 in one million (10^{-6}) or a chronic hazard index of more than 0.20 is required to have Best Available Control Technology for Toxics (TBACT). For cases where multiple sources vent to a single emission point, TBACT is generally required for all sources venting to that emission point.

TBACT can include abatement equipment, process modifications, material substitutions, control procedures, work practice standards, or a combination of these methods. For guidance on TBACT requirements for commonly permitted sources, consult the District's BACT/TBACT Workbook:
http://www.baaqmd.gov/pmt/bactworkbook/default.htm

4.3 Project Risk Requirement

The project risk requirement of Regulation 2-5-302 applies to all new and modified permitted sources within a project. A project is defined in Regulation 2-5-216 and includes all new or modified sources in the current application, any prior modifications (occurring after January 1,

1987) of a source that is being modified, and all new or modified sources permitted within two years of the completeness date of the current application (if the current project is related to a previous application). Sources that are exempt from permitting requirements or that were permitted pursuant to a loss of exemption should not be considered part of a project.

All projects subject to this rule must comply with the project risk limits listed in Regulation 2-5-302.1 through 2-5-302.3. Therefore, all projects subject to this rule must have (a) a cancer risk of no more than 10.0 in one million (10^{-5}), (b) a chronic hazard index of no more than 1.0, and (c) an acute hazard index of no more than 1.0. Otherwise, the permit to construct or operate for the proposed new or modified equipment in the current application will be denied.

The project risk is determined based on the emission increases for the project. The project risk limits apply after installation of TBACT or other proposed control requirement. If an initial HRSA indicates that a project risk limit will be exceeded, the applicant will be given an opportunity to refine the project risk determination by accepting permit conditions that will limit operating time or emissions or by using site-specific data.

5. GLOSSARY

AP-42
An EPA document: Compilation of Air Pollution Emission Factors, fifth edition, that describes emission factors for various source types.

APCO
Air Pollution Control Officer

ATCM
Air Toxic Control Measure

BACT
Best Available Control Technology

CAA
The federal Clean Air Act

Cal/EPA
California Environmental Protection Agency

CAPCOA
California Air Pollution Control Officers Association

CARB
California Air Resources Board

CATEF
California Air Toxic Emission Factors is a database of toxic emission factors for various source types that is maintained by CARB.

CFR
The Code of Federal Regulations

EPA
The U.S. Environmental Protection Agency

HAP
Hazardous Air Pollutant

HI
Hazard Index

HQ
Hazard Quotient

HRSA
Health Risk Screening Analysis

MACT
Maximum Available Control Technology

MOP
The District's Manual of Procedures

NESHAPS
National Emission Standards for Hazardous Air Pollutants

NSPS
Standards of Performance for New Stationary Sources

NSR
New Source Review

OEHHA
Cal/EPA Office of Environmental Health Hazard Assessment

REP
Risk Evaluation Procedure

RSF
Risk Screening Fee

RMP
Risk Management Policy

TAC
Toxic Air Contaminant

TBACT
Best Available Control Technology for Toxic Emissions

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

STAFF REPORT

JUNE 2005

Appendix B

Existing BAAQMD Air Toxics NSR Program Risk Evaluation Procedure (REP) and Risk Management Policy (RMP)

Note: The RMP & REP will be replaced upon adoption of Regulation 2, Rule 5

Risk Evaluation Procedure

(Updated February 3, 2000)

This document describes the procedures to be followed by BAAQMD staff when evaluating health risks for permit applications involving the emission of toxic air contaminants (TACs).

I. All applications for authorities to construct or permits to operate new or modified sources shall be reviewed for emissions of TACs that may result in adverse health effects. The definitions of "new source" and "modified source" given in BAAQMD Regulation 2, Rule 2 shall be used, with the exception that the date of January 1, 1987 shall be used for determining applicability (rather than March 7, 1979).

II. The permit engineer shall identify all TACs emitted from new and modified sources to the extent necessary to determine whether or not they may pose a health risk. Contaminants to be considered are listed in Tables 1 and 2. If the applicant does not provide complete speciation of mixtures being used, the unspeciated fraction of any mixture will be assumed to be the most toxic compound consistent with the available description (e.g., "aromatic compounds" will be assumed to be benzene). The use of nonspecific material codes such as "Other Organic Compounds" or "Hydrocarbon---not specified" shall be avoided.

III. The permit engineer shall calculate annual emission rates for new sources, and the increase in annual emission rates for modified sources, for all emitted TACs listed in Tables 1 and 2. The emission calculation procedures for new and modified sources given in BAAQMD Regulation 2, Rule 2 shall be used. The calculated emission rates shall represent the operation of the source as it is to be described in the permit and any operating conditions associated with the permit.

IV. The total emissions of each applicable TAC from all new and modified sources contained within a permit application shall constitute the "project emissions" for the purpose of determining whether a risk analysis must be prepared. In addition, emission increases from all related projects at the facility shall be included in order to prevent circumvention which might be achieved by breaking a project into smaller pieces and submitting more than one permit application over a period of time. A "related project" shall include <u>all</u> new or modified sources at the facility that have been permitted within the two-year period immediately preceding the date a complete application is received, unless the permit applicant can demonstrate that the sources involved are not directly related to one another (e.g., installation of a groundwater stripper would be directly related to any other remedial activity already occurring, while construction of a new crude unit would not necessarily be directly related to the modernization of a wastewater treatment plant). A "related project" shall also include a series of consecutive modifications to a single source (e.g., increasing a source's permitted throughput), regardless of the time period over which the modifications occur.

V. A written risk analysis shall be prepared where the project emissions exceed any of the trigger levels listed in Tables 1 and 2. Permit applications not requiring a written risk analysis shall be judged to be in accordance with the BAAQMD's Risk Management Policy and will require no further review.

VI. At the permit engineer's request, staff of the Toxic Evaluation Section will prepare the risk analysis. The application shall not be deemed "complete" until all of the information necessary to perform the risk analysis has been collected. The application shall be forwarded to the Toxic Evaluation Section for review at least two weeks before a completeness determination must be made because additional information may need to be collected in order to perform or refine the analysis.

VII. The evaluating engineer has the option to prepare his/her own risk analysis, provided that it conforms to the procedures laid out in this document. Likewise, an applicant may also submit a conforming analysis. These analyses will be reviewed by the Toxic Evaluation Section for acceptability and amended, if necessary.

VIII. The risk analysis shall be performed in accordance with the risk assessment methodology established for use in the Air Toxics "Hot Spots" Program for estimating maximum individual cancer and chronic non-cancer health risks (ref.1, 2). The current adopted risk assessment guidelines shall be used based on the date of submittal of a complete permit application.

IX. A risk analysis may be performed at one of two levels or tiers. Level 1 is termed a "screening analysis" and Level 2 a "refined analysis". A screening analysis employs procedures and assumptions that assure a conservative estimate of public impact. A refined analysis employs procedures and assumptions that are more site-specific, resulting in a risk evaluation that is more representative of the source in question. The requirements for Level 1 and Level 2 analyses can be found in Appendix B.

X. The risk calculated in a Level 1 analysis tends to overestimate the real risk because of the conservative assumptions used in the process. This approach is satisfactory for the majority of sources and will be utilized routinely by the Toxic Evaluation Section in evaluating permit applications. There are situations, however, in which a Level 2 or refined analysis is preferable. These include the instance in which a screening analysis yields a risk value that exceeds levels given in the Risk Management Policy. In these cases a re-evaluation of the source using a refined analysis may result in a more realistic estimate of risk. The Toxic Evaluation Section will complete refined analyses where feasible, based upon available data and staff resources. The permit applicant also has the option of performing a refined analysis.

In other instances, certain sources/applications will benefit from an immediate Level 2 analysis. Among these are large facilities with multiple sources and/or pollutants, and applications from facilities that may engender public attention because of the nature of their operations or their location in the community. When these cases arise, the Toxic Evaluation Section will recommend that the applicant, or a consultant hired by the applicant, prepare a Level 2 risk analysis. The Toxic Evaluation staff will be available to the applicant or the applicant's consultant to provide oversight in the preparation of the analysis.

XI. All risk analyses shall be reviewed by the Manager of the Toxic Evaluation Section, the District Toxicologist, or another staff member to which this responsibility has been delegated. This review serves the purpose of ensuring that the risk analysis conforms to BAAQMD requirements and that the Risk Management Policy has been followed. This review does not supercede current procedures governing other elements of permit review, such as compliance determination or New Source Review.

XII. It shall be the responsibility of the permit engineer to establish TBACT when required by the Risk Management Policy. The permit engineer shall consult the BACT/TBACT Handbook (ref. 3) for established sources. If TBACT has not been established for the sources being evaluated, the permit engineer shall be responsible for performing a TBACT determination. The Toxic Evaluation Section will be available to assist in the evaluation, if necessary.

Table 1
BAAQMD Screening Levels for Carcinogens
(Updated February 3, 2000)

Compound	Acceptable Emission Rate (lb/year)	Acceptable Air Concentration (gm/m^3)	Unit Risk Factor	Reference
Acetaldehyde	7.2E+01	3.7E-07	2.7E-06	1
Acetamide	9.7E+00	5.0E-08	2.0E-05	4
Acrylamide	1.5E-01	7.7E-10	1.3E-03	2
Acrylonitrile	6.7E-01	3.4E-09	2.9E-04	3
Allyl chloride	3.3E+01	1.7E-07	6.0E-06	3
2-Aminoanthraquinone	2.1E+01	1.1E-07	9.4E-06	4
Aniline	1.2E+02	6.3E-07	1.6E-06	2
Arsenic (inorganic)	2.5E-02♦	1.3E-10♦	3.3E-03	1
Asbestos	3.0E-03	1.6E-11	@@@	1
Benzene	6.7E+00	3.5E-08	2.9E-05	1
Benzidine	1.4E-03	7.1E-12	1.4E-01	3
Benzyl chloride	3.9E+00	2.0E-08	4.9E-05	2
Beryllium	1.4E-02♦	7.4E-11♦	2.4E-03	2
Bis(2-chloro-ethyl)ether	2.7E-01	1.4E-09	7.1E-04	3
Bis(chloro-methyl)ether	1.5E-02	7.7E-11	1.3E-02	3
1,3-Butadiene	1.1E+00	5.9E-09	1.7E-04	1
Cadmium (and compounds)	4.6E-02	2.4E-10	4.2E-03	1
Carbon tetrachloride	4.6E+00	2.4E-08	4.2E-05	1
Chlorinated dibenzodioxins and furans ##	1.2E-06♦	6.2E-15♦	3.8E+01	1
Chlorinated paraffins	7.7E+00	4.0E-08	2.5E-05	4
Chloroform	3.6E+01	1.9E-07	5.3E-06	1
4-Chloro-o-phenylenediamine	4.2E+01	2.2E-07	4.6E-06	4
p-Chloro-o-toluidine	2.5E+00	1.3E-08	7.7E-05	4
Chromium (hexavalent)	1.3E-03	6.7E-12	1.5E-01	1
p-Cresidine	4.4E+00	2.3E-08	4.3E-05	4
Cupferron	3.1+00	1.6E-08	6.3E-05	4
2,4-Diaminoanisole	2.9E+01	1.5E-07	6.6E-06	4
2,4-Diaminotoluene	1.8E-01	9.1E-10	1.1E-03	4
1,2-Dibromo-3-chloropropane	9.7E-02	5.0E-10	2.0E-03	3

Table 1
BAAQMD Screening Levels for Carcinogens
(Updated February 3, 2000)

Compound	Acceptable Emission Rate (lb/year)	Acceptable Air Concentration (gm/m^3)	Unit Risk Factor	Reference
1,4-Dichlorobenzene	1.8E+01	9.1E-08	1.1E-05	3
3, 3′-Dichlorobenzidine	5.6E-01	2.9E-09	3.4E-04	3
1,1-Dichloroethane	1.2E+02	6.3E-07	1.6E-06	4
Diesel exhaust particulate matter	6.4E-01	3.3E-09	3.0E-04	1
Diethylhexylphthalate	8.1E+01	4.2E-07	2.4E-06	5
p-Dimethylaminoazobenzene	1.5E-01	7.7E-10	1.3E-03	4
2,4-Dinitrotoluene	2.1E+00	1.1E-08	8.9E-05	3
1,4-Dioxane	2.5E+01	1.3E-07	7.7E-06	3
Epichlorohydrin	8.3E+00	4.3E-08	2.3E-05	3
Ethylene dibromide	2.7E+00	1.4E-08	7.1E-05	1
Ethylene dichloride	8.7E+00	4.5E-08	2.2E-05	1
Ethylene oxide	2.1E+00	1.1E-08	8.8E-05	1
Ethylenethiourea	1.5E+01	7.7E-08	1.3E-05	4
Formaldehyde	3.3E+01	1.7E--07	6.0E-06	1
Hexachlorobenzene	3.9E-01	2.0E-09	5.1E-04	3
Hexachlorocyclohexanes	1.8E-01	9.1E-10	1.1E-03	3
Hydrazine	3.9E-02	2.0E-10	4.9E-03	2
Lead and lead compounds	1.6E+01	8.3E-08	1.2E-05	1
4.4′-Methylenebis-(2-chloroaniline)	4.4E-01	2.3E-09	4.3E-04	4
Methylene chloride	1.9E+02	1.0E-06	1.0E-06	1
4,4′-Methylenedianiline	4.2E-01	2.2E-09	4.6E-04	4
Michler's ketone	7.7E-01	4.0E-09	2.5E-04	4
Nickel and Nickel Compounds	7.3E-01	3.8E-09	2.6E-04	1
N-Nitrosodiethylamine	1.9E-02	1.0E-10	1.0E-02	3
N-Nitrosodimethylamine	4.2E-02	2.2E-10	4.6E-03	3
N-Nitrosodiphenylamine	7.3E+01	3.8E-07	2.6E-06	3
p-Nitrosodiphenylamine	3.1E+01	1.6E-07	6.3E-06	4
N-Nitroso-n-dibutylamine	1.6E-03	9.1E-12	1.1E-01	3
N-Nitroso-N-methylethylamine	3.1E-02	1.6E-10	6.3E-03	2
N-Nitrosomorpholine	1.0E-01	5.3E-10	1.9E-03	4

Table 1
BAAQMD Screening Levels for Carcinogens
(Updated February 3, 2000)

Compound	Acceptable Emission Rate (lb/year)	Acceptable Air Concentration (gm/m^3)	Unit Risk Factor	Reference
N-Nitrosopiperidine	7.1E-02	3.7E-10	2.7E-03	4
N-Nitrosodi-*n*-propylamine	9.7E-02	5.0E-10	2.0E-03	2
N-Nitrosopyrrolidine	3.3E-01	1.7E-09	6.0E-04	2
PAHs ***	4.4E-02♦	2.3E-10♦	1.7E-03	1
PCBs	6.8E-03♦	3.5E-11♦	2.2E-03	3
Pentachlorophenol	3.8E+01	2.0E-07	5.1E-06	3
Perchloroethylene	3.3E+01	1.7E-07	5.9E-06	1
Potassium bromate	1.4E+00	7.1E-09	1.4E-04	4
1,3-Propane sultone	2.7E-01	1.4E-09	6.9E-04	4
Propylene oxide	5.2E+01	2.7E-07	3.7E-06	2
1,1,2,2-Tetrachloroethane	3.3E+00	1.7E-08	5.8E-05	2
Thioacetamide	1.1E-01	5.9E-10	1.7E-03	4
2,4- and 2,6-Toluene diisocyanate	1.8E+01	9.1E-08	1.1E-05	4
1,1,2-Trichloroethane	1.2E+01	6.3E-08	1.6E-05	2
Trichloroethylene	9.7E+01	5.0E-07	2.0E-06	1
2,4,6-Trichlorophenol	9.7E+00	5.0E-08	2.0E-05	3
Urethane	6.6E-01	3.4E-09	2.9E-04	3
Vinyl chloride	2.5E+00	1.3E-08	7.8E-05	1

Footnotes for Table 1

Expressed as 2,3,7,8-TCDD equivalents.

*** Includes, but is not limited to, benz[a]anthracene, benzo[a]pyrene, benzo[k]fluoroanthene, benzo[b]fluoroanthene, dibenz[a,h]anthracene, indeno[1,2,3-cd]ppyrene.

♦ Screening levels adjusted to include the impact from default noninhalation pathways.

@@@ URF = 1.9E-04/100 fibers/m^3. Use factor of 100 fibers/0.003 μg weight to convert asbestos concentration in $\mu g/m^3$ to fibers/m^3.

Notes for Table 1

The acceptable air concentration (g/m^3) is the annual average air concentration which would cause a cancer risk of 1E-06 (one in a million). These concentrations are converted to an emission rate (lb/year) by use of the following aerodynamic downwash equation (ref. 6):

Emission rate (g/sec) = 1-hour average concentration (g/m^3) x 1.5 x A x u

Assuming:

1-hour average concentration = annual average concentration x 10 (ref. 7)
A = building cross-sectional area = 92.7 m^2 (25'h x 40'w) [reasonable worst-case assumption]
u = wind speed = 2 m/sec (ref. 8)
Emission rate (lb/year) = emission rate (g/sec) x 69525 (lb/yr)/(g/sec) [units conversion]

Substituting:

Emission rate (lb/year) = [annual avg. concentration (g/m^3) x 10] x [69525 (lb/yr)/(g/s)] x [1.5 x 92.7 m^2 x 2 m/sec]

Yields:

Emission rate (lb/year) = annual average concentration (g/m^3) x 1.93E+08

References for Table 1

1. California/EPA Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Risk Assessment Guidelines. Part II: Technical Support Document for Describing Available Cancer Potency Factors, April 1999*, Toxic Air Contaminant document.

2. California/EPA Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Risk Assessment Guidelines. Part II: Technical Support Document for Describing Available Cancer Potency Factors, April 1999*, Integrated Risk Information System (IRIS), US EPA.

3. California/EPA Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Risk Assessment Guidelines. Part II: Technical Support Document for Describing Available Cancer Potency Factors, April 1999*, Standard Proposition 65 document.

4. California/EPA Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Risk Assessment Guidelines. Part II: Technical Support Document for Describing Available Cancer Potency Factors, April 1999*, Expedited Proposition 65 document.

5. California/EPA Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Risk Assessment Guidelines. Part II: Technical Support Document for Describing Available Cancer Potency Factors, April 1999,* Pesticide and Environmental Toxicology Section document.

6. USEPA, Office of Air Quality Planning and Standards, *Screen3 Model User's Guide*, EPA-454/B-95-004, September 1995.

7. USEPA, Office of Air Quality Planning and Standards, *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised*, EPA-454/R-92-019, October 1992.

8. USEPA, Office of Air Quality Planning and Standards, *Regional Workshops on Air Quality Modeling: A Summary Report*, EPA-450/4-82-015, 1982.

Table 2
BAAQMD Screening Levels for Noncarcinogens
(Updated February 3, 2000)

Compound	Acceptable Emission Rate (lb/year)	Acceptable Air Concentration (g/m^3)	Reference
Acrolein	3.9E+00	2.0E-08	2
Allyl chloride	1.9E+02	1E-06	2
Ammonia	1.9E+04	1E-04	2
Benzyl chloride	2.3E+03	1.2E-05	3
Bromine and compounds	3.3E+02	1.7E-06	3
Butyl alcohol, tert-	1.4E+05	7.1E-04	5
Carbon disulfide	1.4E+04	7.4E-05	5
Chlorine	1.4E+03	7.1E-06	3
Chlorobenzene	1.4E+04	7.0E-05	2
Chlorofluorocarbons	1.4E+05	7.0E-04	2
Chlorophenol, 2-	3.5E+03	1.8E-05	2
Chloropicrin	7.7E+02	4.0E-06	3
Chlorotoluene	2.3E+03	1.2E-05	5
Copper and copper compounds	4.6E+02	2.4E-06	3
Cresol mixtures	3.5E+04	1.8E-04	2
1,1-Dichloroethylene; *see* Vinylidene chloride			
Diethylaminoethanol	2.1E+04	1.1E-04	5
Dimethylamine	3.8E+02	2.0E-06	2
Dimethyl phthalate	2.3E+03	1.2E-05	5
Dioctyl phthalate	2.3E+03	1.2E-05	5
Ethyl alcohol (ethanol)	8.7E+05	4.5E-03	5
Ethyl acetate	6.6E+05	3.4E+03	5
Ethyl acrylate	9.3E+03	4.8E-05	3
Ethyl chloride	1.9E+06	1.0E-02	2
Freons: *see* Chlorofluorocarbons			
Gasoline vapors	4.1E+05	2.1E-03	3
Glutaraldehyde	3.3E+02	1.7E-06	3
Glycol ethers:			
2-ethoxyethanol (Cellosolve®)	3.9E+04	2.0E-04	2

Table 2
BAAQMD Screening Levels for Noncarcinogens
(Updated February 3, 2000)

Compound	Acceptable Emission Rate (lb/year)	Acceptable Air Concentration (g/m^3)	Reference
2-ethoxyethanol acetate (Cellosolve® acetate)	1.2E+04	6.4E-05	3
2-methoxymethanol (Methyl Cellosolve®)	3.9E+03	2.0E-05	2
2-methoxymethanol acetate (Methyl Cellosolve® acetate)	1.1E+04	5.7E-05	3
2-butoxyethanol (Butyl Cellosolve®)	3.9E+03	2.0E-05	4
Hexachlorocyclopentadiene	4.6E+01	2.4E-07	2,3
n-Hexane	8.3E+04	4.3E-04	5
Hydrogen bromide	4.6E+03	2.4E-05	3
Hydrogen chloride	1.4E+03	7.0E-06	2
Hydrogen cyanide	1.4E+04	7.0E-05	2
Hydrogen fluoride	1.1E+03	5.9E-06	3
Hydrogen sulfide	8.1E+03	4.2-05	6
Methylene-bis-phenylisocyanate	1.8+01	9.5E-08	3
Methyl isocyanate	7.0E+01	3.6E-07	3
Toluene diisocyanate	1.8+01	9.5E-08	3
Isophorone	6.6E+04	3.4E-04	5
Isopropyl alcohol	4.4E+05	2.3E-03	5
Lead, inorganic, and compounds	2.9E+01*	1.5E-07*	6
Maleic anhydride	4.6E+02	2.4E-06	3
Manganese and manganese compounds	7.7E+01	4.0E-07	2
Mercury and mercury compounds	5.8E+01	3.0E-07	4
Methyl alcohol	1.2E+05	6.2E-04	3
Methyl bromide	1.2E+03	6.0E-06	4
Methyl chloroform (TCA)	6.2E+04	3.2E-04	2
Methylene dianiline & chloride, 4,4'-	3.7E+02	1.9E-06	3
Methyl ethyl ketone	1.5E+05	7.7E-04	1
Methyl mercury	1.9E+02	1.0E-06	2
Methyl methacrylate	1.9E+05	1.0E-04	3
N-Methylpyrrolidone	1.8E+05	9.5E-04	5

Table 2
BAAQMD Screening Levels for Noncarcinogens
(Updated February 3, 2000)

Compound	Acceptable Emission Rate (lb/year)	Acceptable Air Concentration (g/m^3)	Reference
Naphthalene	2.7E+02	1.4E-05	4
Nitric acid	2.3E+03	1.4E-05	5
Nitrobenzene	3.3E+02	1.7E-06	2
Nitropropane, 2-	3.9E+03	2.0E-05	2
Phenol	8.7E+03	4.5E-05	3
Phosgene	1.8E+02	9.5E-07	5
Phosphine	1.9E+03	1.0E-05	2
Phosphoric acid	4.6E+02	2.4E-06	5
Phosphorus (white)	1.4E+01	7.0E-08	2
Phthalic anhydride	1.4E+06	7.0E-03	2
Selenium and selenium compounds	9.7E+01	5.0E-07	3
Silica, respirable, crystalline	2.3E+02	1.2E-06	3
Sodium hydroxide	9.3E+02	4.8E-06	3
Styrene monomer	1.4E+05	7.0E-04	2
Tetrachlorophenols	1.7E+04	8.8E-05	2
Tetrahydrofuran	2.7E+05	1.4E-03	5
Toluene	3.9E+04	2.0E-04	2
Trichlorobenzene, 1,2,4-	1.8E+04	9.5E-05	5
1,1,1-Trichloroethane; *see* Methyl chloroform			
Vapam (Na diethyldithiocarbamate)	2.2E+04	1.1E-04	1
Vinylidine chloride (1,1-Dichloroethylene)	6.2E+03	3.2E-05	2
Xylenes	5.8E+04	3.0E-04	4
Zinc and zinc compounds	6.8E+03	3.5E-05	1

Footnote for Table 2

* Screening levels adjusted to include the impact from default noninhalation pathways

Notes for Table 2

The acceptable air concentration (g/m^3) is the annual average air concentration below which adverse non-cancer health effects are not expected to occur. These concentrations are converted to an emission rate (lb/year) by use of the following aerodynamic downwash equation (ref. 7):

Emission rate (g/sec) = 1-hour average concentration (g/m^3) x 1.5 x A x u

Assuming:

1-hour average concentration = annual average concentration x 10 (ref. 8)
A = building cross-sectional area = 92.7 m^2 (25'h x 40'w) [reasonable worst-case assumption]
u = wind speed = 2 m/sec (ref. 9)
Emission rate (lb/year) = emission rate (g/sec) x 69525 (lb/yr)/(g/sec) [units conversion]

Substituting:

Emission rate (lb/year) = [annual avg. concentration (g/m^3) x 10] x [69525 (lb/yr)/(g/s)] x [1.5 x 92.7 m^2 x 2 m/sec]

Yields:

Emission rate (lb/year) = annual average concentration (g/m^3) x 1.93E+08

References for Table 2

1. Acceptable Daily Intake; EPA Superfund Public Health Evaluation Manual, 1986.

2. California-EPA Office of Environmental Health Hazard Assessment, *CAPCOA Air Toxics "Hot Spots" Program Risk Assessment Guidelines, October 1993*, IRIS database.

3. California-EPA Office of Environmental Health Hazard Assessment, *CAPCOA Air Toxics "Hot Spots" Program Risk Assessment Guidelines, October 1993*, TLV/420.

4. California-EPA Office of Environmental Health Hazard Assessment, *CAPCOA Air Toxics "Hot Spots" Program Risk Assessment Guidelines, October 1993*, EPA Health Effects Assessment Summary Tables, Fourth Quarter FY 1991.

5. Threshold Limit Value (TLV)/Safety factor of 420.

6. California Ambient Air Quality Standard (CAAQS).

7. USEPA, Office of Air Quality Planning and Standards, *Screen3 Model User's Guide,* EPA-454/B-95-004, September 1995.

8. USEPA, Office of Air Quality Planning and Standards, *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised*, EPA-454/R-92-019, October 1992.

9. USEPA, Office of Air Quality Planning and Standards, *Regional Workshops on Air Quality Modeling: A Summary Report*, EPA-450/4-82-015, 1982.

APPENDIX A
REFERENCES

The health risk assessment procedures used by the BAAQMD are in accordance with guidelines adopted by Cal/EPA, specifically the Office of Environmental Health Hazard Assessment (OEHHA), for the Air Toxics "Hot Spots" Program. These guidelines, which are prepared in coordination with the California Air Resources Board (CARB) and the California Air Pollution Control Officers Association (CAPCOA), have been revised several times and are subject to future updating. The current adopted risk assessment guidelines are listed in reference numbers 1 and 2 below.

References:

1. California Air Pollution Control Officers Association, *CAPCOA Air Toxics "Hot Spots" Program, Revised 1992 Risk Assessment Guidelines*, October 1993.

2. Cal/EPA Office of Environmental Health Hazard Assessment Memorandum, *Adoption of Cancer Potency Values for Airborne Toxicants*, April 13, 1999.

3. BACT/TBACT Workbook: Guidelines for Best Available Control Technology including Best Available Control Technology for Toxics (TBACT), June 1995. Periodic updates to Workbook found on the BAAQMD website (www.baaqmd.gov).

APPENDIX B
RISK ANALYSIS PROCEDURES

The Air Toxic "Hot Spots" (ATHS) Program risk assessment guidelines contain detailed discussions on the nature of risk assessments and their preparation. Anyone preparing a risk evaluation for submission to the BAAQMD should consult these guidelines. [It should be noted, however, that the ATHS program involves estimating health risks associated with TAC emissions from entire facilities. The BAAQMD review for new/modified sources involves estimating incremental health risks associated with increases in TAC emissions from proposed projects].

Procedures for Levels 1 and 2 Risk Analyses follow. It should be noted that the ATHS Program risk assessment guidelines use a tiered, iterative, approach to evaluating health risks to allow the level of effort in assessing risk to be commensurate with the importance of the risk management decision. Under this approach, additional detail and refinement in an analysis is introduced only to the extent necessary to reach specified acceptable risk levels.

1. Risk Screening Analysis (Level 1)

A. Components of a Screening Analysis

A screening analysis should contain the following:

1. A brief description of the new or modified source(s).

2. The annual emission estimates associated with the new or modified source(s) for all TACs listed in Tables 1 and 2.

3. A description of applicable emission release parameters such as stack height, stack diameter, stack gas velocity, and release temperature for point sources, or the characteristics of area or volume sources. For elevated emission releases, the dimensions of nearby buildings should also be provided for determining building downwash impacts.

4. The choice of air dispersion model; SCREEN3 or ISCST3 using default meteorological data (i.e., SCREEN3) are the models usually chosen. Any dispersion model selected must be EPA-approved and in the public domain.

5. Identification of the receptors to be impacted by the source being evaluated. This will typically include the closest residential receptor, the closest off-site industrial receptor and any K-12 schools within 1000 feet of the source.

6. The choice of exposure pathways to be evaluated. If the source being evaluated will emit volatile organic compounds (VOC) or other gaseous TACs only, the inhalation pathway is the only pathway that need be evaluated. If the source emits any of the contaminants listed in Table B-1, then noninhalation pathways must also be evaluated. The pathways to be included, in addition to inhalation, are soil ingestion, dermal exposure and mother's milk.

7. An estimate of the zone of impact of the proposed project, if requested by the Toxic Evaluation Section staff. The zone of impact is used to determine whether additional non-inhalation exposure pathways should be evaluated.

B. Results and Calculations

The following items should be included in this portion of the analysis:

1. The results of the air dispersion modeling expressed as the annual average ambient air concentration(s) resulting from the project's emissions ($\mu g/m^3$). The concentrations at the site of maximum impact and at the location of any of the receptors defined in A.6 should be clearly identified.

2. Calculations of risk attributable to emissions of carcinogens and/or calculations of hazard indices attributable to emissions of noncarcinogens. The risk should be calculated for the maximally exposed individual (MEI), which may be either a residential site, an offsite worker, or any K-12 schools within 1000 feet of the source. Sample calculations for risk and hazard index are shown in Appendix C.

   In those instances where noninhalation pathways are included, the risks from these exposure routes should be added to the inhalation risk to give total risk. Similarly, hazard indices are calculated for all of the pathways and summed to give a total hazard index.

3. An adequate map of the facility showing the location of sources, the facility boundary line, all pertinent receptors, and the facility zone of impact (if required).

2. Refined Risk Analysis (Level 2)

A. Components of a Refined Analysis

A refined analysis should contain the following:

1. A description of the new or modified source(s).

2. The annual emission estimates associated with the new or modified source(s) for all TACs listed in Tables 1 and 2.

3. A description of applicable emission release parameters such as stack height, stack diameter, stack gas velocity, and release temperature for point sources, or the characteristics of area or volume sources. For elevated emission releases, the dimensions of nearby buildings should also be provided for determining building downwash impacts.

4. The choice of air dispersion model(s); ISCST3 is the model usually chosen. The reasons for the choice of model should be listed. Any dispersion model selected must be EPA-approved and in the public domain.

5. The choice of meteorological data. The meteorological data must be deemed applicable for the site by BAAQMD meteorologists. For determining cancer risks, the results may be averaged if a minimum of three consecutive years of approved meteorological data is available.

6. The choice of exposure pathways to be evaluated. If the source being evaluated will emit volatile organic compounds (VOC) or other gaseous TACs only, the inhalation pathway is the only pathway that need be evaluated. If the source emits any of the contaminants listed in Table B-1, then noninhalation pathways must also be evaluated. The minimum pathways to be included, in addition to inhalation, are soil ingestion, dermal exposure and mother's milk. Any other pathways that are applicable within the zone of impact of the proposed project (e.g., fish consumption, crop consumption) must also be included.

7. A network of receptor points identified in the modeling analysis. The network should be of sufficient number and density to locate the site of maximum concentration. Receptor points should also be placed at the location of sensitive receptors such as K-12 schools. If required by the Toxic Evaluation Section, receptors should also include census tract (or sub-census area) centroids surrounding the source(s).

8. Identification of the receptors to be impacted by the source being evaluated. This should include the residential and off-site industrial receptors surrounding the source, any K-12 schools located within 1000 feet of the source.

9. An estimate of the zone of impact of the proposed project, if requested by the Toxic Evaluation Section staff. The zone of impact is used to determine whether additional non-inhalation exposure pathways should be evaluated. The zone of impact may also be used to determine which census tracts need to be included in estimating population risks, if deemed necessary by the Toxic Evaluation Section.

B. Results and Calculations

The following items should be included in this portion of the analysis:

1. The results of the air dispersion modeling expressed as the annual average ambient air concentration(s) ($\mu g/m^3$). The concentrations at the site of maximum impact and at the location of any of the receptors defined in A.8 should be clearly identified.

2. Calculations of risk attributable to emissions of carcinogens and/or calculations of hazard indices attributable to emissions of noncarcinogens. The calculations should include the risk to the maximally exposed individual (MEI) and the risks to all of the receptors identified in A.8. Sample calculations for risk and hazard index are shown in Appendix C.

   In those instances where noninhalation pathways are included, the risks from these exposure routes are added to the inhalation risk to give total risk. Similarly, hazard indices are calculated for all of the pathways. The indices for substances affecting the same target organ are summed to give total hazard indices for each target.

3. An adequate map of the facility showing the location of sources, the facility boundary line, all pertinent receptors, and the facility zone of impact (if required).

Table B-1

Substances to be Evaluated for Noninhalation Exposures

Arsenic	Mercury[1]	Polychlorinated biphenyls
Beryllium	Nitrosamines:	PAHs Including, but not limited to:
Cadmium[1]	N-Nitrosodiethylamine	Benz[a]anthracene
Chlorobenzene[1]	N-Nitrosodimethylamine	Benzo[b]fluoranthene
Chromium (hexavalent)	p-Nitrosodiphenylamine	Benzo[k]fluoranthene
Dioxins and Furans	N-Nitrosodi-n-butylamine	Benzo[a]pyrene
2-Chlorophenol[1]	N-Nitrosodi-n-propylamine	Dibenz[a,h]anthracene
p-Dichlorobenzene	N-Nitrosomethylethylamine	Indeno[1,2,3-cd]pyrene
Hexachlorobenzene	N-Nitrosomorpholine	Naphthalene[1]
Hexachlorocyclohexanes	N-Nitrosopiperidine	Pentachlorophenol
Lead[1]	N-Nitrosopyrrolidine	2,4,6 Trichlorophenol

[1] Oral cancer potency value not available.

APPENDIX C
SAMPLE CALCULATIONS

Sample calculations for risk from inhalation exposure only are presented here. Noninhalation exposure risks can be calculated using the equations found in the risk assessment guidelines. Software packages are also available through for estimating risk from both inhalation and noninhalation pathways. They are available through CARB and CAPCOA.

A. Calculation of carcinogenic risk (inhalation pathway)

1) Residential site, 70-year exposure:
   Cancer Risk = maximum GLC x URF

2) Off-site worker, long-term exposure:
   Cancer Risk = maximum GLC x URF x WEF

GLC = long-term average ground-level air concentration ($\mu g/m^3$)
URF = pollutant-specific unit risk factor $(\mu g/m^3)^{-1}$
WEF = worker exposure factor, long term (varies from 0.14 to 0.66)
If the source emissions occur continuously (i.e., 24 hours/day, 365 days/year), a WEF of 0.14 should be used (8/24 hr x 240/365 days x 46/70 years).
If the source emissions coincide with hours of operation for off-site workers. e.g. weekdays from 8:00 AM to 5:00 PM, rather than continuously, then a WEF of 0.66 should be used (46/70 years).

B. Calculation of noncarcinogenic chronic risk (inhalation pathway)

1) Residential site, long-term exposure:
   Hazard Index = maximum GLC/inhalation REL

2) Off-site worker, long-term exposure:
   Hazard Index = (maximum GLC/inhalation REL) x WEF

GLC = annual average ground-level air concentration ($\mu g/m^3$)
REL = inhalation reference exposure level ($\mu g/m^3$)
WEF = worker exposure factor, long term (0.22 to 1.0)
If the source emissions occur continuously (i.e., 24 hours/day, 365 days/year), a WEF of 0.22 should be used (8/24 hr x 240/365 days).
If the source emissions coincide with hours of operation for off-site workers. e.g. weekdays from 8:00 AM to 5:00 PM, rather than continuously, no exposure adjustments should be applied (WEF = 1.0).

Risk Management Policy

(Updated February 3, 2000)

The APCO is responsible for Risk Management at the BAAQMD. The APCO may consider a number of factors in determining whether to issue or deny a permit for a proposed project together with the results of a risk analysis. These factors include possible net air quality benefits of replacement equipment, incorporation of all feasible risk reduction measures, the lifetime of the project, the degree of uncertainty in the risk analysis, the costs of mitigation, project benefit to society, or any other relevant factor.

A. The APCO has determined that projects meeting one or more of the following three criteria are acceptable without further risk management consideration:
   i. The project is acceptable if the annual emissions associated with the project would result in an incremental cancer risk equal to or less than 1E-06 (one in a million), were the exposure to continue for 70 years. When applicable, the chronic noncancer risk associated with the project, expressed in terms of a Hazard Index, must be equal to or less than 1.0. The risk is calculated at the point of maximum residential or maximum off-site worker exposure, whichever is greater.
   ii. The project is acceptable if the annual emissions associated with the project would result in an incremental cancer risk greater than 1E-06 (one in a million) and equal to or less than 10E-06 (ten in a million), were the exposure to continue for 70 years, the chronic noncancer risk associated with the project, expressed in terms of a Hazard Index, is equal to or less than 1.0, and TBACT has been applied to permitted sources (TBACT is determined on a case-by-case basis and represents a level of control technology no less stringent than BACT for criteria pollutants; in some cases BACT and TBACT will be equivalent). The risk is calculated at the point of maximum residential or maximum off-site worker exposure, whichever is greater.
   iii. The project is acceptable if it meets any separate criteria for project approval that have been established by the APCO for specific source categories based on risk management considerations.

B. Permit applications not meeting one of the above criteria shall be routed to the APCO with a recommendation for denial. The permit engineer shall collect any additional information regarding the project requested by the APCO that will be considered in the risk management process.

Risk Management Policy for Perc Dry Cleaners

(Updated February 3, 2000)

This document summarizes criteria that have been established by the APCO for approval of permits for new/modified perchloroethylene dry cleaners. These criteria have been established under Section A(iii) of the District's Risk Management Policy based on risk management considerations, and do not supercede any other applicable District Rules and Regulations.

The APCO has determined that proposed projects involving perchloroethylene dry cleaners that meet one or more of the following three criteria are acceptable without further risk management considerations. Risks are to be calculated using the applicable Unit Risk Factor for perchloroethylene at the point of maximum residential or maximum off-site worker exposure, whichever is greater.

A. The project is acceptable if the annual emissions associated with the project would result in an incremental cancer risk equal to or less than 1.0E-06 (one in a million), were the exposure to continue for 70 years.

B. The project is acceptable if: (1) the annual emissions associated with the project would result in an incremental cancer risk greater than 1.0E-06 (one in a million) and equal to or less than 1.0E-05 (ten in a million), were the exposure to continue for 70 years; <u>and</u> (2) TBACT has been applied to permitted sources. TBACT for perchloroethylene dry cleaners is as follows:

   a) TBACT is a Secondary Control Machine for any new installation of a dry cleaning machine (including new facilities, replacement machines, additional machines at existing facilities) or for an increase in the permitted level of solvent emissions, except as follows in item b;

   b) TBACT is a Closed-loop Machine for a relocated machine (a relocation of an existing facility's machine to a new non-residential facility within the District is exempt from secondary control requirements in accordance with Regulation 11-16-104 and the BACT/TBACT Workbook).

C. The project is acceptable if: (1) the annual emissions associated with the project would result in an incremental cancer risk greater than 1.0E-05 (ten in a million) and equal to or less than 1.0E-04 (one hundred in a million), were the exposure to continue for 70 years; <u>and</u> (2) TBACT has been applied to permitted sources; <u>and</u> (3) all reasonable risk reduction measures have been applied. TBACT and all reasonable risk reduction measures for perchloroethylene dry cleaners are as follows:

a) TBACT is a Secondary Control Machine for any new installation of a dry cleaning machine (including new facilities, replacement machines, additional machines at existing facilities) or for an increase in the permitted level of solvent emissions, except as follows in item b;

b) TBACT is a Closed-loop Machine for a relocated machine (a relocation of an existing facility's machine to a new non-residential facility within the District is exempt from secondary control requirements in accordance with Regulation 11-16-104 and the BACT/TBACT Workbook).

c) All reasonable risk reduction measures are: (1) a Vapor Barrier Room (consistent with Regulation 11-16-307.1 and the Dry Cleaner Ventilation Guidelines) for a new facility (including a relocated facility); or (2) an enhanced ventilation system (consistent with Regulation 11-16-307.2 and the Dry Cleaner Ventilation Guidelines, i.e., Vapor Barrier Room, Vapor Capture Room, Partial Vapor Room, or Local Ventilation System) for a proposed project at an existing facility that is not co-residential.

A permit applicant may apply alternative and/or additional emissions control (e.g., secondary control retrofits for relocated machines, use of alternative solvents) or other risk reduction measures (e.g., increasing stack height and/or exit velocity) as necessary to reduce risks to acceptable levels specified in one of the three listed criteria above.

Permit applications not meeting one of the above criteria shall be routed to the APCO with a recommendation for denial. The permit engineer shall collect any additional information regarding the project requested by the APCO that will be considered in the risk management process.

Risk Management Policy for Diesel-Fueled Engines

(Updated January 11, 2002)

This document summarizes criteria that have been established by the APCO for approval of permits for new/modified diesel-fueled, reciprocating, engines ("diesel-fueled engines"). These criteria have been established under Section A(iii) of the District's Risk Management Policy based on risk management considerations, and do not supercede any other applicable District Rules and Regulations. Definitions of key terms used in this policy shall be consistent with those given in Risk Management Policy for Permitting of New Stationary Diesel-Fueled Engines, California Air Resources Board, October 2000.

The APCO has determined that proposed projects with permitted diesel-fueled engines meeting one or more of the following two criteria are acceptable without further risk management considerations. Risks are to be calculated using the applicable Unit Risk Factor for diesel particulate matter (PM) at the point of maximum residential or maximum off-site worker exposure, whichever is greater. For emergency standby engines, risks are to be calculated for all engine operation excluding emergency use (as defined in Regulation 9-8-231).

A. The project is acceptable if the annual emissions associated with the project would result in an incremental cancer risk equal to or less than 1.0E-06 (one in a million), were the exposure to continue for 70 years.

B. The project is acceptable if: (1) the annual emissions associated with the project would result in an incremental cancer risk greater than 1.0E-06 (one in a million) and equal to or less than 1.0E-05 (ten in a million), were the exposure to continue for 70 years; and (2) TBACT has been applied to permitted sources. TBACT for diesel-fueled engines is as follows:

   a) TBACT is a low emitting, spark-ignited, gas-fueled engine with lean burn combustion or rich burn with Non-Selective Catalytic Reduction (see District's *BACT/TBACT Workbook*). A diesel-fueled engine will be permitted only if a gas-fueled engine, or electric motor, is not practical (e.g., a remote location without natural gas availability or electric power, the engine is to be used exclusively for emergency standby purposes, or only a diesel-fueled engine will meet the portability and/or power/torque/rpm requirements of the application under review).

   b) If a diesel-fueled engine is shown by the permit applicant to be necessary, then TBACT is a CARB or EPA certified engine with a PM certified level (or equivalent emission rate) no greater than 0.1 g/bhp-hr.[1]

A permit applicant may apply alternative and/or additional emissions control (e.g., catalyst-based diesel particulate filters (DPFs), diesel oxidation catalysts, ultra-low sulfur diesel fuel) or other risk reduction measures (e.g., increasing stack height within what is considered Good Engineering Practice, maximizing source/receptor separation distances, modifying operating hours to minimize public exposure) as necessary to reduce risks to acceptable levels specified in one of the two listed criteria above (A or B). All engines not equipped with a DPF must be “plumbed” to facilitate the installation of a DPF at a future date.

Permit applications not meeting one of the above criteria shall be routed to the APCO with a recommendation for denial. The permit engineer shall collect any additional information regarding the project requested by the APCO that will be considered in the risk management process.

FOOTNOTE:

[1] A PM certified level no greater than 0.1 g/bhp-hr means an emission level of 0.15 g/bhp-hr or less as determined during a steady-state engine certification test (ISO 8178).

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Staff Report

JUNE 2005

Appendix C

Methodology for Derivation of

Toxic Air Contaminant (TAC) Trigger Levels

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

Methodology for Derivation of Toxic Air Contaminant (TAC) Trigger Levels

C1. INTRODUCTION

The TAC trigger levels given in Table 2-5-1 are used to determine the need for a health risk screening analysis (HRSA) for projects involving new and modified sources. The TAC trigger levels are also used: (1) to establish permit requirements for certain sources that may otherwise qualify for permit exemptions, (2) as part of the applicability of the accelerated permit program, and (3) in determining permit fees. The TAC trigger levels are considered to be reasonable de minimis emission rates for use at a project-level. Projects with emissions below the TAC trigger levels are unlikely to cause, or contribute significantly to, adverse health risks.

The TAC trigger levels were calculated using: (1) target health risk levels that are considered de minimis for project-level risks, (2) OEHHA/ARB health effect values, (3) generally conservative modeling procedures which establish the extent to which a TAC is transported and dispersed in the atmosphere after its release from the source, and (4) health-protective assumptions regarding the extent of an individual's exposure to an emitted TAC.

C2. Target Health Risk Levels

For chronic health risk, a lifetime cancer risk of 1.0 in a million (10^{-6}) and a non-cancer hazard index of 0.20, were used as the target health risk levels to derive the chronic trigger levels. These are the risk thresholds at which TBACT is required under Regulation 2, Rule 5. The target cancer risk is unchanged from what was used to derive the trigger levels in the existing REP. The target non-cancer health risk is 20 percent of what was used to derive the trigger levels in the existing REP (i.e., these were based on a target hazard index of 1.0).

Where applicable, the chronic trigger level represents the lesser of the trigger levels determined based on the cancer and non-cancer target health risk levels. In general, for compounds that have both potential cancer and non-cancer adverse health effects, the chronic trigger level presented in Table 2-5-1 is based on the potential carcinogenic health effect, which is more health-protective.

For acute health risk, a hazard index of 1.0 was used as the target health risk level. This is an impact equal to the acute REL, which represents an air concentration that is not likely to cause adverse effects in a human population, including sensitive subgroups, exposed on an intermittent basis for a one-hour period. It is also the project risk limit required under Regulation 2, Rule 5. The acute trigger levels in Table 2-5-1 are new; the existing REP contains only chronic trigger levels.

C3. Health Effect Values

Table 2-5-1 incorporates the most recent health effect values adopted by OEHHA/ARB (as of January 1, 2005) for use in the ATHS Program. These include CPFs for carcinogens, and RELs for non-carcinogenic health effects. Some TACs do not appear on Table 2-5-1 because there may not be sufficient data available for OEHHA to establish a CPF or REL. Prior to use in Regulation 2, Rule 5, the District through a rule development process will review any new or revised health effects value adopted by OEHHA/ARB after January 1, 2005. Typically within one year of OEHHA/ARB's adoption of new toxicity criteria, the District will evaluate the new criteria for feasibility of implementation, enforcement, and compliance with project risk limits.

Although OEHHA has provided RELs for CO, NO2, and SO2, using the State Ambient Air Quality Standards, trigger levels were not developed for these criteria pollutants because they are regulated in other District programs. In addition, although OEHHA has developed toxicity criteria for "gasoline vapors", a trigger level was not developed for this compound grouping because individual components of gasoline (e.g., benzene) are evaluated separately. Moreover, gasoline has been reformulated since the development of the REL for gasoline vapors, so the use of this REL is considered outdated.

The trigger levels for polycyclic aromatic hydrocarbons (PAHs), polychlorinated dibenzo-p-dioxins (PCDDs, or dioxins), polychlorinated dibenzofurans (PCDFs, or furans), and dioxin-like polychlorinated biphenyls (PCBs) were based on compound groupings. The trigger levels were expressed as B(a)P-equivalent and TCDD-equivalents in order to address cumulative exposures to applicable PAH and PCDD/PCDF/dioxin-like PCB congeners, respectively.

Although acute severity exposure levels (e.g., mild, severe, and life-threatening effects) have been identified for each acute REL, all acute trigger levels were developed based on the same exposure assumptions and target risk levels, regardless of the severity of the adverse health effect corresponding to the acute REL.

C4. Modeling Procedures

The trigger levels in Table 2-5-1 are based on the same screening-level dispersion modeling procedure that was used to develop the trigger levels in the existing REP. This involves the use of a cavity effects screening procedure that relates emission rate to one-hour average ambient air concentrations (i.e., dispersion factors, or Chi/Q) where dispersion is affected by aerodynamic downwash from a nearby building. The cavity region occurs immediately adjacent to the lee side of the building and is often the "worst-case" dispersion scenario where receptor areas are in close proximity to the source being evaluated. The cavity effects equation used to derive the trigger levels is provided in EPA's Screening Procedures for Estimating the Air Quality Impact of Stationary Sources (EPA, 1992), and is incorporated into the EPA SCREEN3 model (EPA, 1995).

The cavity effects equation requires the selection of the crosswind building area and the average wind speed. A value of 92.7 square meters was used for the crosswind building area (e.g., a building 25 feet high x 40 feet wide). The average wind speed was taken to be 2 meters per second, based on EPA screening modeling guidelines. For use in determining chronic trigger levels, a multiplying factor representing the ratio between annual average and one-hour maximum concentrations of 0.1 was used. This is the high-end value of the range of multiplying factors provided in EPA screening modeling guidelines (EPA, 1982).

All acute trigger levels were conservatively based on maximum one-hour average dispersion factors regardless of the averaging period of the REL. (Most RELs are based on one-hour exposures, but some are based on exposures averaged over several hours [e.g., 4-, 6-, and 7-hour] for reproductive/developmental endpoints).

C5. Exposure Assumptions

The exposure assessment assumptions, that are provided in the 2003 HRA Guidelines, were used to estimate trigger levels. In addition, the District has conformed with the statewide interim Risk Management Policy for inhalation-based residential cancer risk that was adopted by the California Air Resources Board (ARB) and Cal/EPA's OEHHA (http://www.arb.ca.gov/toxics/rmpolicy.pdf). This interim policy recommends where a single cancer risk value for a residential receptor is needed or prudent for risk management decision-making, the potential cancer risk estimate for the inhalation exposure pathway be based on the breathing rate representing the 80th percentile value of the breathing rate range of values (302 L/kg-day). Therefore, the recommended breathing rate of 302 L/kg-day was used to calculate the trigger levels presented in Table 2-5-1. Previously a breathing rate of 286 L/kg-day was used, which was based on a daily respiration rate of 20 cubic meters and a 70 kg body weight. A conservative exposure frequency of 365 days/yr was used, along with an exposure duration of 70 years.

OEHHA has identified a list of substances that require multi-pathway risk analysis, which are listed in Table C-1. The trigger levels for these compounds have been determined based on the minimum residential multi-pathway exposure routes, which are inhalation, incidental soil ingestion, and dermal contact. For dioxins, furans, and PCBs, the breast-milk consumption pathway was also included per OEHHA recommendations. The multi-pathway exposure assessment was performed using CARB's Hotspots Analysis and Reporting Program (HARP) (Version 1.0) using default assumptions. A deposition rate of 0.02 meters per second for "controlled sources" was selected for use in HARP for the multi-pathway risk analyses.

Table C-1 Substances with Trigger Levels Based on Multi-pathway Exposures

Substance	
4,4'-Methylene dianiline	Chromium VI & compounds
Creosotes	Inorganic arsenic & compounds
Diethylhexylphthalate	Beryllium & compounds
Hexachlorocyclohexanes	Lead & compounds
PAHs	Mercury & compounds
PCBs	Nickel & compounds
Cadmium & compounds	Dioxins & Furans

C6. Trigger Level Calculations

The acute trigger levels presented in Table 2-5-1 were calculated as follows:

$$\boxed{\text{Acute TL} = \text{Acute REL} * 1.5 * A * u * UCF * THI}$$

where:

Acute TL = Acute Trigger Level (pounds/hour)

Acute REL = Acute Reference Exposure Level (chemical-specific - $\mu g/m^3$)

A = Building Cross-Sectional Area (92.7 m^2),
[25 feet height x 40 feet width x 40 feet length]

u = Wind Speed [2 m/sec]

UCF = Units Conversion Factor, (7.9E-06)
[(lb/453,590,000 μg) * (3,600 sec/hr)]

THI = Target Hazard Index [1.0]

The chronic trigger levels in Table 2-5-1 represent the lesser of the trigger levels calculated for a carcinogenic and non-carcinogenic adverse health effect. Chronic trigger levels based on non-carcinogenic adverse health effects were calculated for the inhalation exposure pathway, and multi-pathway analyses (via HARP) using the following equation:

$$\textit{Chronic } TL_{nc} = \textit{Chronic REL} * 10 * 1.5 * A * u * UCF * THI$$

where:

Chronic TL_{nc}	=	Chronic Trigger Level – non-cancer risk (pounds/year)
Chronic REL	=	Chronic Reference Exposure Level (chemical-specific $\mu g/m^3$ where applicable, chronic RELs were adjusted via HARP to include impacts from multi-pathway exposure)
10	=	conversion factor used to convert from an annual average concentration to a 1-hour average concentration
A	=	Building Cross-Sectional Area (92.7 m^2), [25 feet height x 40 feet width x 40 feet length]
u	=	Wind Speed [2 m/sec]
UCF	=	Units Conversion Factor (69,525 mg L sec/year m^3), [(lb/453,590 mg) * (1,000 L/m^3) * (31,536,000 sec/year)]
THI	=	Target Hazard Index [0.2]

Chronic trigger levels based on carcinogenic health effects were calculated for the inhalation exposure pathway, and multi-pathway analyses (via HARP) using the following equation:

$$\textit{Chronic } TL_{cr} = 1 / (CPF * BR * EF * 10 * 1.5 * A * u * UCF * TCR)$$

where:

Chronic TL_{cr}	=	Chronic Trigger Level – cancer risk (pounds/year)
CPF	=	Cancer Potency Factor (chemical – specific, $(mg/kg\text{-}day)^{-1}$; where applicable, CPFs were adjusted via HARP to include impacts from multi-pathway exposure)
BR	=	Breathing Rate (302 L/kg-day)
EF	=	Exposure Frequency (365 days/year)
10	=	conversion factor used to convert from an annual average concentration to a 1-hour average concentration
A	=	Building Cross-Sectional Area (92.7 m^2), [25 feet height x 40 feet width x 40 feet length]
u	=	Wind Speed (2 m/sec)
UCF	=	Units Conversion Factor = (69,525 mg L sec/year m^3), [(lb/453,590 mg) * (1,000 L/m^3) * (31,536,000 sec/year)]
TCR	=	Target Cancer Risk [10^{-6}]

Table C-2 presents a comparison of the chronic trigger levels listed in the existing REP and Table 2-5-1. Where a difference in trigger level is identified, the basis for the chemical-specific modification is noted. Differences in trigger levels may be due to one or more of the following factors: (1) revised chemical-specific health effects values (e.g., CPFs and/or RELs) in the 2003 HRA Guidelines relative to earlier guideline documents, (2) the use of a revised target hazard index of 0.2 (rather than 1.0 used in the REP) for non-cancer risks, (3) changes in default multi-pathway exposure parameters or calculations included in HARP relative to the CARB HRA Program (which was previously used), (4) change in the assumed breathing rate of 302 L/kg-day (rather than 286 L/kg-day), and/or (5) the use of cancer potency factors instead of unit risk factors in the calculation of trigger levels. With respect to the last factor, the trigger levels in the REP (for carcinogens) were calculated using unit risk factors, whereas the trigger levels in Table 2-5-1 were calculated based on cancer potency factors (as now recommended by OEHHA). In general, if a chemical-specific unit risk factor and CPF are derived from the same data, they represent the same value, but are only expressed in different units of measure [unit risk factors are expressed as $(\mu g/m^3)^{-1}$ and assume a daily breathing rate of 20 m^3 and body weight of 70 kg; CPFs are expressed as $(mg/kg\text{-}day)^{-1}$]. However, slight differences can be introduced when the values are rounded for presentation in tables. Therefore, although a chemical-specific health effect value may not have been revised, the use of the CPF instead of the URF may result in a difference in the trigger level of up to about six percent.

Table C-2 Summary of Chronic Trigger Level Revisions

Chemical	Chronic Trigger Levels (pounds/year)		Change from REP[a]	Notes
	REP[a]	Table 2-5-1[b]		
Acetaldehyde	7.2E+01	6.4E+01	-11%	i, k
Acetamide	9.7E+00	9.1E+00	-6%	k
Acrolein	3.9E+00	2.3E+00	-41%	a, b
Acrylamide	1.5E-01	1.4E-01	-7%	k
Acrylic acid	NA	3.9E+01	NA	
Acrylonitrile	6.7E-01	6.4E-01	-4%	i, k
Allyl chloride	3.3E+01	3.0E+01	-9%	i, k
Aminoanthraquinone, 2-	2.1E+01	1.9E+01	-10%	i, k
Ammonia	1.9E+04	7.7E+03	-59%	a, b
Aniline	1.2E+02	3.9E+01	-68%	g
Antimony compounds	NA	7.7E+00	NA	
antimony trioxide	NA	7.7E+00	NA	
Arsenic and compounds (inorganic)	2.5E-02	1.2E-02	-52%	h
Arsine	NA	1.9E+00	NA	
Asbestos	3.0E-03	2.9E-03	-3%	k
Benzene	6.7E+00	6.4E+00	-4%	i, k
Benzidine (and its salts)	1.4E-03	1.3E-03	-7%	k
benzidine based dyes	NA	1.3E-03	NA	
direct black 38	NA	1.3E-03	NA	
direct blue 6	NA	1.3E-03	NA	
direct brown 95 (technical grade)	NA	1.3E-03	NA	
Benzyl chloride	3.9E+00	3.8E+00	-3%	i, k
Beryllium and compounds	1.4E-02	8.0E-02	+471%	h, j, k
Bis(2-chloroethyl)ether (Dichloroethyl ether)	2.7E-01	2.6E-01	-4%	k
Bis(chloromethyl)ether	1.5E-02	1.4E-02	-7%	k
Bromine and compounds	3.3E+02	6.6E+01	-80%	a
bromine pentafluoride	NA	6.6E+01	NA	
hydrogen bromide	4.6E+03	9.3E+02	-80%	a
potassium bromate	1.4E+00	1.3E+00	-7%	k
Butadiene, 1,3-	1.1E+00	1.1E+00	None	
Cadmium and compounds	4.6E-02	4.5E-02	-2%	i
Carbon disulfide	1.4E+04	3.1E+04	+121%	a, b, d
Carbon tetrachloride (Tetrachloromethane)	4.6E+00	4.3E+00	-7%	i, k
Chlorinated paraffins	7.7E+00	7.2E+00	-6%	i, k
Chlorine	1.4E+03	7.7E+00	-99%	a, c
Chlorine dioxide	NA	2.3E+01	NA	
Chloro-o-phenylenediamine, 4-	4.2E+01	4.0E+01	-5%	k
Chloroacetophenone, 2-	NA	1.2E+00	NA	
Chlorobenzene	1.4E+04	3.9E+04	+179%	a, b
Chlorodifluoromethane (Freon 22) [see Fluorocarbons]				

Chemical	Chronic Trigger Levels (pounds/year)		Change from REP[a]	Notes
	REP[a]	Table 2-5-1[b]		
Chlorofluorocarbons [see Fluorocarbons]				
Chloroform	3.6E+01	3.4E+01	-6%	k
Chlorophenol, 2-	3.5E+03	7.0E+02	-80%	a
Chloropicrin	7.7E+02	1.5E+01	-98%	a, c
Chloroprene	NA	3.9E+01	NA	
Chloro-o-toluidine, p-	2.5E+00	2.4E+00	-4%	k
Chromium, (hexavalent, 6+)	1.3E-03	1.3E-03	None	
barium chromate	NA	1.3E-03	NA	
calcium chromate	NA	1.3E-03	NA	
lead chromate	NA	1.3E-03	NA	
sodium dichromate	NA	1.3E-03	NA	
strontium chromate	NA	1.3E-03	NA	
Chromium trioxide (as chromic acid mist)	NA	1.3E-03	NA	
Copper and compounds	4.6E+02	9.3E+01	-80%	a
Cresidine, p-	4.4E+00	4.3E+00	-2%	i, k
Cresols (m-, o-, p-)	3.5E+04	2.3E+04	-34%	a, b
Cupferron	3.1E+00	2.9E+00	-6%	k
Cyanide and compounds (inorganic)	NA	3.5E+02	NA	
hydrogen cyanide (hydrocyanic acid)	1.4E+04	3.5E+02	-98%	a, c
Diaminoanisole, 2,4-	2.9E+01	2.8E+01	-3%	k
Diaminotoluene, 2,4-	1.8E-01	1.6E-01	-11%	i, k
Dibromo-3-chloropropane, 1,2- (DBCP)	9.7E-02	9.1E-02	-6%	k
Dichlorobenzene, 1,4-	1.8E+01	1.6E+01	-11%	i, k
Dichlorobenzidine, 3,3-	5.6E-01	5.3E-01	-5%	k
Dichloroethane, 1,1- (Ethylidene dichloride)	1.2E+02	1.1E+02	-8%	i
Dichloroethylene, 1,1- [see vinylidene chloride]				
Diesel exhaust particulate matter	6.4E-01	5.8E-01	-9%	i, k
Diethanolamine	NA	1.2E+02	NA	
Di(2-ethylhexyl)phthalate (DEHP)	8.1E+01	6.9E+01	-15%	h, i, k
Dimethylamine	3.8E+02	7.7E+01	-80%	a
Dimethylaminoazobenzene, p-	1.5E-01	1.4E-01	-7%	k
Dimethyl formamide, N,N-	NA	3.1E+03	NA	
Dinitrotoluene, 2,4-	2.1E+00	2.1E+00	None	
Dioxane, 1,4- (1,4-diethylene dioxide)	2.5E+01	2.4E+01	-4%	k
Epichlorohydrin (1-chloro-2,3-epoxypropane)	8.3E+00	8.0E+00	-4%	i, k
Epoxybutane, 1,2-	NA	7.7E+02	NA	
Ethyl acrylate	9.3E+03	1.9E+03	-80%	a
Ethyl benzene	NA	7.7E+04	NA	
Ethyl chloride (chloroethane)	1.9E+06	1.2E+06	-37%	a, b
Ethylene dibromide (1,2-dibromoethane)	2.7E+00	2.6E+00	-4%	k
Ethylene dichloride (1,2-dichloroethane)	8.7E+00	8.9E+00	+2%	e, i, k
Ethylene glycol	NA	1.5E+04	NA	
Ethylene glycol butyl ether – EGBE [see Glycol ethers]				

Chemical	Chronic Trigger Levels (pounds/year)		Change from REP[a]	Notes
	REP[a]	Table 2-5-1[b]		
Ethylene oxide (1,2-epoxyethane)	2.1E+00	2.1E+00	None	
Ethylene thiourea	1.5E+01	1.4E+01	-7%	k
Fluorides and compounds	NA	5.0E+02	NA	
hydrogen fluoride (hydrofluoric acid)	1.1E+03	5.4E+02	-51%	a, b
Fluorocarbons (chlorinated)	1.4E+05	2.7E+04	-81%	a
chlorinated fluorocarbon (CFC-113)	1.4E+05	2.7E+04	-81%	a
chlorodifluoromethane (Freon 22)	NA	1.9E+06	NA	
dichlorofluoromethane (Freon 21)	NA	2.7E+04	NA	
trichlorofluoromethane (Freon 11)	NA	2.7E+04	NA	
fluorocarbons (brominated)	NA	2.7E+04	NA	
Formaldehyde	3.3E+01	3.0E+01	-9%	i, k
Freons [see Fluorocarbons]				
Glutaraldehyde	3.3E+02	3.1E+00	-99%	a, c
Glycol ethers				
ethylene glycol butyl ether – EGBE (2-butoxy ethanol; butyl cellosolve)	3.9E+03	7.7E+02	-80%	a
ethylene glycol ethyl ether – EGEE (2-ethoxy ethanol; cellosolve)	3.9E+04	2.7E+03	-93%	a, c
ethylene glycol ethyl ether acetate – EGEEA (2-ethoxyethyl acetate; cellosolve acetate)	1.2E+04	1.2E+04	None	
ethylene glycol methyl ether – EGME (2-methoxy ethanol; methyl cellosolve)	3.9E+03	2.3E+03	-41%	a, b
ethylene glycol methyl ether acetate – EGMEA (2-methoxyethyl acetate; methyl cellosolve acetate)	1.1E+04	3.5E+03	-68%	a, b
Hexachlorobenzene	3.9E-01	3.6E-01	-8%	i, k
Hexachlorocyclohexanes (mixed or technical grade)	1.8E-01	1.2E-01	-33%	h
Hexachlorocyclohexane, alpha-	NA	1.2E-01	NA	
Hexachlorocyclohexane, beta-	NA	1.2E-01	NA	
Hexachlorocyclohexane, gamma- (lindane)	NA	4.2E-01	NA	
Hexachlorocyclopentadiene	4.6E+01	9.3E+00	-80%	a
Hexane, n-	8.3E+04	2.7E+05	+225%	a,b,d
Hydrazine	3.9E-02	3.8E-02	-3%	i, k
Hydrochloric acid (hydrogen chloride)	1.4E+03	3.5E+02	-75%	a, b
Hydrogen bromide [see bromine & compounds]				
Hydrogen cyanide (hydrocyanic acid) [see cyanide & compounds]				
Hydrogen fluoride (hydrofluoric acid) [see fluorides & compounds]				
Hydrogen sulfide	8.1E+03	3.9E+02	-95%	a, c
Isophorone	6.6E+04	7.7E+04	+17%	a, b, d
Isopropyl alcohol (isopropanol)	4.4E+05	2.7E+05	-39%	a, b, d
Lead and compounds (inorganic)	1.6E+01	5.4E+00	-66%	f, k
lead acetate	NA	5.4E+00	NA	
lead phosphate	NA	5.4E+00	NA	
lead subacetate	NA	5.4E+00	NA	

Chemical	Chronic Trigger Levels (pounds/year)		Change from REP[a]	Notes
	REP[a]	Table 2-5-1[b]		
Lindane [see hexachlorocyclohexane, gamma]				
Maleic anhydride	4.6E+02	2.7E+01	-94%	a, c
Manganese and compounds	7.7E+01	7.7E+00	-90%	a, c
Mercury and compounds (inorganic)	5.8E+01	5.6E-01	-99%	a, c
mercuric chloride	NA	5.6E-01	NA	
Mercury and compounds (organic)				
methyl mercury	1.9E+02	3.9E+01	-79%	a
Methanol (methyl alcohol)	1.2E+05	1.5E+05	+25%	a, b
Methyl bromide (bromomethane)	1.2E+03	1.9E+02	-84%	a, c
Methyl chloroform (1,1,1-trichloroethane)	6.2E+04	3.9E+04	-37%	a, b
Methyl ethyl ketone (MEK) (2-butanone)	1.5E+05	3.9E+04	-74%	a, b
Methyl isocyanate	7.0E+01	3.9E+01	-44%	a, b
Methyl mercury [see mercury & compounds]				
Methyl methacrylate	1.9E+05	3.8E+04	-80%	a
Methyl tertiary-butyl ether (MTBE)	NA	3.6E+02	NA	
Methylene bis (2-chloroaniline), 4,4'- (MOCA)	4.4E-01	4.3E-01	-2%	i, k
Methylene chloride (dichloromethane)	1.9E+02	1.8E+02	-5%	k
Methylene dianiline, 4,4'- (and its dichloride)	4.2E-01	4.1E-01	-2%	i
Methylene diphenyl isocyanate	1.8E+01	2.7E+01	+50%	a, b
Michler's ketone (4,4'-bis(dimethylamino)benzophenone)	7.7E-01	7.4E-01	-4%	i, k
Mineral fibers (<1% FREE SILICA)	NA	9.3E+02	NA	
ceramic fibers (man-made)	NA	9.3E+02	NA	
glasswool (man-made fibers)	NA	9.3E+02	NA	
mineral fibers (fine: man-made)	NA	9.3E+02	NA	
rockwool (man-made fibers)	NA	9.3E+02	NA	
slagwool (man-made fibers)	NA	9.3E+02	NA	
Naphthalene [see polycylcic aromatic hydrocarbons]				
Nickel and compounds	7.3E-01	7.3E-01	None	
nickel acetate	NA	7.3E-01	NA	
nickel carbonate	NA	7.3E-01	NA	
nickel carbonyl	NA	7.3E-01	NA	
nickel hydroxide	NA	7.3E-01	NA	
nickelocene	NA	7.3E-01	NA	
nickel oxide	NA	7.3E-01	NA	
nickel refinery dust from the pyrometallurgical process	NA	7.3E-01	NA	
nickel subsulfide	NA	7.3E-01	NA	
Nitric acid	2.3E+03	NA	NA	
Nitrobenzene	3.3E+02	6.6E+01	-80%	a
Nitropropane, 2-	3.9E+03	7.7E+02	-80%	a
Nitroso-n-dibutylamine, N-	1.6E-03	5.8E-02	+3,525%	e, i, k *
Nitrosodi-n-propylamine, n-	9.7E-02	9.1E-02	-6%	k
Nitrosodiethylamine, n-	1.9E-02	1.8E-02	-5%	k

Chemical	Chronic Trigger Levels (pounds/year)		Change from REP[a]	Notes
	REP[a]	Table 2-5-1[b]		
Nitrosodimethylamine, n-	4.2E-02	4.0E-02	-5%	k
Nitrosodiphenylamine, n-	7.3E+01	7.1E+01	-3%	i, k
Nitroso-n-methylethylamine, n-	3.1E-02	2.9E-02	-6%	k
Nitrosomorpholine, n-	1.0E-01	9.6E-02	-4%	k
Nitrosopiperidine, n-	7.1E-02	6.8E-02	-4%	i, k
Nitrosopyrrolidine, n-	3.3E-01	3.0E-01	-9%	i, k
Nitrosodiphenylamine, p-	3.1E+01	2.9E+01	-6%	k
Ozone	NA	7.0E+03	NA	
Pentachlorophenol	3.8E+01	7.7E+00	-80%	g
Perchloroethylene (tetrachloroethylene)	3.3E+01	3.0E+01	-9%	i, k
Phenol	8.7E+03	7.7E+03	-11%	a, b
Phosgene	1.8E+02	NA	NA	
Phosphine	1.9E+03	3.1E+01	-98%	a, c
Phosphoric acid	4.6E+02	2.7E+02	-41%	a, b, d
Phosphorus (white)	1.4E+01	2.7E+00	-81%	a
Phthalic anhydride	1.4E+06	7.7E+02	-99.95%	a, c
PCBs (polychlorinated biphenyls) [low risk]	NA	8.0E-01	NA	
PCBs (polychlorinated biphenyls) [high risk]	6.8E-03	2.8E-02	+312%	e, h
Polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) (as 2,3,7,8-PCDD equivalent)	1.2E-06	5.7E-07	-53%	h, k
Polycyclic aromatic hydrocarbon (PAH) (as B(a)P-equivalent)	4.4E-02	1.1E-02	-75%	e, h
naphthalene	2.7E+02	5.3E+00	-98%	i, **
Potassium bromate [see bromine & compounds]				
Propane sultone, 1,3-	2.7E-01	2.7E-01	None	
Propylene (propene)	NA	1.2E+05	NA	
Propylene glycol monomethyl ether	NA	2.7E+05	NA	
Propylene oxide	5.2E+01	4.9E+01	-6%	k
Selenium and compounds	9.7E+01	7.7E+02	+694%	a, b
selenium sulfide	NA	7.7E+02	NA	
Sodium hydroxide	9.3E+02	1.9E+02	-80%	a
Styrene	1.4E+05	3.5E+04	-75%	a, b
Sulfates	NA	9.7E+02	NA	
Sulfuric acid and oleum	NA	3.9E+01	NA	
sulfuric acid	NA	3.9E+01	NA	
oleum	NA	3.9E+01	NA	
Tetrachloroethane, 1,1,2,2-	3.3E+00	3.2E+00	-3%	i, k
Tetrachlorophenols	1.7E+04	3.4E+03	-80%	a
Thioacetamide	1.1E-01	1.0E-01	-9%	k
Toluene	3.9E+04	1.2E+04	-69%	a, b
Toluene diisocyantates	1.8E+01	2.7E+00	-85%	g
toluene-2,4-diisocyanate	1.8E+01	2.7E+00	-85%	g
toluene-2,6-diisocyanate	1.8E+01	2.7E+00	-85%	g
Trichloroethane, 1,1,1- (see methyl chloroform)				

Chemical	Chronic Trigger Levels (pounds/year)		Change from REP[a]	Notes
	REP[a]	Table 2-5-1[b]		
Trichloroethane, 1,1,2- (vinyl trichloride)	1.2E+01	1.1E+01	-8%	k
Trichloroethylene	9.7E+01	9.1E+01	-6%	k
Trichlorophenol, 2,4,6-	9.7E+00	9.1E+00	-6%	k
Triethylamine	NA	7.7E+03	NA	
Urethane (ethyl carbamate)	6.6E-01	6.4E-01	-3%	i, k
Vinyl acetate	NA	7.7E+03	NA	
Vinyl bromide	NA	2.7E+02	NA	
Vinyl chloride (chloroethylene)	2.5E+00	2.4E+00	-4%	k
Vinylidene chloride (1,1-dichloroethylene)	6.2E+03	2.7E+03	-56%	a, b
Xylenes (mixed isomers)	5.8E+04	2.7E+04	-53%	a, b
m-xylene	NA	2.7E+04	NA	
o-xylene	NA	2.7E+04	NA	
p-xylene	NA	2.7E+04	NA	
Zinc and compounds	6.8E+03	1.4E+03	-79%	a
zinc oxide	NA	1.4E+03	NA	

[a] = BAAQMD Air Toxics Risk Evaluation Procedure (REP), Tables 1 and 2 (February 3, 2000)
[b] = BAAQMD Regulation 2, Rule 5 (2005)

Notes (Identify the Basis for Change in Trigger Levels from the REP):

a = Decrease Target Hazard Index from 1.0 to 0.2
b = Increase in REL
c = Decrease in REL
d = REP Trigger Level derived from TLV, Table 2-5-1 Trigger Level derived from REL
e = Decrease in URF
f = REP Trigger Level based on CAAQS, Table 2-5-1 Trigger Level based on CPF
g = REP Trigger Level derived from URF, Table 2-5-1 Trigger Level derived from REL
h = Multi-pathway exposure parameters revised
i = REP Trigger Level derived from URF, Table 2-5-1 Trigger Level derived from CPF
j = REP Trigger Level incorporates an oral CPF; currently, no oral CPF is available
k = Increase in Breathing Rate
l = REP Trigger Level Derived from REL, Table 2-5-1 Trigger Level derived from CPF
* = REP Trigger Level derived from incorrect URF
** = Calculation error in REP Trigger Level

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

STAFF REPORT

JUNE 2005

Appendix D

Proposed BAAQMD
Air Toxics NSR Program
Health Risk Screening Analysis
(HRSA) Guidelines

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

Proposed BAAQMD Air Toxics NSR Program
Health Risk Screening Analysis (HRSA) Guidelines

D1. INTRODUCTION

This document describes the Bay Area Air Quality Management District's guidelines for conducting health risk screening analyses. Any health risk screening analysis (HRSA) that is required pursuant to Regulation 2 Permits, Rule 1 General Requirements or Rule 5 New Source Review of Toxic Air Contaminants shall be conducted in accordance with these guidelines.

In accordance with Regulation 2-5-402, these guidelines generally conform to the Health Risk Assessment Guidelines adopted by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) for use in the Air Toxics Hot Spots Program. In addition, these guidelines are in accordance with State risk assessment and risk management policies and guidelines in effect as of January 1, 2005. Through the District's rule development process, these guidelines will periodically be updated to clarify procedures, amend health effects data, or incorporate other revisions to regulatory guidelines.

D2. PROCEDURES

The procedures described below constitute the Regulation 2-5-603 Health Risk Screening Analysis Procedures. Any HRSA shall be completed by following the procedures described in the OEHHA Health Risk Assessment Guidelines for the Air Toxics Hot Spots Program that were adopted by OEHHA on October 3, 2003 and any State risk assessment and risk management policies and guidelines in effect as of January 1, 2005.

The OEHHA Health Risk Assessment Guidelines contain several sections which identify (a) the overall methodology, (b) the exposure assessment assumptions and procedures, and (c) the health effects data (cancer potency factors, chronic reference exposure levels, and acute reference exposure levels).
A summary of OEHHA's Health Risk Assessment Guidelines and an index of the relevant documents are located at:

http://www.oehha.ca.gov/air/hot_spots/index.html

OEHHA's risk assessment methodology is located at:

http://www.oehha.ca.gov/air/risk_assess/index.html

The exposure assessment and stochastic technical support document (Part IV of OEHHA's Risk Assessment Guidelines) is located at:

http://www.oehha.ca.gov/air/exposure_assess/index.html

The cancer potency factors for carcinogenic compounds (Part II of OEHHA's Risk Assessment Guidelines) are located at:

http://www.oehha.ca.gov/air/cancer_guide/hsca2.html

The chronic reference exposure levels (RELs), which are Part III of OEHHA's Risk Assessment Guideline, are located at:

http://www.oehha.ca.gov/air/chronic_rels/index.html

The acute reference exposure levels (RELs), which are Part I of OEHHA's Risk Assessment Guideline, are located at:

http://www.oehha.ca.gov/air/acute_rels/index.html

Sections D2.1 through D2.3 below clarify and highlight some of the exposure assessment procedures including exposure assumptions (e.g., breathing rate and exposure duration) and health effect values to be used for conducting HRSAs.

D2.1 Clarifications of Exposure Assessment Procedures

This section clarifies and highlights some of the exposure assessment procedures that should be followed when conducting an HRSA.

D2.1.1 Breathing Rate

On October 9, 2003, a statewide interim Risk Management Policy for inhalation-based residential cancer risk was adopted by the California Air Resources Board (ARB) and Cal/EPA's OEHHA (http://www.arb.ca.gov/toxics/rmpolicy.pdf). For the HRSA methodology used in the Air Toxics NSR Program, the District has conformed with these State guidelines and adopted the interim exposure assessment recommendations made by ARB and OEHHA. The interim policy recommends where a single cancer risk value for a residential receptor is needed or prudent for risk management decision-making, the potential cancer risk estimate for the inhalation exposure pathway be based on the breathing rate representing the 80th percentile value of the breathing rate range of values (302 L/kg-day).

To assess potential inhalation exposure to offsite workers, OEHHA recommends assuming a breathing rate of 149 L/kg-day. This value corresponds to a 70 kg worker breathing 1.3 m^3/hour (breathing rate recommended by USEPA as an hourly average for outdoor workers) for an eight-hour day. For children, OEHHA recommends assuming a breathing rate of 581 L/kg-day to assess potential risk via the inhalation exposure pathway. This value represents the upper 95% percentile of daily breathing rates for children.

D2.1.2 Exposure Time and Frequency

Based on OEHHA recommendations, the District will estimate cancer risk to residential receptors assuming exposure occurs 24 hours per day for 350 days per year. For a worker receptor, exposure is assumed to occur 8 hours per day for 245 days per year. However, for some professions (e.g., teachers) a different schedule may be more appropriate. For children at school sites, exposure is assumed to occur 10 hours per day for 180 days (or 36 weeks) per year.

D2.1.3 Exposure Duration

Based on OEHHA recommendations, the District will estimate cancer risk to residential receptors based on a 70-year lifetime exposure. Although 9-year and 30-year exposure scenarios may be presented for information purposes, risk management decisions will be made based on 70-year exposure duration for residential receptors. For worker receptors, risk management decisions will be made based on OEHHA's recommended exposure duration of 40 years. Cancer risk estimates for children at school sites will be calculated based on a 9 year exposure duration.

D2.2 Health Effects Values

Chemical-specific health effects values have been consolidated and are presented in Table 2-5-1 for use in conducting HRSAs. Toxicity criteria summarized in Table 2-5-1 represent health effects values that were adopted by OEHHA/ARB as of January 1, 2005. Prior to use in Regulation 2, Rule 5, any new or revised health effects values adopted by OEHHA/ARB after January 1, 2005 will be reviewed by the District through a rule development process. The District will evaluate the new criteria for implementation, enforcement, and feasibility of compliance with the project risk limits.

D2.3 Stochastic Risk Assessment

For a stochastic, multipathway risk assessment, the potential cancer risk should be reported for the full distribution of exposure from all exposure pathways included in the risk assessment. For risk management decisions, the potential cancer risk from a stochastic, multipathway risk assessment should be based on the 95^{th} percentile cancer risk.

D3. Assessment of Acrolein Emissions

Currently, CARB does not have certified emission factors or an analytical test method for acrolein. Therefore, since the appropriate tools needed to implement and enforce acrolein emission limits are not available, the District will not conduct a HRSA for emissions of acrolein. In addition, due to the significant uncertainty in the derivation, OEHHA is currently re-evaluating the acute REL for acrolein. When the necessary tools are developed, the District will re-evaluate this specific evaluation procedure and the HRSA guidelines will be revised.

References

1 *"Air Toxics "Hot Spots" Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, ", OEHHA, August 2003*

2 *"Air Toxics "Hot Spots" Program Risk Assessment Guidelines, Part IV. Technical Support Document for Exposure Assessment and Stochastic Analysis", OEHHA, September 2000*

3 *"Air Toxics "Hot Spots" Program Risk Assessment Guidelines, Part II, Technical Support Document for Describing Available Cancer Potency Factors", OEHHA, updated December, 2002.*

4 *"Air Toxics "Hot Spots" Program Risk Assessment Guidelines, Part III, Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels", OEHHA, April 2000.*

5 *"Air Toxics "Hot Spots" Program Risk Assessment Guidelines, Part I, Technical Support Document for the Determination of Acute Reference Exposure Levels for Airborne Toxicants", OEHHA, March 1999.*

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

June 2005

Appendix E

Comments on Proposed

Air Toxics NSR Program &

BAAQMD Responses

Toxic Evaluation Section

Bay Area Air Quality Management District

E1. INTRODUCTION

In April 2003, the District proposed to codify the policies and procedures that make up the BAAQMD Air Toxics NSR Program by adopting a new District rule: Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, and a new part to its Manual of Procedures. Amendments to several other District rules were also proposed in order to maintain consistency with Regulation 2, Rule 5. The District conducted a series of public workshops and community meetings during May and June 2003, and continued to accept written comments through July 2003.

The District received numerous comments on the April 2003 proposal. The most extensive comments submitted were from the Golden Gate University School of Law Environmental Law and Justice Clinic (ELJC) on behalf of the Environmental Justice Air Quality Coalition, Bayview Hunters Point Community Advocates, and Our Children's Earth Foundation. The California Council for Environmental and Economic Balance (CCEEB) also submitted detailed comments.

The District's rule development efforts were then delayed for a period of time pending the release of revised risk assessment guidelines and tools from OEHHA and CARB. The District issued a revised proposal in March 2005. The most substantive revision was the removal of provisions for discretionary risk management. Other revisions were relatively minor in impact and clarifying in nature. A workshop on the revised proposal was conducted on April 8, 2005.

The District received several comments about source applicability and permitting procedures from several facility representatives during the final workshop and in written form from CCEEB. Minor written comments, which were not directly related to the proposed amendments, were also received from CARB concerning associated regulations.

In many cases, several different individuals commented on the same issue. To facilitate the discussion of the issues, the District has summarized all of the comments received about each issue and provided a response for each issue. This discussion is presented in Section E2 below. Each commenter is identified in Section E3.

Verbal comments were also received from CARB[1] and OEHHA[2] concerning acrolein; OEHHA has also followed up on their comments by e-mail. CARB has determined that the existing test methods for acrolein are invalid and existing emission factors have great uncertainty. Sources need a valid test method to be able to establish site-specific emission rates that can be used to demonstrate compliance with permit conditions and regulatory standards. Generally, the District uses CARB-approved emission estimating methods for the Air Toxics Hot Spots Program and for the Air Toxics NSR Program. Therefore, until CARB develops a valid test method and adequate testing data are available, the District will not include emission estimates for acrolein in determining risk. In addition, OEHHA is reevaluating the acute REL for acrolein and the methodology for deriving RELs for sensory irritants with mild and temporary effects.

E2. SUMMARY OF COMMENTS AND RESPONSES

The comments on the District's April 2003 proposal covered a broad range of issues. Many comments concerned the District's general approach to regulating air toxic emissions from new and modified sources, while many other comments were about the specific proposed language in the April 2003 draft of Regulation 2, Rule 5. Some additional comments dealt with other proposed regulatory amendments (fees, in particular). Another issue of concern was the District's proposed Negative Declaration for this rule development project pursuant to the California Environmental Quality Act (CEQA). The dry cleaning industry submitted comments concerning the impact to their industry. The District also received a few comments that were not related to this rule development project.

Comments about each of the following major topic areas are discussed in detail in the following sections: the District's Air Toxics NSR Approach, CEQA, Dry Cleaners, and Miscellaneous Unrelated Comments. The comments are presented first, followed by the District's response to each point or issue.

[1] Conversation of Scott Lutz with Dan Donohoue (CARB) concerning faulty test methods for acrolein, ambient concentrations, and OEHHA methodology for establishing RELs. Mr. Donohoue reiterated that CARB's Risk Management Guidelines recommend consideration of permit approval for cases where Hazard Index exceeds 1.0, especially considering the lack of an adequate test method that a facility could used to show compliance. Mr. Donohoue was also concerned that OEHHA's acute REL for acrolein is well below typical ambient levels and was aware of OEHHA's reevaluation of the acute REL for acrolein.

[2] Conversation of Scott Lutz with Melanie Marty (OEHHA) concerning acute REL for acrolein, and methods for establishing RELs. Acrolein is in a group of sensory irritants with mild and temporary health effects for which OEHHA does not recommend regulatory action at a Hazard Index of 1.0. Acute REL for acrolein was established by extrapolating from a 5-minute exposure to a 1-hour concentration; OEHHA is reevaluating this methodology and the value of the acute REL.

E2.1 District's Air Toxic NSR Approach

Best Available Control Technology for Toxic Emissions (TBACT)

Comment:

The TBACT requirement should not be limited to chronic cancer risk and hazard index (HI), but also on the basis of the acute HI. This would provide consistency with the chronic HI threshold for TBACT. Establishing an acute HI threshold of 0.2 for TBACT would provide a concrete way for the District to use a precautionary approach to control TAC emissions.

Response:

The District is unaware of any agency that has established a TBACT requirement based solely on acute HI. The District does not believe that a TBACT requirement based on a maximum acute HI of 0.2 is appropriate for a number of reasons as follows.

1. An acute HI of 0.2 is only twenty percent of the exposure level at which specified health effects might be expected to occur in the general population including sensitive individuals;
2. Most acute RELs are based on health effects that are mild and reversible (e.g., mild irritation of the eyes, nose, or throat). Uncertainties in the available toxicological data also require that most acute RELs incorporate extrapolation factors of 10 or more;
3. Most of the sources that the District permits have continuous or intermittent emissions that result in exposures that are more appropriately characterized as being chronic than acute. For example, OEHHA recommends that acute RELs be used to evaluate exposures that occur no more frequently than every two weeks in a given year. Nearly all TACs with acute RELs also have chronic RELs, and the District has proposed to require TBACT based on a very stringent chronic HI of 0.20. Some TACs with acute RELs may also be required to be controlled with TBACT based on maximum cancer risk exceeding 1 in one million, or BACT based on maximum POC, NPOC, or PM emissions exceeding 10 lb/day;
4. The maximum acute HI is determined based on the maximum one-hour average ambient pollutant concentration predicted using the maximum hourly emission rate of the source being evaluated. The likelihood of an actual adverse acute health effect is also dependent on the frequency and spatial extent under which such peak concentrations may occur, which is not part of the evaluation; and,

5. In many cases, the use of TBACT based solely on an acute HI of 0.20 would not be cost-effective. This may be the case if the peak exposure was limited to only a few hours per year (TBACT is required to reduce emissions during all periods of source operation). Additionally, some very small sources (e.g., small natural gas fired combustion sources) would likely have maximum acute HI's over 0.20 due primarily to very localized ground-level impacts caused by limited dispersion. In these cases, project costs would be increased, District resources would be expended, and permit-processing time would be lengthened, for very little reductions in emissions.

Comment:

The TBACT threshold for noncancer risk should be a 1.0 chronic hazard index as provided in the District's Risk Management Policy. The proposed Rule would change the TBACT chronic hazard index threshold to 0.2, which is overly conservative and unnecessary since OEHHA takes a very conservative approach in the development of RELs.

Response:

The requirement for new and modified sources to use TBACT at a maximum chronic HI of 0.2 is provided in statewide permitting guidelines issued by CARB. Requiring TBACT on sources that may collectively contribute to an adverse impact may mitigate potentially adverse cumulative impacts.

Many of the TACs with relatively low chronic RELs are also carcinogens. For almost all of these, TBACT is required based on a cancer risk that exceeds 1 in one million before it is triggered based on a chronic HI of 0.2. For many of the TACs with higher RELs, BACT will be required based on POC emissions in excess of 10 lb/day. For sources where TBACT is required based only on chronic HI, emissions are expected to be relatively high so that cost effectiveness should be reasonable. Costs may also be mitigated by the proposed change to require TBACT on a source-level basis, rather than on a project-level basis as is required under the existing Risk Management Policy.

Comment:

Consider less toxic alternatives and a "no-risk" alternative when assessing TBACT.

Response:

Chemical/product/process substitutions are generally not within the scope of BACT or TBACT. The District is authorized to limit emissions to assure that new and modified sources will not cause, or contribute significantly to, adverse health effects. The District is not authorized to require the use of specific chemicals, products, or processes.

The particular chemicals, products, or processes a facility uses may be based on a number of considerations such as product/process manufacturing, product performance, product safety, and product liability. District staff has limited qualifications and expertise in these areas.

Less toxic alternatives are more appropriately considered when developing regulatory standards for a particular source category with input from industry experts and the public, rather than on a permit-basis. Rules may limit or even prohibit the emissions of specific TACs, but cannot require the use of any specific alternatives.

Project risk limits, and the cost of TBACT equipment and other environmental regulations, encourage permit applicants to evaluate less toxic alternatives. For example, about 80 percent of new dry cleaning machines in the Bay Area already use less toxic alternatives to Perc.

Cumulative Risk and Environmental Justice

Comment Summary:

Several comments were received concerning the lack of incorporation of cumulative health impacts (from mobile and/or stationary sources) into the risk assessment and risk management process for permitting sources. Commenters indicated that risk management decisions should be made based on cumulative risks, not incremental risks. These commenters believe that incorporation of cumulative risk in the permitting process would address environmental justice concerns regarding equal health protection for communities most affected by air pollution. A specific proposal was given to establish "community risk caps" for all new and existing permitted sources based on the District's proposed project risk limits.

Response:

The District's proposal does not include cumulative risk considerations for two reasons: (1) the needed policies, tools, and databases are currently not available for that purpose, and (2) at this time, there is no evidence that emissions from new and modified sources that meet the proposed project risk limits would cause, or contribute significantly to, adverse cumulative health effects. These issues are addressed in more detail in the following sections.

A. Cumulative Risk Management Policies

To our knowledge, risk limits or goals for overall cumulative exposures to TACs from all sources (existing and proposed), or for cumulative exposures from all non-mobile sources, have not been established in law, nor in regulation or guidance by any agency with the authority to do so. If community risk limits were to be established for multiple facilities, it would be expected that they would be set at higher levels than what has been historically used for judging the significance of individual sources or facilities alone. District staff therefore believe that the suggested community risk caps of 10 in a million cancer risk, and 1.0 for non-cancer HI, for all permitted sources are unrealistically low. District staff does not believe that it is good public policy to establish community risk caps that would prohibit growth in a particular geographic area for any proposed project that would emit TACs without considering the degree to which the proposed project would contribute to risk.

District staff expect that cumulative risk management guidelines will be developed at the State-level (e.g., by CARB) over the next several years. Undoubtedly, these guidelines will be developed through a full public process that will allow input from many diverse stakeholders. The District intends on participating in the development of these guidelines. When finalized, the District will consider whether any recommended cumulative risk limits or goals should be incorporated into the District's Air Toxics NSR Program, and/or whether incremental project risk limits should be revised.

B. Cumulative Risk Assessment Tools

Computer simulation models are the preferred tools for completing cumulative risk assessments over a spatial domain. Air dispersion models are used to estimate air pollutant concentrations and depositions at various receptor locations. Health risk assessment models are then used to calculate public exposures and health risks. Additional tools are typically required for database management, reporting, and mapping.

Cumulative risk assessments may be completed over a variety of spatial scales. For example, EPA and CARB have completed comprehensive regional-scale air toxics modeling studies using the ASPEN model (Assessment System for Population Exposure Nationwide). The SCAQMD has similarly used versions of the regional UAM model (Urban Airshed Model) in their MATES-II study (Multiple Air Toxics Emissions Study) of the South Coast Air Basin. The level of accuracy needed in a regional-scale modeling analysis rarely requires that detailed, precise, model input data be used (e.g., source release parameters are often based on assumed, rather than actual, values). Regional-scale models cannot, however, provide results that are accurate over the relatively small spatial scales (i.e., tens of meters) needed to determine the maximum risks to individuals resulting from local emission sources. Microscale air dispersion models are needed for this purpose.

A variety of air dispersion models are available to estimate pollutant concentrations and depositions on a microscale basis. The EPA's ISC model (Industrial Source Complex) has, for nearly three decades, been the most commonly used general-purpose microscale air dispersion model. The EPA is expected to replace the ISC model, however, with the AERMOD model. AERMOD incorporates improved dispersion estimates using planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The most recent version of AERMOD also incorporates improved treatment of building downwash.

Cumulative risk assessments that are to be completed in a permitting program, where results must be provided on a timely basis, require an integrated software system that combines dispersion modeling (e.g., using ISC and/or AERMOD), risk assessment modeling, database management, and reporting and mapping functions as seamlessly as possible. For a number of years, CARB has been developing an integrated risk assessment software tool known as HARP (Hotspots Analysis and Reporting Program). HARP can calculate cancer and non-cancer health risks using the new risk assessment guidelines developed by OEHHA. On December 31, 2003, CARB released HARP by posting it on their website. Nevertheless, HARP has a number of limitations and is not designed to be used by air districts for routine permit modeling. CARB is undertaking a process to upgrade HARP to make it more usable for the air districts.

The District has identified a number of critical issues that will need to be resolved before HARP could be used for cumulative risk assessment in the Bay Area:

1. HARP uses a PC-based source and emission inventory database, known as CEIDARS-Lite (California Emission Inventory Development and Reporting System-Lite). The District does not use CEIDARS-Lite, but rather has its own mainframe database developed in-house. Appropriate interface software would need to be developed between the District's database and HARP. The District has estimated the cost of developing such a database interface for HARP to be about $20,000, plus an additional $5,000 per year for software licensing.

2. HARP lacks integrated GIS technology that allow data (i.e., source locations, building parameters, facility boundaries) to be input graphically using digital background maps such as USGS Digital Raster Graphics (DRG) and Digital Orthophoto Quadrangles (DOQ). These GIS features are available on most commercial modeling systems and are currently used by the District to complete health risk screening analyses. The District has estimated the cost of developing integrated GIS technology for HARP to be at least $25,000.

3. HARP uses the ISC dispersion model and will need to be modified to use AERMOD, or it will soon be obsolete. The District has estimated the cost of upgrading HARP to have AERMOD compatibility to be at least $25,000.

The total estimated cost of the necessary software enhancements is at least $70,000, plus $5,000 per year for software licensing. CARB is developing plans to make some of these modifications to HARP.

C. Cumulative Risk Assessment Databases

Detailed source, facility, building, and geophysical data (i.e., land use, meteorology, and terrain data) are needed to complete cumulative risk assessments at a community-level. While geophysical databases are generally already available (e.g., from USGS), source, facility, and building databases are not, and must therefore be created.

Source databases require peak and long-term average emissions for each emitted TAC, information regarding the temporal variation of these emissions, and detailed information regarding how the emissions are released to the atmosphere. In ISC and AERMOD, the emissions from each "emission source" (i.e., permit unit) must be assigned to one or more type of "modeling source" as follows: stack, volume, rectangular area, circular area, polygon area, or open pit. For each modeling source, source coordinates, base elevation, and release height are required. Additional source input requirements are specific to the modeling source type. For example, stack sources require stack temperature, exit velocity or flowrate, and exit diameter.

Required facility data generally consist of a series of coordinates that describe the facility fence line or boundary line. The ISC and AERMOD models also require building information consisting of the coordinates of the corners of any nearby buildings, along with the building height and base elevation. For multi-tiered buildings, the information is required for each building tier. These building parameters are processed into wind direction-specific building dimensions prior to modeling.

The District currently does not have the detailed source, facility, and building databases needed for completing cumulative risk assessments in the Bay Area. Of the parameters listed above, the District's electronic database currently includes only long-term average actual emissions (the database also includes limited stack information, the accuracy of which is suitable only for regional modeling analyses).

Creating a microscale modeling database would require the completion of the following three tasks: (1) Establish the necessary modeling database elements, (2) map the emissions from each permit unit to one or more modeling source, and (3) populate and maintain the modeling database elements. While the first task is relatively straightforward, the second and third would require substantial efforts due to the large number of permitted sources with TAC emissions. If all permitted sources emitting TACs were to be included, information would need to be collected, screened, and entered for roughly 22,500 sources at 12,000 facilities.

The District has made a preliminary estimate of the costs of creating a microscale modeling database for permitted sources of TACs (see Attachment 1). The initial costs are estimated to be roughly $1.2 million (15 staff FTEs). The annual cost of updating and maintaining the modeling database on an ongoing basis is estimated to be at least 10 percent of the cost of the initial database population (i.e., $120,000, or 1.5 staff FTEs per year). These costs represent District staff resources only, and do not include the costs that would be incurred by permitted facilities for assembling the required information and filling out the necessary data forms.

Depending on the desired scope of the cumulative impact analyses, additional emissions inventory data may also need to be compiled. The District's current database contains only long-term actual emissions. Establishing short-term maximum emission rates, and/or maximum permitted emissions (rather than actual emissions) would require additional work. The costs of these additional projects have not been estimated at this time.

D. Existing Information on Cumulative Risks from Multiple Facilities

In order to justify the relatively high costs of incorporating cumulative impact analysis into the Air Toxics NSR Program, the benefits of doing so would need to be clearly established. The answer to the question of whether new and modified sources that comply with the existing incremental risk approach cause, or contribute significantly to, adverse cumulative health effects for individuals in the community obviously depends on how an adverse cumulative health effect is defined.

Admittedly, little additional evidence would be needed if an adverse cumulative health effect were defined using the same risk criteria that are used to judge incremental project risks. As was previously indicated, however, the District believes that cumulative risk limits, if established, would likely be considerably higher (e.g., an order of magnitude or more) than incremental project risk limits. Based on this understanding, Staff does not believe that sources that comply with the existing incremental approach would cause, or contribute significantly to, adverse health effects (e.g., our evaluations have shown that clusters of nearby sources that comply with project risk limits are unlikely to result in maximum cumulative risks that are more than about twice the project risk limits).

Instances where emissions from permitted stationary sources have been found to result in health risks that were significantly elevated above typical background risks (i.e., a toxic "hot spot") were highly localized and caused primarily by the emissions from a single source or facility. This was found to be the case for facilities evaluated by the District under the Air Toxics Hot Spots Program. Another example is the cumulative exposure pilot study conducted by CARB and the San Diego APCD in the Barrio Logan community of San Diego, where very localized elevated risks were attributed to hexavalent chromium emissions from a single facility. Emerging cumulative impact studies are expected to provide additional information on which air pollution sources have significant contributions to adverse health effects.

Although the District's Air Toxics NSR rule proposal does not include cumulative risk considerations, the District plans additional work in this area, including:

- Continue to work (with CARB) to collect and analyze comprehensive air toxics monitoring data at sites located downwind of multiple air pollution sources;
- Continue to track CARB's Community Health Modeling Working Group;
- Participate in the development of cumulative risk management guidelines at the State-level;
- Establish a microscale modeling database structure that is integrated with the existing BAAQMD source database;
- Establish software tools needed to input, extract, and execute cumulative impact assessments for permitted stationary sources; and
- Complete pilot project (CARE Program) involving cumulative impact assessment in a Bay Area neighborhood.

Precautionary Principle

Comment Summary:

Several comments were received suggesting the incorporation of a precautionary principle approach to permitting new and modified sources. Commenters indicated that the standard risk assessment and risk management paradigm is likely to be insufficiently health protective of certain sensitive subpopulations and communities, which could result in environmental injustice. It is thought that the incorporation of a precautionary principle should require businesses and industries that emit TACs to demonstrate that there are no safer, less toxic, alternative technologies or compounds available. If an applicant cannot demonstrate that the proposed application will not lead to cumulative health hazards, then that application should be denied.

Response:

As was mentioned previously, the District is a regulatory agency that does not have the authority to require the use of specific chemicals, products, or processes. Thus, the District cannot require the use of the "least toxic" alternative.

The District believes that many elements of the precautionary principle are built into the proposed Regulation 2, Rule 5. The methods used to estimate health risks are not without uncertainty, but are based on well-established scientific principles, and are intended to err on the side of health protection. The stringent project risk limits are set at levels that the District believes do not warrant more detailed alternatives assessment within the preconstruction permitting process. The District intends on monitoring any workable applications of the precautionary principle that may emerge and serve to further improve the Air Toxics NSR Program.

Risk Limits

Comment:

The District should lower all project risk limits. The proposed project risk limits (i.e., 10 in a million cancer risk, non-cancer Hazard Index (HI) of 1.0) are far less stringent than what is required under federal Clean Air Act Section 112 to protect public health with an ample margin of safety. The proposed project risk limits are consistent with CARB risk management guidelines issued in 1993, but these guidelines are considered outdated. Risks for new or modified projects should be limited to 1 in a million for cancer risk and a chronic and acute HI of 0.2.

Response:

The District's proposed project risk limits were chosen to provide a balanced consideration of protection of public health, technological feasibility, economic reasonableness of risk reduction methods, uncertainties and variability in health risk assessments. To our knowledge, no other air-permitting agency uses project risk limits that are any more stringent than what District staff has proposed.

Based on our experience, it would be virtually impossible for a wide variety of sources that the District routinely permits to meet risk levels of 1 in one million cancer risk and/or non-cancer HI of 0.2, despite the use of TBACT and all other reasonable risk reduction measures. This includes almost all retail gasoline dispensing facilities, perchloroethylene dry cleaners, diesel back-up generators, crematories, furniture refinishing operations, and many gas-fired combustion sources. It should be noted that this problem would not be limited to sources in residential area, as the maximum risk for these sources typically results from exposures to nearby off-site workers. The problem will also become even more pronounced when the exposure assessment assumptions in the new OEHHA risk assessment guidelines are used, as calculated cancer risks for off-site workers will increase by 39 percent from the assumptions currently used (note that, for these facilities, making these changes in exposure assumptions is equivalent to lowering the project cancer risk limit to 7.2 in one million and keeping the existing exposure assumptions). Lowering the project cancer risk limit so significantly could also have the negative effect of delaying projects that involve the replacement of existing sources that may reduce risks (the proposed rule treats replacement sources as entirely new sources).

The District's proposed risk limits are not less stringent than what is required under the federal Clean Air Act (CAA). Section 112 of the CAA does not specify any risk limits, nor otherwise define what risk levels "provide an ample margin of safety to protect public health." Rather, the CAA mandates that EPA make these risk management determinations. (Note that the 1 in a million cancer risk level specified in CAA Section 112(f)(2) is not a mandated level of protection, but rather a trigger point to evaluate whether additional emission reductions are necessary to provide an ample margin of safety to protect public health).

The EPA uses a process for risk management decision-making that is outlined in their 1989 benzene NESHAP. Using this process, the EPA has set health-based emission standards for maximum lifetime cancer risks up to, and somewhat above, <u>100 in a million</u>. For example, the maximum cancer risk after application of the benzene NESHAP for Coke By-product Recovery Plants was 200 in a million (see 54 *Federal Register* 38044). In the 1990 CAA amendments, Congress affirmed the use of this risk management process by referring to it in CAA Section 112(f)(2)(B). Furthermore, in their 1999 Residual Risk Report to Congress (EPA-453/R-99-001, March 1999) prepared in response to CAA Section 112(f)(1), EPA indicated that it was their intent to continue to use this process in setting residual risk standards.

The EPA has not yet set health-based standards under CAA Section 112 on the basis of non-cancer health effects alone. The EPA has indicated, however, that it is their intention to use a maximum non-cancer HI of 1 as a screening-level to eliminate low-risk source categories from further consideration (see EPA Residual Risk Report). This approach is consistent with the recommendations made by the Presidential/Congressional Commission on Risk Assessment and Risk Management (CRARM) mandated under Section 303 of the 1990 CAA Amendments (see *Framework for Environmental Health Risk Management*, CRARM, 1997). The EPA has indicated that a number of factors will be considered in evaluating non-cancer health risks that do not screen-out, including the amount by which the HI is greater than 1, the uncertainty in the HI, the slope of the dose-response curve, and the number of people exposed.

The District has recently asked CARB to clarify the status of their risk management guidelines to the air districts for new and modified stationary sources of TACs. CARB indicated that they do not consider their 1993 guideline document to be outdated. (It should be noted that, in their more recent risk management guidelines for diesel engines issued in 2000, CARB did not recommend any specific upper-bound limits on risk). The District will consider any future updates to CARB risk management guidelines in subsequent amendments to the Air Toxics NSR Program.

It is important to emphasize that the risk management criteria that have been used by EPA to set health-based emission standards under CAA Section 112, and by CARB in established risk management guidelines, are based on the <u>incremental risks</u> associated with specific regulated stationary sources, and not the cumulative risks resulting from multiple facilities or any other sources of air pollution.

Toxic Trigger Levels

Comment:

CARB is currently fixing errors in HARP. The toxic trigger levels should therefore be revised using the final version of HARP when it is available.

Response:

The trigger levels in Table 2-5-1 have been revised based on HARP 1.0, which was released by CARB on December 31, 2003, and OEHHA's health effects values. In addition, CARB's "Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk" was incorporated in the calculation of the trigger levels.

Comment:

Why is a deposition velocity of 0.02 m/sec being used to derive the toxic trigger levels? The risk assessment guidelines recommend a value of 0.05 m/sec for "uncontrolled" sources.

Response:

The District has incorporated a deposition velocity of 0.02 m/sec (for controlled sources), instead of 0.05 m/sec (for uncontrolled sources) in the derivation of toxic trigger levels because the majority of projects with PM-based TAC emissions permitted by the District emit predominately PM_{10} or finer, for which a vertical deposition velocity of 0.02 m/sec is more appropriate. This includes almost all fuel combustion sources.

Revised TAC List

Comment:

The District should not limit its Air Toxics New Source Review program to conform only to the CARB Risk Management Guidelines. The District can conform to all of the OEHHA risk assessment guidelines and still maintain its own list of TACs. It is incorrect to assume that including only the selected TACs in the OEHHA list and removing those currently on the TAC list will not result in potentially significant environmental impacts. An assessment of the TACs being removed must each separately be discussed in the initial study and explanation and supporting substantiating evidence must be cited to explain how removing them from the list will in fact not result in less protection to what is now in place. In particular, there is great concern in removing gasoline vapors from the TAC list.

Response:

The District is proposing to update the list of compounds included in the Air Toxics NSR Program to include those TACs with health effect values published in the 2003 HRA Guidelines and those adopted by OEHHA up to January 1, 2005. These values represent the best information currently available concerning the toxicity of chemical compounds based on general population exposures and incorporating an adequate margin of safety. As a result of the updated health effect values published in the 2003 HRA Guidelines, there are compounds that will either be added to or removed from the list of compounds currently included in the risk evaluation procedures.

District staff believes it is important that the program be updated periodically to represent the best current scientific understanding regarding potential health effects, providing an ample margin of safety that accounts for the variable effects that heterogeneous populations may experience and the completeness and quality of available information. A specific procedure has been established in California for making and updating these evaluations of toxicity. The toxicologists and epidemiologists at Cal/EPA OEHHA handle the procedure, which includes a peer review process and approval by the State Scientific Review Panel. As new or updated toxicity values are adopted by OEHHA, they will be periodically added to the list of compounds used in the Air Toxics NSR program.

It is important to note that gasoline vapors will continue to be evaluated based on its specific toxic components (e.g., benzene). Due to the reformulation of gasoline, the available toxicity value for gasoline vapors is currently out of date and not appropriate for use is assessing the current composition of gasoline. Therefore, individual toxic components of gasoline will continue to be evaluated.

Criteria Pollutants

Comment:

The ELJC recommends that the toxic effects of criteria pollutants be considered additively when calculating the Hazard Index, and that 1-hour average concentrations of background criteria pollutants be used in calculating the acute HI for the purposes of facility permitting.

Response:

Carbon monoxide, nitrogen dioxide, and sulfur dioxide are criteria pollutants; they are not defined as Toxic Air Contaminants. These are all already subject to criteria pollutant NSR requirements in Regulation 2, Rule 2. Federal and State ambient air quality standards (AAQS) have been established for each, and the District is in attainment of all of these applicable AAQS.

Table 2-5 includes an emission trigger level for ozone because this criteria pollutant is not covered by Regulation 2, Rule 2 (ozone, however, is not expected to be emitted directly from stationary sources in significant quantities). Many particulate TACs (e.g., diesel PM, lead, hexavalent chromium) are included in Regulation 2, Rule 5, and will be considered in health risk screening. In addition, the District is implementing the CARE Program to further assess air pollution health risks at a community-level. While the focus of the CARE Program is on TACs, further analysis of criteria pollutants will also be included.

E2.2 CEQA

Comment:

Several comments were received regarding CEQA requirements. Some comments indicated that a comprehensive environmental impact report (EIR) should be completed on the proposed rulemaking in order to facilitate the public's understanding of the extent of potentially significant and adverse impacts to human health and the environment, and identify ways in which these impacts could be avoided or mitigated. Under CEQA, a negative declaration is improper if substantial evidence in the record supports a "fair argument" that a significant impact may occur.

Response:

The District re-evaluated the need for a more comprehensive CEQA document, and agrees that an EIR should be completed for this proposed rulemaking. Therefore, a draft EIR was prepared by Environmental Audit, Inc. (April 20, 2005) and is available for review on the District's website (www.baaqmd.gov/pln/ruledev/2-5/2005/0205_drEIR_042005.pdf).

The draft EIR indicates that the District's proposal to require new and modified dry cleaners to meet project risk limits of Regulation 2-5-302, may result in a potentially significant increase of a criteria pollutant (ozone) because many dry cleaners may switch from perchloroethylene (a negligibly reactive organic compound) to less toxic cleaning solvents (i.e., VOCs) that may be precursors to ozone formation. Even though the District proposal is expected to reduce emissions of Perc and other TACs, the potential for this increase in VOC emissions is considered significant under CEQA. No other potentially significant adverse impacts were identified.

E2.3 Dry Cleaners Comments

Comment:

Dry cleaners and the Halogenated Solvents Industry Alliance commented that the proposed rule would require all existing facilities to replace their equipment, which would be an excessive expense for these small businesses.

Response:

Only new or modified sources that emit toxic air contaminants (above trigger levels) are subject to Air Toxics NSR. The District currently permits only about 5 to 10 new Perc dry cleaning machines per year. About 80 percent of new dry cleaning machines use alternative solvents (e.g., high flash-point petroleum solvent), which are not subject to Air Toxics NSR (indeed, most are exempt from permitting requirements). The cost of installing and operating alternative solvent machines is very similar to the cost of installing and operating a Perc machine. Existing Perc dry cleaning machines are subject to a statewide ATCM and the Air Toxics Hot Spots Program.

Comment:

Dry cleaners and the *Halogenated Solvents Industry Alliance* commented that the proposal would extend "new source review" limits to existing cleaners wishing to replace their equipment.

Response:

The existing Air Toxics NSR program already treats replacement equipment as a new source. Our permit rules (Regulations 2-1 and 2-2) and Risk Management Policy (RMP) consider replacement machines (e.g., boilers, vapor degreasers) to be new sources [note the exemption, Regulation 1-115: mandated installations/modifications are not subject to new source requirements. The dry cleaning ATCM mandated some dry cleaning facilities to replace or modify vented and transfer machines effective 1998, these replacements were not subject to NSR]. From 1993 to 2000, the District's RMP allowed a replacement dry cleaning machine to be approved if TBACT was applied but risk reduction measures were not required if the throughput was not increased. The District modified the Risk Management Policy on February 3, 2000; the new RMP requires TBACT if project risk is greater than one in a million, and risk reduction measures (e.g., Vapor Barrier Room) if the project risk is greater than 10 in a million (limits risk to 100 in a million).

Comment:

Dry cleaners objected that the District was proposing a future prohibition of Perc dry cleaning. Other commenters (e.g., ELJC) suggested a prohibition of Perc.

Response:

The District's current proposal does not set a future prohibition for Perc; however, CARB is reviewing the statewide dry cleaning ATCM and future prohibition of Perc is possible. This issue is probably more appropriately addressed when the District reviews the forthcoming ATCM revision and could at that time consider changes to Regulation 11, Rule 16.

Comment:

Dry cleaners commented that the industry could not sustain additional annual fees and that the small business discount should be expanded.

Response:

The increase in fees associated with Air Toxics NSR (Risk Screening Fee) is related only to those permit applications for new or modified sources subject to toxic review (with emissions in excess of the trigger levels in Table 2-5-1). The Risk Screening Fee would be increased $272 ($186 with 50% discount for small businesses). Increases in fees (including changes to Fee Schedules that affect annual renewal fees) are included as part of a Public Hearing to consider changes to Regulation 3 to provide revenue for the District's FY 2005/06 budget. The proposed changes to Regulation 3 include expanding the small business income limit from $500,000 to $600,000.

Comment:

Dry cleaners believe that significant emission reductions already achieved by their industry are enough.

Response:

District Staff commends the dry cleaning industry for the emission reductions achieved to date. However, because of the close proximity to residences and off-site workers, the risk from a typical Perc dry cleaner is between 10 in a million and 100 in a million. Virtually all other toxic sources are below 10 in a million.

Comment:

How are risks calculated? Can new dry cleaning machines use Perc?

Response:

The District uses a computer simulation program to conduct air dispersion modeling that estimates concentrations of air pollutants at multiple sites downwind of toxic sources. A program called ISCST3 (Industrial Source Complex Short Term, version 3) that was developed by U.S. EPA is typically used. EPA is developing an improved dispersion model called AERMOD (American Meteorological Society / Environmental Protection Agency Regulatory Model) that will use more site-specific data to estimate dispersion. CARB has developed a new computer program called HARP (Hot Sports Analysis and Reporting Program) that incorporates ISCST3, as well as relevant toxicity values to calculate risk. These new tools and the new OEHHA risk assessment guidelines add significant complexity to the current procedures and will require additional resources.

New dry cleaning machines may still use Perc but, in order to meet the proposed cancer risk standard of 10 in a million, a new Perc machine will likely need to be installed inside a Vapor Barrier Room. VBRs typically cost $5000 to $10,000 to install. Even with a VBR, the amount of solvent allowed may be less than 100 gallons. Facilities should definitely consider alternative solvents.

Comment:

Dry cleaners commented that the rule should not be rushed.

Response:

The District does not believe that the rule is being rushed. The District adjusted the rule development schedule to address the extensive comments received in 2003 and 2004. District staff also thought it appropriate to include the new OEHHA Risk Assessment guidelines and use HARP, which were completed late in 2003 (although HARP still has severe limitations for use as a permitting tool). CARB is proceeding to improve HARP. In addition, the District initiated the Community Air Risk Evaluation (CARE) Program in order to assess cumulative impacts from mobile, area, and stationary sources within a community.

Comment:

Halogenated Solvents Industry Alliance commented that replacement of Perc would likely result in an increase in emissions of ozone-forming (POCs) or toxic alternatives.

Response:

The District considers the increase in emissions of ozone-forming emissions a wise trade-off for the beneficial decrease in Perc emissions. All available data indicate that the alternatives to Perc have lower toxicity than Perc. If OEHHA develops health effects values for any alternative solvent, the District will incorporate that compound into the rule, and the use of an alternative solvent above its trigger level will be subject to toxic new source review.

E2.4 Miscellaneous Comments

Comment:

Section 112 of the Clean Air Act requires risk standards to be set without regard for cost considerations, in order to provide an ample margin of safety to the affected community.

Response:

The federal CAA Section 112 does not restrict EPA from considering the costs of controls in establishing “an ample margin of safety to protect public health”. EPA considers costs, and other relevant factors such as technological feasibility and uncertainties, in establishing “an ample margin of safety.” The framework for EPA’s risk management process is based on the recommendations from a U.S. Court of Appeals decision on the vinyl chloride NESHAP litigation (see *Natural Resources Defense Council v. EPA*, 1987), and is delineated in the preamble to the benzene NESHAP (54 FR 38044, Sept. 14, 1989). EPA briefly describes this risk management process as follows:

> For public health risk management decision-making in the residual risk program, EPA considers the two-step process culminating with an “ample margin of safety” determination, as established in the 1989 benzene NESHAP and endorsed by Congress in the 1990 CAA Amendments as a reasonable approach. In the first step, a “safe” or “acceptable risk” level is established considering all health information including risk estimation uncertainty. As stated in the preamble to the rule for benzene, which is a linear carcinogen (i.e., a carcinogen for which cancer risk is believed or assumed to vary linearly with exposure), “an MIR (maximum individual risk) of approximately 1 in 10 thousand should ordinarily be the upper-end of the range of acceptability.” In the second step, an emission standard is set that provides an “ample margin of safety” to protect public health, considering all health information including the number of persons at risk levels higher than approximately 1 in 1 million, as well as other relevant factors including costs, economic impacts, technological feasibility, and any other relevant factors. In notifying the public of the 1989 benzene NESHAP, the Agency stated that it “strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately 1 in 1 million and (2) limiting to no higher than approximately 1 in 10 thousand the estimated risk that a person living near a plant would have.” (Source: Residual Risk Report to Congress, EPA-453/R-99-01, March 1999, pg. ES-11).

The risk management process used by CARB is similar to that used by EPA. CARB recommends an upper level maximum project cancer risk of 100 in a million, and a non-cancer HI of 10. Acceptable risks below that level are then based on case-by-case considerations of a broad range of factors including the degree of uncertainty in the risk analysis, and the technological feasibility and cost effectiveness of risk reduction measures.

Comment:

The proposed changes do not result in more stringent NSR regulations but instead may result in less stringent regulatory controls since some TACs are proposed to be removed from the current list of TACs. It is the District's responsibility to show that the proposed new rule does not weaken the regulations thereby causing greater public health risk.

Response:

The proposed changes make the program more stringent. The District proposal drops compounds that are not on the OEHHA list, but adds twice as many compounds as are dropped. In addition, though gasoline vapors are dropped, the compounds that make gasoline toxic are retained. Because, in general, the compounds added are more toxic than those dropped, and because there are more added than dropped, the proposal is more stringent than the existing program. It is important that the Toxics NSR program be updated periodically to incorporate the best current scientific understanding regarding potential health effects and provide an ample margin of safety. A specific procedure has been established in California for developing and updating these evaluations of toxicity. The toxicologists and epidemiologists at OEHHA handle the procedure, which includes a peer review process and approval by the State Scientific Review Panel. As updated toxicity values are adopted by OEHHA, the District will periodically consider their addition to the Toxics NSR Program. Prior to use in Regulation 2, Rule 5, any new or revised health effects values adopted by OEHHA/CARB after January 1, 2005 will be reviewed by the District through a rule development process. The District will evaluate the new criteria for implementation, enforcement, and feasibility of compliance with the project risk limits.

Attachment 1: Preliminary Resource Estimate for Populating Modeling Database for BAAQMD Permitted Sources of Toxic Air Contaminants

1. Number of BAAQMD permitted sources and facilities with TAC emissions

As is detailed in the following table, there are currently a total of 22,494 permitted sources of TACs (permit units) in the Bay Area. The number of facilities is 12,032. These figures include an estimated 3,000 backup engines at 2,500 facilities that have not yet received District permits.

BAAQMD Permitted Sources with Toxic Air Contaminant Emissions

Source Category	Number of Sources (Current)	Number of Sources (Future)	Number of Sources (Total)
Gasoline dispensing facilities	2,608	295	2,903
Diesel engines	3,761	3,237	6,998
Crematories	82	0	82
Other combustion sources	3,280	315	3,595
Semiconductor fabrication	157	6	163
Auto body shops	1,095	14	1,109
Other surface coating sources	1,994	37	2,031
Printing presses	871	10	881
Fiberglass operations	76	0	76
PERC drycleaners	714	6	720
Non-PERC drycleaners	203	2	205
Solvent cleaning operations	1,734	40	1,774
Other solvent sources	344	9	353
Organic liquid storage sources	711	15	726
Organic liquid handling sources	107	2	109
Other sources	766	1	767
Totals	18,503	3989	**22,492**

- Current sources are existing sources with a Permit to Operate
- Future sources are sources with an Authority to Construct that have not yet started up
- The number of future diesel engines includes an estimated 3,000 existing sources that have not yet submitted permit applications

2. Staff Time Needed to Collect, Screen, and Enter Modeling Data

The estimated District staff time needed to collect, screen, and enter required modeling data for each source and facility (on average) is given in the following two tables.

Staff Time to Establish Modeling Data for Each Source (min.)

Task	Clerical	Technician	Engineer
Send out source data form	5		
Receive source data form	5		
QA source data form		15	
Establish permitted-to-modeled source relationship			5
Enter source data form(s)			10
Totals per source	10	15	15

Staff Time to Establish Modeling Data for Each Facility (min.)

Task	Clerical	Technician	Engineer
Receive facility boundary and building data diagram	5		
QA facility boundary and building data diagram		15	
Establish background photo/map			15
Enter facility boundary and building data			25
Totals per facility	5	15	40

The estimated staff time needed to establish the required modeling data for all Bay Area sources and facilities identified in item #1 above is summarized as follows.

Total Staff Time to Establish

Modeling Data for All Sources and Facilities (hours)

Task	Clerical	Technician	Engineer
All source data	3,749	5,623	5,623
All facility data	1,003	3,008	8,021
Total for all data	4,752	8,631	13,644

3. District Staff Resources and Associated Costs

The unit cost of District staff labor is given in the following table, based on District FY 2003-04 wages, and including a multiplying factor of 1.285 to account for the cost of overhead incurred above regular wages.

Cost of District Staff Time (Dollars per hour)

	Clerical	Technician	Engineer
Cost of Staff Time w/Overhead	25.85	40.10	51.17

The total cost of the District staff time given in item #2 above is provided in the following table.

Cost to Establish Modeling Data for All Sources and Facilities (Dollars)

Task	Clerical	Technician	Engineer	All
Cost for all source data	$96,903	$225,482	$287,729	$610,114
Cost for all facility data	$25,919	$120,621	$410,452	$556,992
Total cost for all data	$122,822	$346,103	$698,181	$1,167,106

The estimated staff time given in item #2 above is translated into staff resources expressed as full time equivalents (FTEs) in the following table assuming 1,800 staff hours equals 1 FTE.

Staff Resources to Establish Modeling Data (FTEs)

Task	Clerical	Technician	Engineer	ALL
Staff FTEs for all source data	2.08	3.12	3.12	8.32
Staff FTEs for all facility data	0.56	1.67	4.46	6.69
Total FTEs for all data	2.64	4.79	7.58	15.01

E3. LIST OF COMMENTORS

Commenter	Affiliation
Linda Weiner	**Bay Area Clean Air Task Force c/o American Lung Association of San Francisco & San Mateo Counties)** 2171 Junipero Serra Blvd., Suite 720 Daly City, CA 94014-1999 650-994-5864
Michelle Komlenic	**California Air Resources Board (CARB)** P.O. Box 2815 Sacramento, CA 95812 [comments received via telephone conversation with B. Bateman] 916-322-3926
Sally Rump	**California Air Resources Board (CARB)** P.O. Box 2815 Sacramento, CA 95812 916-327-5603
Sandra Giarde	**California Cleaners Association** 530 Bercut Drive, Suite G Sacramento, CA 95814 916-443-0986
Cindy K. Tuck	**California Council for Environmental and Economic Balance (CCEEB)** 100 Spear Street, Suite 805 San Francisco, CA 94105-1525 415-512-7890

Melanie Marty	**California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA)** 1515 Clay Street, 16th Floor Oakland, CA 94612 510-622-3150
Lenore Griffin	**Carlmont Village Cleaners** 101 Alameda De Las Pulgas Belmont, CA 94002 650-593-1121
Summary Report from BAAQMD's Air Toxics NSR Program Workshops	**Design, Community & Environment** 1600 Shattuck Avenue, Suite 222 Berkeley, CA 94709 510-848-3815
Ken Kloc & Amy S. Cohen	**Golden Gate University** **Environmental Law and Justice Clinic** **School of Law** 536 Mission Street San Francisco, CA 94105-2968 415-442-6647
Stephen P. Risotto	**Halogenated Solvents Industry Alliance, Inc. (HSIA)** 1300 Wilson Boulevard Arlington, VA 22209 703-741-5780

Jon Meijer	**International Fabricare Institute** 12251 Tech Road Silver Spring, MD 20904 301-662-1900
Edward Moore	**New United Motor Manufacturing, Inc. (NUMMI)** 45500 Fremont Blvd. Fremont, CA 94538 510-498-5795
Marti Russell	**Peninsula Dry Cleaners Association (PDCA)** 1876 S. Norfolk San Mateo, CA 94403
Heather N. Perry	**Stanford University** Environmental Health and Safety ESF – 480 Oak Road Stanford, CA 94305-8007 650-723-0448
Antoinette “Toni” Stein	**Antoinette “Toni” Stein, PhD** 800 Magnolia Street Menlo Park, CA 94025 650-853-0314 igc.org [tweil@igc.org]
David Schonbrunn	**Transportation Solutions Defense and Education Fund (TRANSDEF)** 16 Monte Cimas Avenue Mill Valley, CA 94941 415-380-8600

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Final Environmental Impact Report for the

Bay Area Air Quality Management District's

Air Toxics NSR Rule

June 8, 2005

Prepared By:

Environmental Audit, Inc.

Final Environmental Impact Report for the Bay Area Air Quality Management District's Air Toxics NSR Rule

June 8, 2005

Prepared for:

Bay Area Air Quality Management Distict
939 Ellis Street
San Francisco, CA 94109
Contact: Scott Lutz
(415) 749-4676

Prepared By:

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92870
Contact: Debra Bright Stevens
(714) 632-8521

PREFACE

This document constitutes the Final Environmental Impact Report (EIR) for the Bay Area's Air Quality Management District's Air Toxic New Source Review Rules. The Draft EIR was circulated for a 30-day public review and comment period on April 18, 2005. The comment period ended on May 23, 2005. One comment letter was received during the public comment period. The comment letter and responses are included in Appendix B of this document. Only minor modifications were made to the Draft EIR to convert it to a Final EIR. None of the modifications alter any conclusions reached in the Draft EIR, nor provide new information of substantial importance relative to the draft document that would require recirculation of the Draft EIR pursuant to CEQA Guidelines §15088.5. Therefore, this document is now a Final EIR. Additions to the text of the EIR are denoted using italics. Text that has been eliminated is shown using ~~strike outs~~.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

DRAFT ENVIRONMENT IMPACTS REPORT

AIR TOXICS NSR RULES

TABLE OF CONTENTS

Page No.

Page No.

Page No.

Page No.

Page No.

Page No.

TABLES:

APPENDIX:

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The Bay Area Air Quality Management District (BAAQMD or District) was established in 1955 by the California Legislature to control air pollution in the counties around San Francisco Bay and to attain federal air quality standards by the dates specified in federal law. There have been significant improvements in air quality in the Bay Area over the last several decades. The BAAQMD is also required to meet state standards by the earliest date achievable.

For the last eighteen years, the District has had a program to evaluate and reduce the public's exposure to toxic air contaminants (TACs). TACs are air pollutants, which may cause adverse health effects such as cancer, birth defects, respiratory ailments, or other serious illness. The District's overall air toxics program includes three individual regulatory programs directed at controlling TAC emissions from stationary sources. Two of these programs apply to sources at existing facilities, and the third is the Air Toxics New Source Review (NSR) Program, which focuses on proposed projects involving new and modified sources.

This EIR addresses the proposed changes to the Bay Area Air Quality Management District ("the District" or BAAQMD) Air Toxics NSR Program. The proposed changes in the program will result in the adoption of a new District rule, and amendments to several existing District rules and Manual of Procedures (MOP).

1.1.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the potential environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid identified significant adverse environmental impacts of these projects be identified.

To fulfill the purpose and intent of CEQA, the BAAQMD has prepared this Program Environmental Impact Report (EIR) to address the potential environmental impacts associated with the proposed Air Toxics New Source Review (NSR) Program. The Proposed Project will be implemented by adopting a new District Rule, Regulation 2, Rule 5: New Source Review of Toxic Air contaminants, and a new part to its Manual of Procedures (MOP). Amendments to several other District rules are also proposed in order to maintain consistency with Regulation 2, Rule 5. Prior to making a decision on the Air Toxics NSR Program, the BAAQMD Governing Board must review and certify the EIR as providing adequate information on the potential adverse environmental impacts of implementing the proposed plan.

1.1.2 NOTICE OF PREPARATION

A Notice of Preparation for the adoption of District Regulation 2, Rule 5 (included as Appendix A of this EIR) was distributed to responsible agencies and interested parties for a 30-day review on January 26, 2005. A notice of the availability of this document was distributed to other agencies and organizations and was placed on the BAAQMD's web site, and was also published in newspapers throughout the area of the BAAQMD's jurisdiction. No comment letters on the NOP were received.

1.1.3 TYPE OF EIR

CEQA includes provisions for program EIRs in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, including adoptions of broad policy programs, from those prepared for specific types of projects (e.g., land use projects) (CEQA Guidelines §15168). The EIR for the Air Toxics NSR Program is a program EIR because it examines the environmental effects of proposed project which will ultimately be issued as rules or regulations and promulgated as part of a continuing ongoing regulatory program.

A program EIR allows consideration of broad policy alternatives and program-wide mitigation measures at a time when an agency has greater flexibility to deal with basic problems of cumulative impacts. A program EIR also plays an important role in establishing a structure within which CEQA reviews of future related actions can be effectively conducted. This concept of covering broad policies in a program EIR and incorporating the information contained therein by reference into subsequent EIRs for specific projects is known as "tiering" (CEQA Guidelines §15152). A program EIR will provide the basis for future environmental analyses and will allow project-specific EIRs to focus solely on the new effects or detailed environmental issues not previously considered. If an agency finds that no new effects could occur, or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required (CEQA Guidelines §15168(c)[5]).

The degree of specificity required in an EIR corresponds to the degree of specificity involved in the underlying activity described in the EIR (CEQA Guidelines §15146). Because the level of information regarding potential impacts from the proposed project recommended in the Air Toxics NSR Program is relatively general at this time, the environmental impact forecasts are also general or qualitative in nature. In certain instances, such as future ambient air quality concentrations, impacts are quantified to the degree feasible.

1.1.4 INTENDED USES OF THIS DOCUMENT

In general, a CEQA document is an informational document that informs a public agency's decision-makers, and the public generally, of potentially significant adverse environmental effects of a project, identifies possible ways to avoid or minimize the significant effects, and describes reasonable alternatives to the project (CEQA Guidelines §15121). A public agency's decision-makers must consider the information in a CEQA document prior to making a decision on the project. Accordingly, this EIR is intended to: (a) provide the BAAQMD Governing Board and the public with information on the environmental effects of the proposed project; and, (b) be used as a tool by the BAAQMD Governing Board to facilitate decision making on the proposed project.

Additionally, CEQA Guidelines §15124(d)(1) require a public agency to identify the following specific types of intended uses of a CEQA document:

1. A list of the agencies that are expected to use the EIR in their decision-making;
2. A list of permits and other approvals required to implement the project; and
3. A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies.

To the extent that local public agencies, such as cities, county planning commissions, etc., are responsible for making land use and planning decisions related to projects that implement a District Rule in the Air Toxic NSR Program they can rely on this, pursuant to CEQA Guidelines §15152, during their decision-making process. Similarly, other single purpose public agencies developing projects consistent with Regulation 2, Rule 5, can tier off this EIR, pursuant to CEQA Guidelines §15152.

1.1.5 AREAS OF CONTROVERSY

In accordance to CEQA Guidelines §15123(b)(2), the areas of controversy known to the lead agency including issues raised by agencies and the public shall be identified in the EIR. *Only one set of comments was received on the Draft EIR. Those comments came from the Environmental Law and Justice Clinic (ELJC) at the Golden Gate University School of Law. In the comments ELJC advocates the incorporation of cumulative health risk analysis and the precautionary principle into the proposed project.*

The existing District Air Toxics NSR Program uses a risk-based approach where the maximum incremental health risks from new and modified sources in a project are estimated by an HRSA and compared to project risk limits. Projects that meet these project risk limits are not expected to cause, or contribute significantly to, adverse health effects. The project risk limits that are used are consistent with risk management guidelines issued by both CARB and EPA. This approach is often called "incremental risk analysis."

ELJC advocates that the toxics NSR rule incorporate "cumulative risk analysis." Cumulative risk analysis attempts to assess health risks from exposure to air contaminants emitted from a proposed new source taken together with emissions from existing local sources. These cumulative risks would then be compared to cumulative risk limits.

The District believes that cumulative risk analysis cannot be incorporated into the District's toxics NSR program at present for three primary reasons: (1) insufficient data *is available to estimate exposures and health risks from existing sources, (2) cumulative risk limits have not been established in law, regulation, or guidance by any agency, and (3) the software tools necessary to perform this kind of analysis on a programmatic basis do not exist.*

ELJC also advocates incorporating the precautionary principle into the toxics NSR program. The "precautionary principle" has received considerable attention in a number of international discussions on human health and the environment. Although some statements of the principle are more detailed than others, each has at its core the idea that action should be taken to prevent or minimize harm to human health and the environment even if scientific evidence is inconclusive.

The District believes that the precautionary principle is extremely vague and therefore difficult to craft into workable policies or regulations. The precautionary principle does not specify what should trigger action (e.g., how a potential health threat is to be established, and how a determination about whether existing scientific information is inadequate or inconclusive is to be made), nor does it specify what action should be taken after it is triggered. However, the District also believes that some ideas regarding how the precautionary principle is to be applied are already incorporated into the toxics NSR program through the use of methods to estimate health risk that are intended to err on the side of health protection, through the use of conservative incremental risk limits that trigger analysis of alternatives, and through the adoption of rules to replace less public and open policy and procedure documents.

~~No areas of controversy have been raised by the public during the NOP public comment period. At this time, there are no known areas of controversy regarding the adoption of the Air Toxics NSR Program.~~

1.1.6 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) requires an EIR to include a statement of objectives, which describes the underlying purpose of the proposed project. The purpose of the statement of objectives is to aid the lead agency in identifying alternatives and the decision-makers in preparing a statement of findings and a statement of overriding considerations, if necessary. The objectives of the proposed Air Toxics NSR Program are summarized in the following bullet points.

- update and enhance program requirements primarily to increase conformity with updated State guidelines,
- improve the legal defensibility of the District's permitting decisions, and
- increase the clarity and public visibility of program requirements.

1.1.7 DOCUMENT FORMAT

State CEQA Guidelines outline the information required in an EIR, but allow the format of the document to vary [CEQA Guidelines §15120(a)]. The information in the EIR complies with CEQA Guidelines §15122 through §15131 and consists of the following:

Chapter 1: Introduction

Chapter 2: Project Description

Chapter 3: Environmental Setting, Impacts and Mitigation Measures

Chapter 4: Alternatives

Chapter 5: Other CEQA Topics

Chapter 6: References

Chapter 7: Acronyms

Appendix A: Notice of Preparation/Initial Study

Appendix B: Comments Received on the Notice of Preparation (NOP)/Initial Study and Responses to Comments

1.2 EXECUTIVE SUMMARY OF ~~*DRAFT*~~ *FINAL* EIR

1.2.1 EXECUTIVE SUMMARY – CHAPTER 2: PROJECT DESCRIPTION

The goal of the District Air Toxics NSR Program is to prevent significant increases in health risks resulting from new and modified sources of TACs based on pre-construction permit review. The program is also intended to reduce existing health risks by requiring updated control requirements when older, more highly polluting, sources are modified or replaced. The Air Toxics NSR Program was established in 1987 at the direction of the District's Board of Directors, and has been implemented based on policies and procedures adopted by the District's Air Pollution Control Officer (APCO).

The Air Toxics NSR Program is a health risk-based program, meaning the program requirements are based on the results of health risk assessments (HRA). An HRA is a scientific analysis of the measure of health risk to individuals in the affected population that may be exposed to emissions of one or more toxic substances. The Air Toxics NSR Program uses an HRA methodology specifically developed for air pollution control programs in California. This methodology is documented in State HRA guideline documents. Under the Air Toxics NSR Program, District staff completes a site-specific Health Risk Screening Analysis (HRSA) as part of the permit evaluation process for any proposed project with TAC emissions, which exceed specified toxic thresholds. (Note that an HRA completed for the Air Toxics NSR Program is generally referred to as a "Health Risk Screening Analysis", or HRSA).

Depending on the results of an HRSA, new and modified sources may be required to control emissions of TACs using the Best Available Control Technology for Toxics (TBACT). The residual emissions remaining after the use of TBACT are also evaluated to make sure that the health risks for any exposed individual in the surrounding community will not be significantly increased by the proposed project. The program also allows the APCO to consider the degree of uncertainty in the HRSA, along with a number of other factors, in making a risk management decision to issue or deny a permit.

The District is now proposing to codify the policies and procedures that make up the Air Toxics NSR Program by adopting a new District rule: Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, and a new part to its Manual of Procedures (MOP). Amendments to several other District rules are also proposed in order to maintain consistency with Regulation 2, Rule 5.

The most significant changes in the Air Toxics NSR Program included in the proposed rulemaking are: (1) add the consideration of acute health risks in HRSAs, (2) lower the TBACT threshold for chronic non-cancer health risks, (3) use updated toxicity values and exposure assessment procedures, (4) eliminate discretionary risk management authority and (5) remove existing exemptions from project risk limits for dry cleaners. Due to increases in the quantity and complexity of HRSAs that will result from these changes, the District is also proposing to increase permit fees for affected facilities in order to fund the additional anticipated staff resources.

The District has three regulatory programs which are used to reduce the health risks associated with exposure to TACs emitted from stationary sources: (1) a Source Category-based Control Program, (2) the Air Toxic "Hot Spots" Program (ATHS), and (3) the Air Toxics NSR Program.

1.2.2 EXECUTIVE SUMMARY – CHAPTER 3: ENVIRONMENTAL SETTINGS, IMPACTS AND MITIGATION MEASURES

CEQA Guidelines §15125(a) requires that an EIR include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the NOP is published. This environmental setting will normally constitute the baseline of physical conditions by which a lead agency determines whether an impact is significant.

Chapter 3 describes the existing environmental setting, analyzes the potential environmental impacts, and recommends mitigation measures, when significant environmental impacts have been identified. In addition, cumulative impacts and mitigations are also addressed. Each of the resources identified in the CEQA checklist (CCR Title 14, Chapter 3, §15000 et seq., Appendix G) are analyzed in Chapter 3.

The proposed project could result in the additional control of TACs. The Air Toxic NSR Rules provide incentives to reduce the potential health risk due to the operation of stationary sources. Specifically, the Air Toxic NSR Program is expected to provide incentives to use alternatives to the use of perc in dry cleaning facilities. There are a number of non-perc solvents available for dry cleaning. Additional control equipment also may be required to reduce exposure to TACs, e.g., oxidation catalyst to reduce emissions of acrolein. Table 1-1 summarizes the proposed project impacts and mitigation measures.

1.2.3 EXECUTIVE SUMMARY – CHAPTER 4: ALTERNATIVES

This EIR provides a discussion of alternatives to the proposed project as required by CEQA. According to the CEQA guidelines, alternatives should include realistic measures to attain the basic objectives of the proposed project and provide means for evaluating the comparative merits of each alternative (CEQA, Guidelines, § 15126.6(a)). In addition, though the range of alternatives must be sufficient to permit a reasoned choice, they need not include every conceivable project alternative (CEQA Guidelines §15126.6(a)).

CEQA requires a No Project Alternative to be evaluated. A No Project Alternative consists of what would occur if the project were not approved. The No Project Alternative would continue the current policies for regulating TACs from new, modified, or relocated equipment as part of the permit review process. The APCO would continue to have the discretion to issue or deny a permit for a proposed project that exceeds specified health risk thresholds, depending on a number of factors. These factors include the degree of uncertainty in the risk analysis, possible net air quality benefits of updated replacement equipment, the lifetime of the project, incorporation of all feasible risk reduction measures, the costs of mitigation, and any benefit of the project to the local community and society.

Under Alternative 2, the discretionary risk management actions of the APCO for proposed projects that exceed project risk limits would be clarified and expanded. The existing RMP indicates that the APCO is responsible for risk management at the District and may consider a number of factors in determining whether to issue or deny a permit for a proposed project together with the results of a risk screening analysis. Under this alternative, the District would retain this provision, which has been eliminated under the proposed project.

TABLE 1-1

Summary of Environmental Impacts, Mitigation Measures and Residual Impacts

Impact	Mitigation Measures	Residual Impact
Aesthetics		
The proposed rules are not expected to adversely affect scenic vistas, or to create additional demand for new lighting or exposed combustion, adversely affecting day or nighttime views. Stationary source control equipment which may be required typically affects industrial, institutional, or commercial facilities located in appropriately zoned areas.	None	Less than significant
Agricultural Resources		
The proposed rules are not expected to generate any new construction of buildings or other structures requiring conversion of farmland to non-agricultural use or conflict with zoning for agricultural uses.	None	Less than significant
Air Quality		
The BAAQMD considers construction emission impacts to be less than significant.	None Required	Less than significant
Emission reductions from the control of emissions at certain stationary sources could result in secondary emissions. These impacts are considered to be less than significant.	None Required	Less than significant
Assuming a "worst-case" analysis, where all existing perc dry cleaning machines in the District would switch to solvent cleaning with the highest VOC content, the potential VOC emissions would exceed the BAAQMD's regional mass daily significance threshold.	Current and future ozone control measures, and strict local regulation and restrictions will assist in reducing the potential increase in VOC emissions.	Potentially significant
The secondary impacts from increased electricity demand are expected to be less than significant.	None Required	Less than significant
The proposed project is expected to provide an air quality benefit by resulting in reduced TAC emissions, including perc, and reduced exposure to TACs within the District.	None Required	Beneficial impact
Biological Resources		
No direct or indirect impacts from implementing the proposed rules were identified which could adversely affect plant and/or animal species in the District.	None	Less than significant
Cultural Resources		
Because controlling toxic emissions from new or modified stationary sources does not typically require extensive cut-and-fill activities, or excavation, it is unlikely that changes in the District's Air Toxics NSR Program will adversely affect historical or archaeological resources, destroy unique paleontological resources or unique geologic features; or disturb human remains interred outside formal cemeteries.	None	Less than significant

TABLE 1-1 (cont.)

Impact	Mitigation Measures	Residual Impact
Geology and Soils		
The proposed rules will not directly expose people or structures to earthquake faults, seismic shaking, seismic-related ground failure including liquefaction, landslides, mudslides or substantial soil erosion.	None	Less than significant
Hazards and Hazardous Materials		
Providing incentives to use alternatives to perc could result in the increased use of flammable materials. The replacement solvents will be used in equipment that has been designed to comply with stringent flammability standards. Wet cleaning is a water-based system, is not flammable and is not considered further in this analysis. Likewise, carbon dioxide (CO_2) is not flammable. The proposed rules would not affect equipment, fire suppressant or prevention system specifications. Equipment would continue to comply with NFPA requirements. In conclusion, compliance with NFPA standards, and compliance with fire prevention, combined with improved equipment design and safety mechanisms, will reduce the potential fire hazards associated with flammable solvents to a less than significant impact. Hazards associated with transportation of hazardous materials are considered to be less than significant.	None	Less than significant
Hydrology and Water Quality		
Reducing the use of perc would remove it as a source of water contamination, providing some water quality benefits through eliminating or reducing the amount of perc used at dry cleaning facilities. The proposed project would not alter the location of facilities and would not exacerbate any potential hazards to storm-water or flood zones.	None	Less than significant
Land Use and Planning		
The proposed rules do not require construction of structures for new land uses in any areas of the District, therefore, are not expected to create divisions in any existing communities or conflict with any applicable habitat conservation or natural community conservation plan.	None	Less than significant
Mineral Resources		
The proposed rules are not expected to deplete non-renewable mineral resources, such as aggregate materials, metal ores, etc., at an accelerated rate or in a wasteful manner.	None	Less than significant
Noise		
It is not expected that modifications to install air pollution control equipment would substantially increase ambient operational noise levels, or expose people to excessive noise levels. The noise produced by the alternative non-perc technologies or new air pollution control equipment will not increase ambient noise levels. Affected facilities would be expected to comply with existing noise ordinances.	None	Less than significant
Population and Housing		
The existing labor pool within the Bay Area would accommodate the labor requirements for any modifications at affected facilities, therefore the proposed rules are not expected to result in changes in population densities or induce significant growth in population.	None	Less than significant

TABLE 1-1 (concluded)

Impact	Mitigation Measures	Residual Impact
Public Services		
There is no potential for significant adverse public service impacts as a result of adopting the proposed rules. There would be no need for new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives. No additional need for fire or police services would be expected.	None	Less than significant
Recreation		
There are no provisions in the proposed rule which would affect land use plans, policies, ordinances, or regulations, increasing the need for more recreational facilities.	None	Less than significant
Transportation and Traffic		
If two additional employees are required for each dry cleaning facility, and all dry cleaning facilities install wet cleaning equipment, 1,350 new employees would be needed. Therefore, 1,350 new additional commute trips would be generated and spread throughout the district. This is not a substantial increase nor would it adversely affect the LOS at any one intersection. No other significant traffic or parking impacts were identified.	None	Less than significant
Utilities and Service Systems		
Adoption of the new rules would not require the construction of new wastewater treatment or storm water drainage facilities, or expansion of existing facilities. If all existing dry cleaning facilities currently using perc switched to wet cleaning, the expected annual water use would increase. The resulting per day increase would be 388,540 gallons per day. There are sufficient water supplies available to serve the project from existing entitlements and resources. The proposed rules may require replacement of dry cleaning equipment. It is expected that the dry cleaning equipment will be replaced at the end of its useful life. Therefore, the landfills or scrap metal collectors would be receiving this equipment whether the new requirements are imposed or not.	None	Less than significant

Under Alternative 3, it is assumed that the health risk thresholds would be reduced. The maximum cancer risk threshold would be limited to 1 per million and the hazard index would be limited to 0.2 for all cases. There would be no additional allowance for projects to go to 10 per million with TBACT. It is assumed that additional air pollution control equipment would be required under this alternative than the proposed project, in order to comply with the 1 per million threshold.

The No Project Alternative would not ultimately achieve the long-term benefits of reduced TAC emissions and reduced exposure to TACs that the proposed rule would achieve. The No Project Alternative (Alternative 1) and Alternative 2 would reduce the potentially significant impacts of increased VOC emissions associated with the proposed project to less than significant but would provide less benefit associated with TAC emission reductions than the proposed rule would provide.

1.2.4 EXECUTIVE SUMMARY – CHAPTER 5: OTHER CEQA TOPICS

1.2.4.1 Relationship Between Short-term Uses and Long-Term Productivity

Implementing the Air Toxic NSR rules would not narrow the range of beneficial uses of the environment. Of the potential environmental impacts discussed in Chapter 3, those related to air quality are considered potentially significant due to the potential increase in VOC emissions associated with hydrocarbon dry cleaning machines versus perc dry cleaning machines. Implementation of ozone control measures in the 2000 CAP are expected to reduce the cumulative VOC emissions to less than significant.

1.2.4.2 Significant Irreversible Environmental Changes

Implementation of the Air Toxic NSR rules is not expected to result in significant irreversible adverse environmental changes. The proposed project could result in significant air quality impacts since the conversion of perc dry cleaning machines to other solvents could result in emissions that exceed the BAAQMD significance thresholds. However, cumulative air quality impacts are expected to be less than significant as other ozone control measures will result in overall emission reductions of NOx and VOCs.

The Air Toxic NSR rules are expected to result in long-term benefits associated with improved air quality even though the population of the Bay Area is expected to increase. The project would result in reduced emissions of TACs, thereby improving air quality and related public health.

1.2.4.3 Growth-Inducing Impacts

Growth-inducing impacts can generally be characterized in three ways: (1) a project includes sufficient urban infrastructure to result in development pressure being placed on less developed adjacent areas; (2) a large project affects the surrounding community by producing a "multiplier effect," which results in additional community growth; and (3) a new type of development is allowed in an area, which subsequently establishes a precedent for additional development of a similar character. None of the above scenarios characterize the project evaluated in the EIR.

1.2.5 EXECUTIVE SUMMARY – CHAPTERS 6 AND 7: REFERENCES AND ACRONYMS AND GLOSSARY

Information on references cited (including organizations and persons consulted) and the acronyms and glossary are presented in Chapters 6 and 7, respectively.

CHAPTER 2

PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 INTRODUCTION

For the last eighteen years, the District has had a program to evaluate and reduce the public's exposure to toxic air contaminants (TACs). TACs are air pollutants which may cause adverse health effects such as cancer, birth defects, respiratory ailments, or other serious illness. The District's overall air toxics program includes three individual regulatory programs directed at controlling TAC emissions from stationary sources. Two of these programs apply to sources at existing facilities, and the third is the Air Toxics New Source Review (NSR) Program, which focuses on proposed projects involving new and modified sources.

This EIR addresses the proposed changes to the Bay Area Air Quality Management District ("the District" or BAAQMD) Air Toxics NSR Program. The proposed changes in the program will result in the adoption of a new District rule, and amendments to several existing District rules and Manual of Procedures (MOP).

The District originally proposed a new Air Toxics Rule in 2003. The District has made numerous revisions to the 2003 proposal based on public comments, and due to amendments to State guidelines and District regulations that have been adopted since 2003. The District has also identified several additional District rules that require amendments to ensure consistency with the current proposal. A list of the regulatory proposals follows.

<u>The proposed project includes the following</u>:

- REGULATION 2: PERMITS, RULE 5: NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

- BAAWMD MANUAL OF PROCEDURES, VOLUME II, PART 4: NEW AND MODIFIED SOURCES OF TOXIC AIR CONTAMINANTS

<u>The proposed project also includes amendments to the following rules and regulations</u>:

- BAAQMD REGULATION 2: PERMITS, RULE 1: GENERAL REQUIREMENTS

- BAAQMD REGULATION 2: PERMITS, RULE 2: NEW SOURCE REVIEW

- BAAQMD REGULATION 2: PERMITS, RULE 9: INTERCHANGEABLE EMISSION REDUCTION CREDITS

- BAAQMD REGULATION 3: FEES

- BAAQMD REGULATION 8: ORGANIC COMPOUNDS, RULE 34: SOLID WASTE DISPOSAL SITES

- BAAQMD REGULATION 8: ORGANIC COMPOUNDS, RULE 40: AERATION OF CONTAMINATED SOIL AND REMOVAL OF UNDERGROUND STORAGE TANKS

- BAAQMD REGULATION 8: ORGANIC COMPOUNDS, RULE 47: AIR STRIPPING AND SOIL VAPOR EXTRACTION OPERATIONS

- BAAQMD REGULATION 11: HAZARDOUS POLLUTANTS, RULE 16: PERCHLOROETHYLENE AND SYNTHETIC SOLVENT DRY CLEANING OPERATIONS

The goal of the District's Air Toxics NSR Program is to prevent significant increases in health risks resulting from new and modified sources of TACs based on pre-construction permit review. The program is also intended to reduce existing health risks by requiring updated control requirements when older, more highly polluting, sources are modified or replaced. The Air Toxics NSR Program was established in 1987 at the direction of the District's Board of Directors, and has been implemented based on policies and procedures adopted by the District's Air Pollution Control Officer (APCO).

The Air Toxics NSR Program is a health risk-based program, meaning that the program requirements are based on the results of health risk assessments (HRA). An HRA is a scientific analysis of the measure of health risk for individuals in the affected population that may be exposed to emissions of one or more toxic substances. The Air Toxics NSR Program uses an HRA methodology that was specifically developed for air pollution control programs in California. This methodology is documented in State HRA guideline documents, which have been updated several times since their original publication in 1987. Under the Air Toxics NSR Program, District staff completes a site-specific Health Risk Screening Analysis (HRSA) as part of the permit evaluation process for any proposed project with TAC emissions that exceed specified toxic thresholds. (Note that an HRA completed for the Air Toxics NSR Program is generally referred to as a "Health Risk Screening Analysis", or HRSA).

Depending on the results of an HRSA, new and modified sources may be required to control emissions of TACs using the Best Available Control Technology for Toxics (TBACT). The residual emissions remaining after the use of TBACT are also evaluated to make sure that the health risks for any exposed individual in the surrounding community will not be significantly increased by the proposed project. The program also allows the APCO to consider the degree of uncertainty in the HRSA, along with a number of other factors, in making a risk management decision to issue or deny a permit.

The District is now proposing to codify the policies and procedures that make up the Air Toxics NSR Program by adopting a new District rule: Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, and a new part to its MOP. Amendments to several other District rules are also proposed in order to maintain consistency with Regulation 2, Rule 5.

The most significant proposed program changes (from the existing Risk Management Policy) are:

- Currently, Health Risk Screening Analyses (HRSAs) are completed to evaluate and limit chronic (i.e., long-term) health risks resulting from TAC emissions. The proposed rule will add the consideration of acute (i.e., short-term) health risk (project acute hazard index limit of 1.0).

- Currently, Best Available Control Technology for Toxics (TBACT) is required for a project that results in a cancer risk of greater than 1.0 in one million. The proposed rule will change the TBACT threshold from a project basis to a source basis and will add a TBACT threshold for chronic non-cancer health risks. Under the proposed rule, any new or modified source is required to have TBACT if the source risk has a cancer risk greater than 1.0 in one million or a chronic hazard index greater than 0.20. These changes focus the imposition of control equipment to those sources that significantly contribute to risk (including non-carcinogenic effects) while avoiding imposition of TBACT on sources that have little effect on risk.

- The proposed rule will remove existing exemptions from project health risk limits for dry cleaners due to advances in less-toxic technologies; this change will provide additional regulatory incentive to use alternatives to perchloroethylene.

- The proposed rule and HRSA Guidelines will include updated lists of toxic air contaminants, toxicity values, and exposure assessment procedures that are consistent with the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines. The rule and HRSA guidelines will be periodically updated to incorporate future changes to the OEHHA guidelines.

- The proposed amendments to Regulation 3 will increase permit application fees for affected permit applicants in order to fund the additional staff resources that will be required to handle the expected increases in the quantity and complexity of HRSAs.

The above proposals include numerous revisions from the 2003 proposal. The major differences from the 2003 proposal are highlighted below.

- In 2003, the District proposed to clarify and expand discretionary risk management authority found in the existing Risk Management Policy and to provide new opportunity for public participation in these discretionary decisions. Projects that complied with the specific findings requirements would have been allowed to meet facility risk limits of 100 in one million for cancer risk and 10.0 for acute and chronic hazard indices instead of the project risk limits of 10.0 in one million for cancer risk and 1.0 for hazard indices. The District has deleted the specific findings exemption, the risk reduction measures requirement, the facility risk limits, and all related definitions, administrative requirements, and procedural provisions from the proposed Regulation 2, Rule 5. Discretionary risk management actions will not be allowed, and all projects will be required to comply with project risk limits of 10.0 in one million for cancer risk and 1.0 for acute hazard index and 1.0 for chronic hazard index.

- The District has augmented Table 2-5-1 by adding the RELs and Cancer Potency Factors that were used to calculate the Acute and Chronic Trigger Levels. Since 2003, OEHHA has updated health effects values for several compounds. These revised health effects values and the resulting revised trigger levels (as of January 1, 2005) have been incorporated into Table 2-5-1. In addition, the trigger level calculation procedures have been amended due to OEHHA's recent adoption of modified exposure assumptions into the State risk assessment procedures, CARB's Interim Residential Breathing Rate, and numerous enhancements of the Hotspots Analysis Reporting Program (HARP) that have occurred since 2003. These trigger level calculation modifications resulted in revised trigger levels for many compounds.

- The District also amended Section 2-5-402 Health Risk Screening Analysis Guidelines by describing how and when Table 2-5-1 and the District's HRSA guidelines will be modified in the future. The District will periodically review, through a rule development process, the feasibility of implementation, enforcement, and compliance with project risk limits, for any new or revised health effects values adopted by OEHHA or any other exposure factors (e.g., breathing rate factors, exposure durations) that affect the emission trigger levels, prior to use of OEHHA's amended health effects values and exposure factors for Regulation 2, Rule 5.

- The District clarified in Section 2-5-301 that the TBACT threshold for chronic hazard index is 0.20 rather than 0.2. In practice, this change reduces the TBACT threshold from a possible high of 0.25 (which rounds down to 0.2 for one significant figure) to 0.205 (which rounds down to 0.20 for two significant figures).

- The District made numerous improvements to the emission calculations procedures in Sections 2-5-601 and 2-5-602 to ensure clarity and consistency.

- Emissions due to emergency use of emergency standby engines are exempt from the current risk management policy and were proposed for exemption from

Regulation 2, Rule 5 in 2003 pursuant to Section 2-5-111. The District is proposing to expand this exemption to include emissions arising from emission testing of these engines that is required by the APCO. This proposed emissions testing exemption for diesel engines is consistent with the Airborne Toxic Control Measure for stationary diesel engines that was recently adopted by California Air Resources Board (CARB). Most new engines are certified by the manufacturer to meet emission standards, therefore testing is very infrequently required by the APCO and these emissions are not expected to be significant.

- The District added definitions for acute hazard quotient and chronic hazard quotient and has clarified the related definitions for hazard index.

- The District revised the definition of cancer risk by removing the quantitative discussion of exposure duration for residential and worker receptors. The appropriate exposure durations will be identified in the District's HRSA guidelines rather than this definition.

- For the definition of "project", the District clarified the circumstances under which a previously permitted source will be considered part of the current project.

The District clarified the definitions of "Health Risk Screening Analysis", "modified source of toxic air contaminants", "receptor location", "reference exposure level", and "worker receptor" and made numerous other editorial revisions to the proposed rule.

The District's efforts to reduce public exposure to TACs includes the promotion of measures directed at reducing emissions from motor vehicles, which are the largest source of TACs. The District has initiated the Community Air Risk Evaluation (CARE) Program to investigate the cumulative impact of stationary, area, and mobile sources in a selected neighborhood; the CARE Program will result in targeted risk reduction measures for the most significant sources, including voluntary risk reduction projects funded by grants (e.g., Carl Moyer and Transportation Fund for Clean Air).

The District's regulatory programs, however, focus on the stationary sources over which the District has direct regulatory authority. TACs are released from a variety of stationary sources, ranging from small facilities like dry cleaners and gasoline stations, to large facilities such as chemical factories and refineries.

2.2 PROJECT LOCATION

The BAAQMD has jurisdiction of an area encompassing 5,600 square miles. The District 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. 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 (see Figure 2-1).

2.3 CURRENT RISK MANAGEMENT POLICY

Risk-based approaches are widely used in regulatory programs in the United States by federal agencies such as the Environmental Protection Agency (U.S. EPA), Department of Energy (DOE), and the Nuclear Regulatory Commission (NRC). In California these methods are used by State agencies including the California Air Resources Board (CARB), Department of Pesticide Regulation (DPR), Department of Toxics Substances Control (DTSC), and the Water Resources Control Board (WRCB). A risk-based approach is appropriate for the Air Toxics NSR Program because it provides site-specific information regarding potential health effects of proposed new and modified sources that can be used in an objective manner to evaluate compliance with California Health & Safety Code (CH&SC) Section 41700.

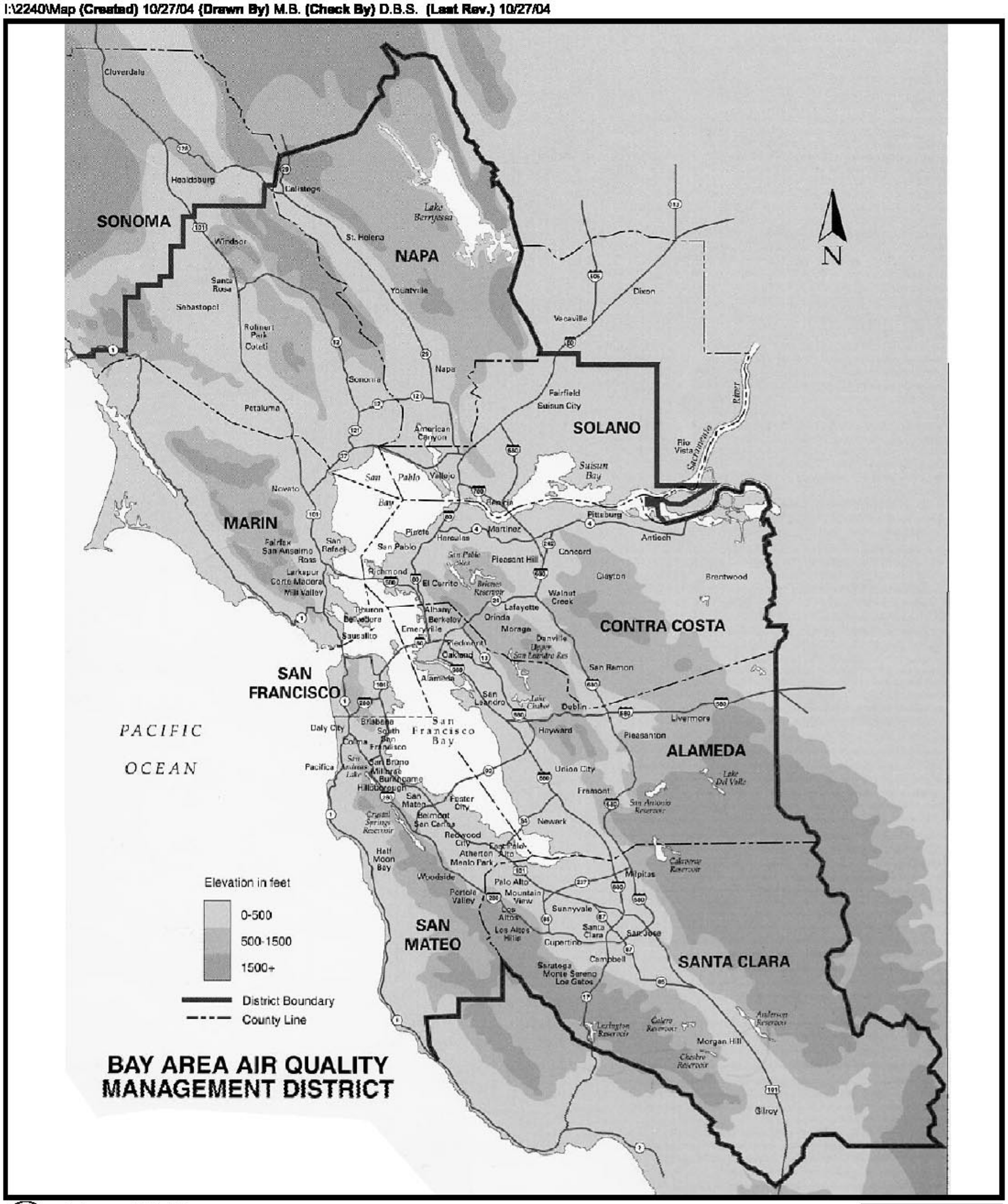
The District Air Toxics NSR Program uses an HRA methodology that was specifically developed for air pollution control programs in California. This methodology is documented in State HRA guideline documents, which have been updated several times since their original publication in 1987. The models and assumptions used in these guidelines are designed to err on the side of health protection in order to avoid underestimation of risk to the public.

The standard risk assessment approach currently involves four steps: (1) Hazard Identification, (2) Exposure Assessment, (3) Dose-Response Assessment, and (4) Risk Characterization. Hazard Identification involves identifying the specific toxic substances that need to be evaluated and whether each of these is a potential human carcinogen, and/or is associated with other types of adverse health effects.

Exposure Assessment involves estimating the extent of public exposure to each substance for which potential cancer risk or non-cancer health effects will be evaluated. Dose-Response Assessment is the process of quantifying the relationship between level of exposure to a toxic substance and incidence of an adverse health effect in an exposed population. Risk characterization is the final step of risk assessment. In this step, risks are calculated by combining modeled exposure estimates determined through exposure assessment with Cancer Potency Factors (CPFs) and/or Reference Exposure Levels (RELs) developed through dose-response assessment.

The Risk Evaluation Process (REP) describes the procedures that are followed by District staff when reviewing permit applications for new and modified sources in order to determine the health risks associated with emissions of TACs.

I:\2240\Map (Created) 10/27/04 (Drawn By) M.B. (Check By) D.B.S. (Last Rev.) 10/27/04



Environmental Audit, Inc.

NOT TO SCALE

LOCATION OF BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Figure 2-1

The Risk Management Policy (RMP) specifies that the APCO is responsible for risk management at the District. The APCO has discretion and may consider a number of factors in determining whether to issue or deny a permit for a proposed project together with the results of an HRSA. These factors include the degree of uncertainty in the risk analysis, possible net air quality benefits of updated replacement equipment, the lifetime of the project, incorporation of all feasible risk reduction measures, the costs of mitigation, and any benefit of the project to the local community and society. The APCO has established specific criteria in the RMP under which permits for new and modified sources can be issued without further risk management considerations (see Table 2-1).

TABLE 2-1

Summary of Existing District RMP Criteria for Issuance of Permits without Further Risk Management Considerations

Project Acceptability Criteria	Cancer Risk Threshold	Chronic Hazard Index Threshold
Project is acceptable as proposed[1]	≤ 1.0 in a million	≤ 1.0
Project is acceptable if all sources in the project have TBACT	≤ 10 in a million	≤ 1.0
For dry cleaners, project is acceptable if all sources in the project have TBACT and all reasonable risk reduction measures have been taken.	≤ 100 in a million	≤ 1.0

[1] Health risks for emergency stand by diesel engines do not include emissions that occur during emergency use.

The District's REP and RMP have been updated several times since their original adoption, primarily in response to revisions in statewide health risk assessment and risk management guidelines. These guideline revisions included HRA guidelines adopted for use in the Air Toxic Hot Spots (ATHS) Program, and risk management guidelines for new and modified sources adopted by CARB. The District established a specific RMP for dry cleaners that allowed permits to be issued for health risks within the action range identified in the CARB risk management guidelines, provided that TBACT and all reasonable risk reduction measures were employed. The District also established a specific risk management policy for diesel-fueled engines so that limitations would not need to be placed on standby engines during emergency use. The current versions of the District's REP and RMP were adopted on February 3, 2000, with the exception of the RMP for diesel-fueled engines which was adopted on January 11, 2002. These documents describe the existing District Air Toxics NSR Program and serve as the baseline for evaluating the changes that would result from the proposed rulemaking described in this report.

Under the REP, the District reviews all permit applications for new and modified sources for TAC emissions. Annual TAC emissions are estimated by District engineers based on source-specific emissions data or material balance, vendor guarantees, and/or representative general emission factors, taken together with the maximum requested source activity levels (e.g., maximum annual fuel or material throughput).

An HRSA is prepared by District staff for proposed projects with TAC emissions that would exceed any listed annual TAC thresholds. To conserve limited resources, an iterative approach is often used in completing these HRSAs. The iterative approach involves initially completing a simplified health-conservative HRSA in order to determine whether a more complex, refined, HRSA is needed. These refinements are often applied sequentially using site-specific information until the requirements of the RMP are met.

If, after exhausting all reasonably available levels of refinement, the results of an HRSA indicate that the project will not meet the requirements of the RMP as proposed, District staff will identify options under which compliance can be achieved. The permit applicant may then consider these options, and is given the opportunity to amend their application, or submit a new permit application, with changes in the project necessary to reduce health risks to levels specified in the RMP.

In relatively rare instances, the District APCO will deny a permit for a proposed project because it has not met the health risk requirements of the RMP. In the vast majority of cases, however, viable permitting options can be identified where the use of emissions control technology and/or other risk reduction measures will be successful in reducing the health risks to acceptable levels.

Prior to 2000, the District completed HRSAs for an average of about 175 permit applications per year. This number increased to 255 in 2000, 440 in 2001, 602 in 2002, 432 in 2003, and 403 in 2004. The large increase in the number of HRSAs completed over the last few years is due primarily to the elimination of permit exemptions for certain sources, particularly engines that are used to supply backup power in the event of an emergency.

A wide variety of different types of sources have TAC emissions and may be subject to HRSA requirements. Diesel engines are currently the most common type of source evaluated in the Air Toxics NSR Program, accounting for about 75 percent of the HRSAs completed in 2004. Other source categories for which significant numbers of HRSAs are completed are, in order of decreasing numbers, gasoline dispensing facilities (GDFs), various gas-fired combustion sources, soil-vapor extraction systems, and dry cleaners. Other common, but less numerous, sources evaluated include landfills, surface coating operations, organic liquid storage tanks (i.e., non-GDFs), coffee roasters, crematories, and furniture strippers.

2.4 PROJECT OBJECTIVES

The objectives of this proposed rulemaking are:

1. To update and enhance the existing District Air Toxics NSR Program. Most of the changes that are proposed are intended to increase conformity with updated State health risk assessment and risk management guidelines.

2. To improve the legal defensibility of the District's permitting decisions concerning new and modified sources of TACs. The proposed program would be implemented through rule requirements and procedures adopted by the District's Board of Directors, rather than policies and procedures adopted by the District's APCO.

3. To increase the clarity and public visibility of program requirements. Publication in the District's rulebook and MOP will clarify program requirements, and a series of planned community-based workshops was conducted in order to increase public awareness of the program.

2.5 PROPOSED PROJECT

The District is proposing to codify the REP and RMP by adopting a new District rule, and a new part to it's Manual of Procedures, as follows: Regulation 2: Permits, Rule 5: New and Modified Sources of Toxic Air Contaminants, and Manual of Procedures Volume II: Engineering Permitting Procedures, Part 4: New and Modified Sources of Toxic Air Contaminants. The District is also proposing amendments to Regulation 2: Permits, Rule 1: General Requirements, Rule 2: New Source Review, and Rule 9: Interchangeable Emission Reduction Credits; Regulation 3: Fees; and Regulation 8: Organic Compounds, Rule 34, Solid Waste Disposal Sites, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks, Rule 47: Air Stripping and Soil Vapor Extraction Operations, and Regulation 11: Hazardous Pollutants, Rule 16: perchloroethylene and Synthetic Solvent Dry Cleaning Operations that are needed to maintain consistency with the new Regulation 2, Rule 5.

2.5.1 PROGRAM UPDATES AND ENHANCEMENTS

The adoption of the proposed Regulation 2, Rule 5, and the companion Manual of Procedures, Volume II: Part 4, will codify the existing District REP and RMP. It will also update and enhance program requirements and increase conformity with State risk assessment and risk management guidelines. These guidelines include:

- Revised health risk assessment guidelines have been established by OEHHA. The SB 1731 amendments to the ATHS Program required OEHHA to revise the risk assessment guidelines used in the ATHS program after a peer review process, and in consideration of input from the State's Scientific Review Panel (SRP). After a multi-year effort, OEHHA adopted the OEHHA Air Toxic Hot Spots Program Guidance

Manual for Preparation of Health Risk Assessment (August, 2003) for use in the ATHS Program in October of 2003. (The new OEHHA HRA guidelines will be referred to in the remainder of this report as the "2003 HRA Guidelines"; the existing HRA guidelines will be referred to as the "1993 HRA Guidelines").

- CARB released the Hotspots Analysis and Reporting Program (HARP) in 2003. The HARP software is intended to facilitate the preparation of HRAs following the new HRA guidelines.

- The District has been informed that OEHHA is evaluating further refinements to the exposure assessment methods that are given in the 2003 HRA Guidelines, and that these refinements may result in significant changes to exposure estimates for the breathing (i.e., inhalation) pathway. In light of this, CARB also released an Interim Policy for Inhalation-Based Residential Cancer Risk" that is to be used to augment the 2003 HRA Guidelines where a single cancer risk value (rather than a range of risk) is needed or prudent for characterizing risk or where a single risk value is used for risk management decision-making for residential receptors. The District will use CARB's interim policy and the recommended 80th percentile breathing rate value (302 liters/kilogram-day) for implementing Regulation 2, Rule 5 until OEHHA completes their refined review of exposure assessment methods. The 80th percentile value will be referred to as the "Interim Residential Breathing Rate".

- Risk management guidelines have been issued by CARB. In 1993, CARB issued Risk Management Guidelines for New and Modified Sources of Toxic Air Pollutants (CARB, 1993). These guidelines were intended to assist air districts in making permitting decisions for new and modified sources of TACs. In 2000, CARB also issued Risk Management Guidance for the Permitting of New Stationary Diesel Fueled-Engines (CARB, 2000). The suggested risk levels for permitting decisions in the CARB guidelines are summarized in Table 2-2.

TABLE 2-2

**Summary of CARB Risk Management Guideline Criteria
For Issuance of Permits**

Project Acceptability Criteria	Cancer Risk Threshold	Hazard Index Threshold
Project is acceptable as proposed[1]	≤ 1.0 in a million	≤ 0.2
Project is acceptable if all sources in the project have TBACT[1]	≤ 10 in a million	≤ 1
For dry cleaners, project is acceptable if all sources in the project have TBACT and all reasonable risk reduction measures have been taken.	≤ 100 in a million	≤ 10
For diesel engines, project is acceptable if specific technology requirements are met. In addition, for non-emergency engines used more than 400 hr/yr, project is acceptable if a Specific Findings Report is prepared and the APCO finds that a permit should be issued.	No specific upper bound risk limit established	No specific upper bound risk limit established

[1] Districts may exempt certain categories of small businesses (e.g., dry cleaners, wood furniture refinishers, gasoline service stations), which have implemented all technically feasible and cost effective control measures.

2.5.2 ACUTE HEALTH RISKS

The existing District REP and RMP focus on adverse health effects that may result from long-term (i.e., chronic) exposures to TACs. There are no specific requirements for consideration of health effects that may result from acute exposures. Acute health effects have not previously been considered because: (1) health effect values for acute exposures for the general public have been of limited number and uneven quality, and have focused on industrial accidents instead of routine or predictable short-term emissions, and (2) use of the available health effects values have generally indicated (e.g., for a wide variety of sources evaluated under the requirements of the ATHS Program) that these acute exposures are rarely of concern for routine or predictable emissions.

In the 2003 HRA Guidelines, OEHHA has established uniform, science-based, guidelines for the derivation of acute health effect values that are applicable to general public exposures to routinely emitted TACs. The 2003 HRA Guidelines establish 51 acute RELs, almost all of which were developed *de novo* for these guidelines. The District is proposing to expand the scope of the Air Toxics NSR Program by using these new OEHHA acute RELs to evaluate short-term health effects.

The District program will focus on acute exposures to TACs that result from emissions that are routine or predictable in nature rather than those that are the result of accidents. Accidental releases of toxic compounds are separately regulated under the California Accidental Release Prevention (CalARP) Program. The CalARP Program is administered by the California Office of Emergency Services (OES) and is implemented by local administering agencies in each city or county. The purpose of the CalARP program is to reduce the frequency of accidental releases of hazardous substances and reduce the consequences in the event a release occurs.

An acute REL is an air concentration that is not likely to cause adverse effects in a human population exposed to that concentration for a short period of time. Almost all of the acute RELs are based on one-hour exposures, except for a few that are based on exposures of several hours (i.e., 4-, 6-, and 7-hour). The acute RELs are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. All but a few of the acute RELs are protective of mild health effects, which are considered minor and reversible (e.g., mild irritation of the eyes, nose or throat). The RELs are designed to protect the most sensitive individuals in the population by the inclusion of margins of safety. Inclusion of margins of safety means that exceeding a specific REL does not automatically indicate an adverse health impact. Rather, it is an indication of the erosion of the margin of safety for exposure to that particular compound. As is the case for estimating chronic non-cancer health effects, a hazard index approach is used to estimate potential acute health effects. For a given TAC, the acute hazard quotient is the ratio of the estimated short-term exposure to the applicable acute REL. To assess the cumulative impact resulting from exposure to more than one compound, the effects are assumed to be additive for a given toxicological endpoint. Thus, where multiple TACs are being considered, the total acute hazard index is the sum of the individual acute hazard quotients for all TACs identified as affecting the same target organ or organ system.

The District is proposing to include all compounds with OEHHA acute RELs in the Air Toxics NSR Program with the exception of carbon monoxide, nitrogen dioxide, and sulfur dioxide. Each of these is a criteria air pollutant with existing requirements for air quality impact analysis in District Regulation 2, Rule 2.

Toxic trigger levels expressed as one-hour emission rates are being added to determine the need for evaluating acute health impacts. The trigger levels were determined for each TAC based on the applicable acute REL, a conservative estimate of the one-hour average air concentration that would result from a unit emission rate (i.e., Chi/Q), and a hazard index of 1.0.

The same air dispersion models that are currently used for estimating chronic health effects (e.g., SCREEN, ISCST) will generally be used for estimating acute health effects. The emission rates used in the modeling will be the maximum emissions that would be expected to occur over the averaging period of the acute REL (i.e., a one-hour period in most cases). The hazard index will be calculated based on the highest model-predicted short-term average (e.g., one-hour) ambient air concentration at a receptor location where public exposure could occur. Non-inhalation pathways are not considered in the calculation of an acute hazard index.

The receptor locations used in evaluating acute health effects will, in some cases, be different from those used in evaluating chronic health effects. The evaluation of chronic health effects focus on locations where individuals live or work (excluding on-site workers, which are regulated by occupational health and safety standards rather than air district requirements). The evaluation of acute health effects, however, may consider a location where a member of the public could reasonably be expected to be located for a short period of time. The proposed rule defines receptor location (Section 2-5-218) in a manner that is sufficiently broad in determining the MEI for acute health effects. A location where an individual may live (residential receptor) or work (worker receptor) or otherwise reasonable be expected to be exposed to toxic air contaminants for the particular chronic or acute exposures being evaluated in an HRSA.

The acute RELs vary widely in their relative toxicity, with values that span a full five orders of magnitude. The TAC that is expected to most frequently require emissions controls and/or other risk reduction measures in order to comply with the proposed acute project risk requirement is acrolein. Acrolein is an organic compound that is emitted from a variety of sources, including those that burn fossil fuels, and it has the lowest acute REL of any that have been adopted by OEHHA. Acrolein emissions can be effectively controlled, however (e.g., oxidation catalysts are extremely effective in removing acrolein emissions from engine exhaust).

2.5.3 TBACT THRESHOLD FOR NON-CANCER RISKS

TBACT is often necessary under the existing District RMP in order to maintain a project risk that is less than or equal to a chronic hazard index of 1.0. The District is proposing to require TBACT for sources with a chronic non-cancer hazard index greater than 0.2 (Regulation 2, Rule 5, Section 2-5-301). This will conform to the recommended non-cancer TBACT requirement in the CARB risk management guidelines.

The annual toxic trigger levels used to determine the need for a HRSA have been revised accordingly. The trigger levels were determined for each TAC based on the applicable chronic REL, a conservative estimate of the annual average air concentration that would result from a unit emission rate, and a target hazard index of 0.2.

2.5.4 TOXICITY VALUES AND EXPOSURE ASSUMPTIONS

Toxicity values and exposure assessment procedures are the two central components of health risk assessment. Toxicity values are the result of dose-response evaluation, which provide quantitative relationships between the amount of exposure to a substance and the extent of toxic injury or disease. Exposure assessment procedures are used to estimate the magnitude and duration of public exposure to substances being evaluated.

The 2003 HRA Guidelines continue to use a point estimate approach for establishing dose-response relationships. That is, single toxicity values (e.g., a CPF, a chronic REL, and/or an acute REL) are assigned to each substance as appropriate. The District is proposing to update the list of compounds included in the Air Toxics NSR Program to include those TACs with health effect values published in the 2003 HRA Guidelines (including new or updated health effects values as of January 1, 2005). These values represent the best information currently available concerning the toxicity of chemical compounds based on general population exposures and incorporating an adequate margin of safety. Table 2-3 contains a list of the compounds that would be either added to or removed from the list of compounds currently included in the REP.

In developing the 2003 HRA Guidelines, OEHHA completed a re-evaluation of the existing algorithms used for making exposure estimates. The re-evaluation showed that the algorithms used in the 1993 HRA Guidelines were largely appropriate for use in the point estimate approach, so these algorithms were retained with only minor modifications. A number of the default values used as exposure parameters were updated, however, based on literature reviews.

The District is proposing to continue to use the point estimate approach to estimate health risks, but with the updated high-end default exposure parameters identified in the 2003 HRA Guidelines (OEHHA, 2000) with the exception of the Interim Residential Breathing Rate recommended by CARB. Also, consistent with the 2003 HRA Guidelines, an HRA may be refined using appropriate site-specific exposure parameters (i.e., a Tier 2 analysis) provided that reasonable justification can be provided for non-default values used. A Tier 3 stochastic analysis may also be used (e.g., using the HARP model) but, under the 2003 HRA Guidelines, this would only provide refined results for residential cancer risk estimates associated with non-inhalation pathways. If stochastic analysis is used, the cancer risk results used for determining compliance with Regulation 2, Rule 5, must be based on the risk to the 95th percentile of the population (see District HRSA Guidelines).

TABLE 2-3

Summary of Differences in the Proposed HRA Guideline and the Existing District REP

Compounds Added	Compounds Removed
Acrylic acid	Butyl Alcohol, tert-
Antimony compounds	Chlorotoluenes
Arsine	Diethylaminoethanol
Chlorine dioxide	Dimethyl phthalate
Chloroacetophenone, 2-	Dioctyl phthalate
Chloroprene	Ethyl acetate
Chromium trioxide (as chromic acid mist)	Ethyl alcohol (ethanol)
Cyanide and compounds (inorganic)	Gasoline vapors
Diethanolamine	Methylpyrrolidone, N-
Dimethyl formamide, N,N-	Silica, respirable, crystalline
Epoxybutane, 1,2-	Tetrahydrofuran
Ethylbenzene	Trichlorobenzene, 1,2 4-
Ethylene glycol	Vapam (sodium methyldithiocarbamate)
Fluorides and compounds	
Hydrogen selenide	
Methyl tertiary-butyl ether (MTBE)	
Mineral fibers (<1% free silica)	
Ozone	
Propylene (propene)	
Propylene glycol monomethyl ether	
Sulfates	
Sulfuric acid and oleum	
Triethylamine	
Vanadium compounds	
Vinyl acetate	
Vinyl bromide	

When combined, use of the default values for breathing rate, exposure frequency, and exposure duration given in the 2003 HRA Guidelines result in residential inhalation exposure estimates that are 31.8 percent higher then those produced using the 1993 HRA Guidelines. Point estimate exposures using the Interim Residential Breathing Rate for the inhalation pathway are likely to be very similar to those provided with the 1993 HRA Guidelines.

Additionally, use of the default values for breathing rate, exposure frequency, and exposure duration given in the 2003 HRA Guidelines result in worker inhalation exposure estimates that are 38.7 percent higher then those produced using the 1993 HRA

Guidelines. The District intends on conforming to these worker exposure assumptions in HRSAs completed for the Air Toxics NSR Program, unless other State recommended assumptions are established prior to adoption of the 2003 HRA Guidelines. The worker exposure assumptions do not affect the trigger levels in Table 2-5-1 because these are based on residential exposure assumptions.

For certain TACs, potential exposures from non-inhalation pathways may need to be estimated. In the 2003 HRA Guidelines, a number of the parameters used to calculate non-inhalation exposures have been updated relative to the 1993 HRA Guidelines. Tables 2-4, 2-5, and 2-6 contain a comparison of these exposure parameters.

2.5.5 PROJECT RISK LIMITS FOR DRY CLEANERS

Perchloroethylene, also known as tetrachloroethylene or perc, is the most common chemical solvent used by dry cleaners to remove stains and soil from clothing and other fabrics. In 1991, OEHHA completed a toxicity review of perc and adopted a revised cancer potency factor that was 10 times higher than the potency value used in the HRA Guidelines in effect at that time. Following this action, the District determined that the use of this revised toxicity value would result in maximum estimated lifetime cancer risks for many new and modified perc dry cleaners that would exceed project risk levels established in the District RMP (i.e., 10 in a million). The District then completed an evaluation of risk reduction measures available to dry cleaners including the use of alternative non-perc dry cleaning technology, and emission control technologies and work practice standards for perc machines.

The results of this evaluation indicated that non-perc alternative dry cleaning technologies were either: (1) not adequately advanced for the District to specify instead of perc, or (2) slated to be phased-out as stratospheric ozone depleting compounds [e.g., Chlorofluorocarbons (CFCs)]. Furthermore, the District's evaluation indicated that, although a number of reasonable risk reduction measures were available to reduce the risk from perc dry cleaners, in many cases they would not be able to reduce the risk below the 10 in a million criterion using the revised cancer potency factor. In consideration of these factors, the District established a specific RMP for perc dry cleaners that would allow permits to be issued for maximum cancer risks up to 100 in a million if TBACT and all reasonable risk reduction measures (e.g., vapor barrier rooms with enhanced ventilation) were used.

TABLE 2-4

Comparison of High-End Default Exposure Parameters (Residential)

Exposure Parameter	Units	1993 HRA Guidelines	2003 HRA Guidelines
Breathing Rate	l/kg bw-day	286	393*
Incidental Soil Ingestion Rate	mg/kg/bw-day	1.57	1.7
Water Intake Rate	ml/kg bw-day	28.6	54
Dermal Surface Area Exposed	cm^2	4,656	5,500
Dermal Absorption	None	Chemical-specific and Scenario-dependent	
Dermal Exposure Frequency	days/year	365	350
Breast Milk Consumption Rate	g/kg-day	138	138
Food Consumption:			
Exposed Produce	g/kg bw-day	3.57 for vine crops	12.1
Leafy Produce	g/kg bw-day	0.14	10.6
Protected Produce	g/kg bw-day	NA	4.88
Root Produce	g/kg bw-day	0.7	10.5
Beef	g/kg bw-day	1.4 for meat	6.97
Chicken	g/kg bw-day		5.02
Pork	g/kg bw-day		4.59
Eggs	g/kg bw-day		5.39
Diary	g/kg bw-day	4.3 for milk	17.4
Fish	g/kg bw-day	0.34	1.35
Fish Bioconcentration Factor	None	Chemical-specific	
Exposure Frequency (cancer risk)	days/year	365	350
Exposure Duration (cancer risk)	Years	70	70
Body Weight	Kg	70	63

Notes:

* Interim Residential Breathing Rate is 302 L/Kg-day

NA = Not Available

1993 HRA Guidelines are: CAPCOA ATHS Program Revised 1992 Risk Assessment Guidelines, California Air Pollution Control Officer's Association, October 1993.

2003 HRA Guidelines are: (1) ATHS Program Risk Assessment Guidelines: Part IV; Technical Support Document for Exposure Assessment and Stochastic Analysis, Office of Environmental Health Hazard Assessment, September 2000, and (2) ATHS Program Risk Assessment Guidelines: The ATHS Program Guidance Manual for Preparation of Health Risk Assessments, Office of Environmental Health Hazard Assessment, August 2003.

Per the 2003 HRA Guidelines, for multipathway evaluation, minimum exposure pathways evaluated for residents include inhalation, soil ingestion, and dermal exposure. If dioxins, furans, or PCBs are emitted, then breast-milk consumption is also mandatory. Other exposure pathways are evaluated on a site-specific basis.

TABLE 2-5

Comparison of Environmental Fate Evaluation

Media	1993 HRA Guidelines	2003 HRA Guidelines
Air	GLC = ER * X/Q	Same as 1993 HRA Guidelines
Soil	Function of: - deposition - accumulation period - chemical-specific half-life in soil - mixing depth - soil bulk density	Same algorithm as 1993 HRA Guidelines, however some chemical-specific half-life values in soil have been revised
Water	Function of: - direct deposition - material carried in by surface runoff is NOT considered	Same as 1993 HRA Guidelines
Vegetation*	Function of: - direct deposition of substance onto vegetation - root translocation or uptake from soil	Same algorithm as 1993 HRA Guidelines, however, for concentrations due to root translocation or uptake, some "root uptake" factors for inorganics (for root, leafy, and vine vegetation) have been revised
	"k", weathering constant, used to estimate concentration due to direct deposition = 0.693/14 day [20 (1/day)]	"k" – 10 (1/day)
Animal Products*	Function of: - identified complete exposure pathways for animal (e.g., inhalation, soil ingestion, of contaminated feed and pasture, and ingestion of contaminated water)	Same algorithm as 1993 HRA Guidelines, however, some specific input parameter values have been revised (CAPCOA, Table 2 vs. OEHHA, Table 5.2). Also feed to meat, milk and eggs transfer coefficients [Tco (d/kg)] for some chemicals have been revised (CAPCOA Table 1 vs. OEHHA, Table 5.3)
Fish Products*	Function of: - concentration in water - bioconcentration factor (bioaccumulation is NOT considered)	Same as 1993 HRA Guidelines

* Estimates of contaminants in vegetation and animals require the use of results from the air, water, and soil environmental fate evaluation

TABLE 2-6

Comparison of Default Values Used in Animal Product Uptake Modeling

Exposure Parameter	Units	1993 HRA Guidelines	2003 HRA Guidelines	
For Cattle:		Cattle/Lactating	Beef Cattle	Lactating Dairy Cattle
Body Weight	kg	500	500	500
Inhalation Rate	m^3/day	80	100	100`
Water Ingestion	L/day	100	40	80
Feed Ingestion	kg/day	8/16	8	16
Soil Fraction of Feed	Unitless	0.01	0.01	0.01
Soil Fraction of Pasture	Unitless	0.05	0.05	0.05
For Pigs:				
Body Weight	kg	60	60	
Inhalation Rate	m^3/day	7	7	
Water Ingestion	L/day	8	8	
Feed Ingestion	kg/day	2	2	
Soil Fraction of Feed	Unitless	0.01	N/A	
Soil Fraction of Pasture	Unitless	0.03	0.04	
For Poultry:				
Body Weight	kg	2	2	
Inhalation Rate	m^3/day	1	0.4	
Water Ingestion	L/day	0.6	0.2	
Feed Ingestion	kg/day	0.3	0.1	
Soil Fraction of Feed	Unitless	0.01	N/A	
Soil Fraction of Pasture	Unitless	0.03	0.02	

N/A = Not Applicable

The District is now proposing to amend the criteria for permit approval for new and modified dry cleaners to conform to those provided for other types of sources (i.e., project risk limited to 10 in a million). This proposal is based largely on an updated evaluation of non-perc alternative dry cleaning technologies, which have improved significantly in recent years. New solvents and equipment have been developed as alternatives to perc including high flashpoint petroleum (HFP) solvents (e.g., Exxon DF2000™), D5 siloxane (e.g., Green Earth ™ solvent), glycol ether (e.g., Rynex ™), aqueous (i.e., wet cleaning) processes and equipment, carbon dioxide technology, and other non-halogenated solvents used with closed-loop dry cleaning machines. Some of these technologies are currently in use within the District.

The District is not proposing to ban the use of perc in new or existing dry cleaning machines. There are many perc dry cleaners in the Bay Area that have maximum cancer risks that do not exceed 10 in a million. These facilities typically have relatively low perc emissions, use state-of-the-art risk reduction measures (e.g., vapor barrier rooms), and/or are not in close proximity to residential and off-site worker receptor areas. The majority of new dry cleaning machines currently purchased, however, are based on non-perc technologies; the District's proposal will likely accelerate this trend to some degree.

2.5.6 OTHER PROGRAM CHANGES

2.5.6.1 Basis for TBACT Applicability

The existing RMP specifies that the requirement for TBACT be based on the maximum health risks determined for all new and modified sources that are included in a project. This provision sometimes results in instances where TBACT is required for some minor new and modified sources in a project that do not cause, or contribute significantly to, adverse health risks.

The District is proposing to address this issue by changing the basis under which TBACT is required from project risk to source risk (i.e., the maximum risk for an individual source, or permit unit). The existing TBACT threshold for cancer risk (i.e., 1 in a million), and the proposed TBACT threshold for chronic non-cancer risk (i.e., Hazard Index (HI) of 0.2), are considered to be appropriate source-level applicability criteria. Under this proposal, TBACT would therefore be required for a source if it results in a maximum cancer risk that exceeds 1.0 in a million and/or a maximum chronic HI that exceeds 0.2. In order to safeguard against instances where multiple minor sources in a project might cumulatively result in a significant contribution to risk, the District is proposing to retain the project risk limits of the existing RMP.

2.5.6.2 Definition of Project

The existing REP requires that health risks be determined for all new and modified sources that make up a construction "project" plus any "related projects". A "project" includes all new and modified sources contained within a single permit application. A "related project" includes all new or modified sources at a facility that have been permitted within the two-year period immediately preceding the date a complete application is received, unless the permit applicant can demonstrate that the sources involved are not directly related to one another. Related projects also include consecutive modifications to a source that occur over a period of time. The related project provision is included in order to discourage circumvention, which might be achieved by breaking a construction project into smaller pieces and submitting more than one permit application over a period of time.

2.5.6.3 Permit Fees

The District Air Toxics NSR Program is funded by collecting permit fees from facilities that are subject to program requirements. The current fee structure, delineated in District Regulation 3: Fees, specifies that a Toxic Surcharge Fee (TSF) be collected for any new and modified sources that emit one or more TAC at a rate which exceeds an established toxic trigger level. The amount of the TSF varies depending on the type of source involved.

For many permit applications, the Toxic Surcharge Fee is currently the minimum specified fee of $182 (this fee may be reduced by 50 percent if the facility qualifies for a small business discount). This minimum fee is far below the District's cost of time and materials needed to conduct an HRSA. The proposed revisions to the fee structure will bring the minimum Toxic Surcharge Fee more in line with the District costs incurred for completing the HRSA.

The proposed amendments will increase the Toxic Surcharge Fee for permit applications that require an HRSA by $259 ($129 for facilities that qualifies for a small business discount). In addition, this fee will now be called a "Risk Screening Fee" so that it will not be confused with the Toxic Surcharge assessed for permit renewals.

The minimum Risk Screening Fee for most permit applications will now be $441 (i.e., $182 plus $259), and half of this amount (i.e., $220) if the facility qualifies for a small business discount. Note that these figures are subject to change based on other amendments to Regulation 3 that may occur before this proposal is finalized. Specifically, the District has proposed to amend Regulation 3 to provide for a general Cost of Living Adjustment (COLA) to permit fees and adjust other fees as appropriate. This COLA would result in a slight increase in the Risk Screening Fee. with this report.

2.5.6.4 Administrative Requirements

Section 2-5-401: Health Risk Screening Analysis Requirement specifies that an HRSA shall be prepared for any project subject to the rule. This would include any project with TAC emissions that exceed one or more of the listed toxic trigger levels. The applicant may submit an HRSA for the District's review, or have the District complete an HRSA for the project. The District will notify the applicant where the results of an HRSA indicate that the project, as proposed, would not meet the requirements of the rule. The applicant is then given the opportunity to perform a more refined HRSA, or to modify the project as necessary to comply with the requirements of the rule.

Sections 2-5-402: Health Risk Screening Analysis Guidelines, and 2-5-403: BACT/TBACT Workbook, specify that the District will publish and periodically update HRSA Guidelines and a BACT/TBACT Workbook, respectively. Both are intended to be "living documents" that will be updated as appropriate by the District without a formal rulemaking process. The initial District HRSA Guidelines will adopt, by reference, the 2003 HRA Guidelines, with some specific exceptions (e.g., Interim Residential Breathing Rate). Any subsequent revisions to the HRA Guidelines used in the ATHS Program will be periodically incorporated into the District HRSA Guidelines.

2.6 PROPOSED RULE AND RULE AMENDMENTS

2.6.1 PROPOSED REGULATION 2, RULE 5

The District is proposing to adopt a new rule, Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. The rule is organized into six sections as follows: General (section numbers in the 100's), Definitions (200's), Standards (300's), Administrative Requirements (400's), Monitoring and Records (500's), and Manual of Procedures (600's).

2.6.2 PROPOSED AMENDMENTS TO REGULATION 2, RULE 1

The District is proposing amendments to Regulation 2: Permits, Rule 1: General Requirements, to delete obsolete terminology and to ensure consistency between the applicability of permit requirements and the project approval criteria for new and modified sources of toxic air contaminants provided in the new Regulation 2, Rule 5.

2.6.3 PROPOSED AMENDMENTS TO REGULATION 2, RULE 2

The District is revising Regulation 2: Permits, Rule 2: New Source Review, Section 2-2-244 Best Available Control Technology for Toxics (TBACT) to add clarity and to be consistent with 2-5-205.

2.6.4 PROPOSED AMENDMENTS TO REGULATION 2, RULE 9

Regulation 2: Permits, Rule 9: Interchangeable Emission Reduction Credits Section 2-9-301 and 2-9-304 is proposed to be updated to refer to "Regulation 2, Rule 5 New Source Review of Toxic Air Contaminants" instead of " the District's Toxic Risk Management Policy for new sources".

2.6.5 PROPOSED AMENDMENTS TO REGULATION 3

The District is proposing amendments to Regulation 3: Fees, to improve clarity and to increase revenue in order to fund increases in District staff resources that will be needed to implement the proposed enhancements in the Air Toxics NSR Program. The specific amounts of fees are noted in Section 2.5.6.3 above.

2.6.6 PROPOSED AMENDMENTS TO REGULATION 8, RULE 34

Regulation 8: Organic Compounds, Rule 34: Solid Waste Disposal Sites Section 122 limited exemption criteria was revised from "pass a risk screening analysis, as defined in Section 2-1-225, performed according to the current Air Toxic Risk Screening Procedure." to "conducting a health risk screening analysis performed according to the District's Health Risk Screening Analysis Guidelines, that the landfill, without a gas collection system, would not require TBACT pursuant to Regulation 2-5-301"

2.6.7 PROPOSED AMENDMENTS TO REGULATION 8, RULE 40

Regulation 8: Organic Compounds, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks, contains an exemption (i.e., Section 8-40-118: Exemption, Aeration Projects of Limited Impact) that is based in part on project emissions being less than the toxic trigger levels listed in Table 2-1-316. The District is proposing to update this reference to the new Table 2-5-1.

2.6.8 PROPOSED AMENDMENTS TO REGULATION 8, RULE 47

Regulation 8: Organic Compounds, Rule 47: Air Stripping and Soil Vapor Extraction Operations Sections 401 and 402 will be updated from using "risk screening" to "health risk screening analysis" to be consistent with this term in Regulation 2, Rule 5.

2.6.9 PROPOSED AMENDMENTS TO REGULATION 11, RULE 16

Regulation 11, Hazardous Pollutants, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations will be modified to be consistent with Regulation 2, Rule 5, particularly referring to the Health Risk Screening Analysis Guidelines instead of risk estimation procedures associated with the Risk Management Policy for Dry Cleaners.

2.6.10 PROPOSED MOP SECTION

The District is proposing to add a new part to the engineering permitting procedures contained in its MOP to address the Air Toxics NSR Program. This part of the MOP will contain five sections that will include: (1) Introduction; (2) Review Procedures for Sources with TAC Emissions; (3) Permit Applications; (4) Regulation 2, Rule 5: New Source Review of TACs; and (5) Glossary.

M:\DBS\2373:BAAQMD NSR Rule\Final EIR\NSR FEIR 2-rev.doc

CHAPTER 3

ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 INTRODUCTION

CEQA Guidelines §15125(a) requires that an EIR include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to gain an understanding of the significant effects of the proposed project and its alternatives.

The CEQA Guidelines also require EIRs to identify significant environmental effects that may result from a proposed project [CEQA Guidelines §15126.2(a)]. Direct and indirect significant effects of a project on the environment should be identified and described, with consideration given to both short- and long-term impacts. If significant adverse environmental impacts are identified, the CEQA Guidelines require a discussion of measures that could either avoid or substantially reduce any adverse environmental impacts to the greatest extent feasible (CEQA Guidelines §15126.4).

This chapter describes the existing environmental setting, analyzes the potential environmental impacts, and recommends mitigation measures, when significant environmental impacts have been identified. Each of the resources identified in the CEQA checklist (CCR Title 14, Chapter 3, §15000 et seq., Appendix G) have been analyzed in this chapter.

Included for each impact category is a discussion of the environmental setting, significance criteria, project-specific impacts, project-specific mitigation (if necessary and available), impacts remaining after mitigation (if any), cumulative impacts and cumulative impact mitigation (if necessary and available).

A Notice of Preparation (NOP) was prepared for the Air Toxic NSR Rules on January 26, 2005 (see Appendix A). The NOP did not include a CEQA environmental checklist. Therefore, this EIR includes a discussion of all environmental resources identified in the CEQA checklist.

The District's REP and RMP were last amended on February 3, 2000, with the exception of the RMP for diesel-fueled engines, which was amended on January 11, 2002. These documents describe the existing District Air Toxics NSR Program and serve as the baseline for evaluating the changes that would result from the proposed rulemaking.

The proposed project could result in the additional control of TACs. The Air Toxic NSR Rules provide incentives to reduce the potential health risk due to the operation of stationary sources. Specifically, the Air Toxic NSR Rules are expected to provide incentives to use alternatives to the use of perc in dry cleaning facilities. There are a number of non-perc alternatives available for dry cleaning. Additional control equipment also may be required to reduce exposure to TACs, e.g., oxidation catalyst to reduce emissions of acrolein. New chemicals are proposed to be added to the Air Toxic NSR rules. The impacts of regulating new TACs are typically secondary or cross media impacts generated by air pollution control equipment.

3.2 AESTHETICS

3.2.1 ENVIRONMENTAL 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 views of the San Francisco Bay Area are varied, unique, and recognized by many in the region and beyond. The basin formed by the coastal range, East Bay Hills, and the Bay itself, are prominent physical features of the region. To the west, the Pacific Ocean and the Coastal Range stretching from Mt. Tamalpais in the north to the Santa Cruz Mountains in the south, dominate the visual setting. To the east the Diablo Range dramatically punctuated by Mount Diablo provides a much different character. In the north, the vineyards of Napa and Sonoma counties are unique and draw visitors from around the world. Many man-made features in the Bay Area, e.g., the Golden Gate and Bay Bridges and the San Francisco skyline in particular, also provide aesthetic resources.

The variety of natural features, their topographic variation and the different types of development within them provide the Bay Area with significant visual resources. The Bay Area sits along the Pacific coast with several branches of the Coast Range dividing it into valleys, plains, and water bodies. The largest of these valleys contains San Francisco Bay while at the eastern edge of the region is the Central Valley, an extremely flat plain lying between the Coast Range and the Sierra Nevada Mountains. The hills of the Coast Range provide expansive views of the valleys and plains, revealing a variety of development types, including urban areas along the Bay plains and inland valleys, agricultural lands, and protected open space, and natural areas.

3.2.2 SIGNIFICANCE CRITERIA

The proposed project impacts on aesthetics will be considered significant if:

> The project will block views from or damage views of a scenic highway or corridor.

The project will adversely affect the visual continuity of the surrounding area.

The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

3.2.3 ENVIRONMENTAL IMPACTS

The proposed Air Toxic NSR Rules are not expected to adversely affect scenic vistas in the District. There should be no damage to scenic resources, including but not limited to trees, rock outcroppings, or historic buildings within a scenic highway; or substantially degrade the visual character of a site or its surroundings. Stationary source control equipment which may be required typically affects industrial, institutional, or commercial facilities located in appropriately zoned areas which are not usually located in areas with scenic resources. Further, modifications typically occur inside the buildings at the affected facilities, or because of the nature of the business (e.g., commercial or industrial) can easily blend with the facilities having little or no noticeable effect on adjacent areas.

The proposed Air Toxic NSR Rules are not expected to create additional demand for new lighting or exposed combustion that could create glare which could adversely affect day or nighttime views in any areas. Facilities proposing to install new sources or modify existing sources of TACs may be required to install new or additional air pollution control equipment or modify existing equipment or processes to reduce emission. Facilities affected by control equipment for stationary sources typically make modifications in the interior of an affected facility (e.g. dry cleaners), so any new light sources would typically be inside a building or not noticeable because of the presence of existing light sources. Further, affected commercial or industrial facilities would be located in appropriately zoned areas that are not usually located next to residential areas, so new light sources, if any, would not be noticeable to residents.

Based upon the above considerations, no potentially significant adverse aesthetics impacts could occur due to implementation of the proposed rule.

3.2.4 MITIGATION MEASURES

The aesthetic impacts associated with the Air Toxic NSR Rules are less than significant so no mitigation measures are required.

3.2.5 CUMULATIVE IMPACTS

Implementation of the air quality rules and regulations are not expected to generate significant cumulative aesthetic impacts. Air quality rules and regulations generally apply to stationary sources located in industrial and commercial areas that are not generally located in highly visible or scenic areas. Further, modifications typically occur inside the buildings at the affected facilities, or because of the nature of the business (e.g., commercial or industrial) can easily blend with the facilities having little or no noticeable effect on adjacent areas. It should be noted that implementation of various air quality plans, rules and regulations may have a beneficial effect on scenic resources by improving visibility as well as improving air quality.

3.2.6 CUMULATIVE MITIGATION MEASURES

The cumulative aesthetic impacts associated with the Air Toxic NSR Rules are less than significant so no mitigation measures are required.

3.3 AGRICULTURAL RESOURCES

3.3.1 ENVIRONMENTAL SETTING

Land uses in the District vary between commercial, industrial, residential, agricultural and open spaces. Agricultural land uses are located in the less urbanized portions of the Bay Area, including the vineyards in Napa and Sonoma counties and include agricultural lands under Williamson Act contracts. Nevertheless, many vineyards have permitted sources and will likely be subject to Toxic NSR for future installations.

The facilities affected by the proposed Air Toxic NSR Rules are expected to be located in the commercial and industrial areas within the Bay Area. Agricultural resources are generally not located in the vicinities of or within the affected commercial and industrial areas, with the general exception of landfills, many which are surrounded by agricultural tracts.

3.3.2 SIGNIFICANCE CRITERIA

Proposed project impacts on agricultural resources will be considered significant if any of the following conditions are met:

> The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
>
> The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
>
> The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

3.3.3 ENVIRONMENTAL IMPACTS

The proposed Air Toxic NSR Rules typically affect commercial or industrial facilities, so they are not expected to generate any new construction of buildings or other structures that would require conversion of farmland to non-agricultural use, or conflict with zoning for agricultural uses, or a Williamson Act contract. There are no provisions in the proposed Air Toxic NSR Rules which would affect or conflict with existing land use plans, policies, or regulations or require conversion of farmland to non-agricultural uses. Land use, including agriculture-related uses, and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. The proposed rules are not expected to have significant adverse direct or indirect effects on agricultural resources. Based upon the above considerations, significant adverse impacts to agricultural resources are not expected.

3.3.4 MITIGATION MEASURES

No significant impacts to agricultural resources were expected so no mitigation measures are required.

3.3.5 CUMULATIVE IMPACTS

Implementation of various air quality plans, rules and regulations typically affect commercial or industrial facilities, so they are not expected to generate any new construction of buildings or other structures that would require conversion of farmland to non-agricultural use, or conflict with zoning for agricultural uses, or a Williamson Act contract. Land use, including agriculture-related uses, and other planning considerations are determined by local governments. Based upon the above considerations, significant adverse cumulative impacts to agricultural resources are not expected.

3.3.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative impacts to agricultural resources were expected so no cumulative mitigation measures are required.

3.4 AIR QUALITY

3.4.1 ENVIRONMENTAL SETTING

3.4.1.1 Criteria Air Pollutants

<u>Ambient Air Quality Standards</u>

It is the responsibility of the BAAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM10), sulfur dioxide (SO_2) and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards and in the case of PM10 and SO_2, far more stringent. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride.

The state and National Ambient Air Quality Standards (NAAQS) for each of these pollutants and their effects on health are summarized in Table 3.4-1. CO, NO_2, PM10, and SO_2 are directly emitted from stationary and mobile sources. Ozone is not emitted directly from pollution sources. Instead ozone is formed in the atmosphere through complex chemical reactions between hydrocarbons or reactive organic hydrocarbons (ROG, also commonly referred to as volatile organic compounds or VOCs).

U.S. EPA requires CARB and BAAQMD to measure the ambient levels of air pollution to determine compliance with the NAAQS. To comply with this mandate, The BAAQMD monitors levels of various criteria pollutants at 26 monitoring stations. The 2003 air quality data from the BAAQMD monitoring stations are presented in Table 3.4-2.

Air quality conditions in the San Francisco Bay Area have improved since the 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 3.4-3). The District is in attainment of the state and federal ambient air quality standards for CO, nitrogen oxides (NOx), and sulfur oxides (SOx). The District is unclassified for the federal 24-hour PM10 standard. Unclassified means that the monitoring data are incomplete and do not support a designation of attainment or non-attainment.

The 2003 air quality data from the BAAQMD monitoring stations are presented in Table 3.4-2. All monitoring stations were below the state and federal ambient air quality standards for CO, NO_2, and SO_2. The federal 1-hour ozone standard was exceeded on one day in 2003 at the Livermore monitoring station. The other monitoring stations were in compliance with the federal 1-hour ozone standard. The Bay Area is designated as a non-attainment area for the California 1-hour ozone standard, and is seeking redesignation to attainment for the national one-hour standard. The federal 8-hour standard was exceeded on seven days in the District in 2003, most frequently in the Eastern District (Bethel Island, Concord, Fairfield, Livermore, and Pittsburg) and the Santa Clara Valley (Gilroy, Los Gatos and San Martin). The state 1-hour standard was exceeded on 19 days in 2003 in the District, most frequently in the Eastern District and Santa Clara Valley (see Table 3.4-2).

All monitoring stations were in compliance with the federal PM10 standards. The California PM10 standards were exceeded on six days in 2003 throughout the various monitoring stations in the District. The District did not exceed the federal PM2.5 standards in 2003 (see Table 3.4-2).

TABLE 3.4-1
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. >	0.12 ppm, 1-hr avg.> 0.08 ppm, 8-hr avg>	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema; (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, ann. geometric 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> 65 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
Hydrogen Sulfide	0.03 ppm (42 µg/m^3), 1-hr avg		
Vinyl Chloride	0.010 ppm (26 µg/m^3), 24-hr avg.		
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 70percent, 8-hour average (10am – 6pm PST)		Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent

TABLE 3.4-2
Bay Area Air Pollution Summary 2003

MONITORING STATIONS	Ozone							CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM10				PM2.5				
	Max 1-Hr	Nat Days	Cal Days	3-Yr Avg	Max 8-Hr	Nat Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/ Cal Days	Max 1-Hr	Ann Avg	Nat/ Cal Days	Max 24-Hr	Ann Avg	Nat/ Cal Days	Ann Avg	Max 24-Hr	Nat Day	Cal Days	Max 24-Hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg
NORTH COUNTIES	(pphm)							(ppm)			(pphm)			(ppb)			(µg/m^3)				(µg/m^3)			(µg/m^3)	
Napa	11	0	2	0.0	8	0	6.5	4.7	2.5	0	7	1.2	0	--	--	--	21.3	41	0	0	--	--	--	--	--
San Rafael	9	0	0	0.0	7	0	4.9	3.8	2.0	0	7	1.6	0	--	--	--	17.6	41	0	0	--	--	--	--	--
Santa Rosa	10	0	1	0.0	8	0	5.4	3.1	1.8	0	6	1.2	0	--	--	--	16.9	36	0	0	39	0	37.9	8.8	10.0
Vallejo	10	0	2	0.0	7	0	6.5	4.0	2.9	0	7	1.2	0	5	1.2	0	17.3	39	0	0	31	0	35.0	9.4	11.8
COAST & CENTRAL BAY																									
Oakland	8	0	0	0.0	5	0	4.0	3.9	2.8	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Richmond	--	--	--	--	--	--	--	--	--	--	--	--	--	5	0.9	0	--	--	--	--	--	--	--	--	--
San Francisco	9	0	0	0.0	6	0	4.8	3.6	2.8	0	7	1.8	0	7	2.2	0	22.7	52	0	1	42	0	47.3	10.1	11.6
San Pablo	9	0	0	0.0	7	0	5.3	3.1	1.8	0	7	1.3	0	5	1.5	0	20.6	49	0	0	--	--	--	--	--
EASTERN DISTRICT																									
Bethel Island	9	0	0	0.3	8	0	7.9	1.6	0.9	0	5	0.9	0	6	2.2	0	19.4	51	0	1	--	--	--	--	--
Concord	10	0	5	0.3	9	1	8.2	3.2	2.0	0	6	1.3	0	3	0.6	0	16.4	34	0	0	50	0	41.0	9.7	11.2
Crockett	--	--	--	--	--	--	--	--	--	--	--	--	--	6	1.2	0	--	--	--	--	--	--	--	--	--
Fairfield	9	0	0	0.0	8	0	7.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Livermore	13	1	10	1.0	9	3	8.4	3.7	1.9	0	7	1.6	0	--	--	--	18.9	33	0	0	42	0	43.0	9.0	11.6
Martinez	--	--	--	--	--	--	--	--	--	--	--	--	--	7	1.6	0	--	--	--	--	--	--	--	--	--
Pittsburg	9	0	0	0.0	8	0	7.5	3.4	1.7	0	6	1.2	0	8	2.1	0	21.1	59	0	1	--	--	--	--	--
SOUTH CENTRAL BAY																									
Fremont	12	0	4	0.0	9	1	6.5	3.2	1.9	0	8	1.7	0	--	--	--	18.2	37	0	0	34	0	37.4	8.7	11.1
Hayward	12	0	3	0.0	9	1	6.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood City	11	0	1	0.0	8	0	5.8	5.4	2.6	0	8	1.5	0	--	--	--	19.8	38	0	0	34	0	37.7	9.0	10.6
San Leandro	10	0	2	0.0	7	0	5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SANTA CLARA VALLEY																									
Gilroy	11	0	6	0.0	9	2	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Los Gatos	12	0	7	0.0	10	2	7.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Central	12	0	4	*	8	0	*	5.5	4.0	0	9	2.1	0	--	--	--	23.6	60	0	3	56	0	*	11.7	*
San Jose East	10	0	2	0.0	7	0	5.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose, Tully Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.8	58	0	2	52	0	40.2	10.1	11.1
San Martin	11	0	9	0.0	9	4	8.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sunnyvale	11	0	4	0.0	9	2	6.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Bay Area Days over Standard		**1**	**19**			**7**				**0**			**0**			**0**			**0**	**6**		**0**			

(ppm) = parts per million, (pphm) = parts per hundred million, (ppb) = parts per billion

TABLE 3.4-3
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
1993	3	19	-	0	0	0	0	0	0	0	0	10	-
1994	2	13	-	0	0	0	0	0	0	0	0	9	-
1995	11	28	-	0	0	0	0	0	0	0	0	7	-
1996	8	34	-	0	0	0	0	0	0	0	0	3	-
1997	0	8	-	0	0	0	0	0	0	0	0	4	-
1998	8	29	16	0	0	0	0	0	0	0	0	5	-
1999	3	2	9	0	0	0	0	0	0	0	0	12	-
2000	3	12	4	0	0	0	0	0	0	0	0	7	1
2001	1	15	7	0	0	0	0	0	0	0	0	10	5
2002	2	16	7	0	0	0	0	0	0	0	0	6	5
2003	1	19	7	0	0	0	0	0	0	0	0	6	0

* PM10 is sampled every sixth day – actual days over standard can be estimated to be six times the numbers listed.
** 2000 is the first full year for which the Air District measured PM2.5 levels.

3.4.1.2 Health Effects

Ozone

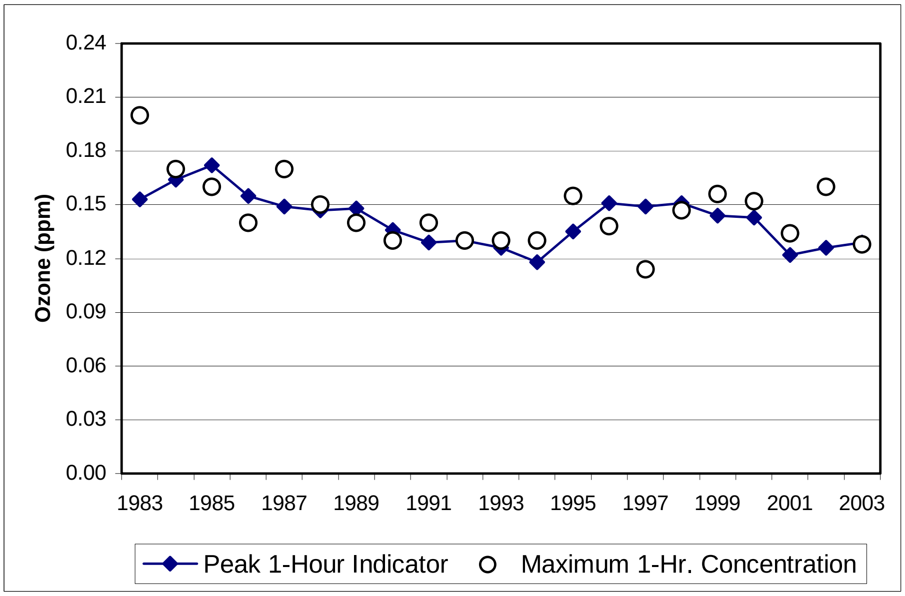
Ozone (O_3), a colorless gas with a sharp odor, is a highly reactive form of oxygen. High ozone concentrations exist naturally in the stratosphere. Some mixing of stratospheric ozone downward through the troposphere to the earth's surface does occur; however, the extent of ozone transport is limited. At the earth's surface in sites remote from urban areas ozone concentrations are normally very low (0.03-0.05 ppm).

While ozone is beneficial in the stratosphere because it filters out skin-cancer-causing ultraviolet radiation, it is a highly reactive oxidant. It is this reactivity which accounts for its damaging effects on materials, plants, and human health at the earth's surface.

The propensity of ozone for reacting with organic materials causes it to be damaging to living cells, and ambient ozone concentrations in the Bay Area are occasionally sufficient to cause health effects. Ozone enters the human body primarily through the respiratory tract and causes respiratory irritation and discomfort, makes breathing more difficult during exercise, and reduces the respiratory system's ability to remove inhaled particles and fight infection. People with respiratory diseases, children, the elderly, and people who exercise heavily are more susceptible to the effects of ozone.

Plants are sensitive to ozone at concentrations well below the health-based standards and ozone is responsible for significant crop damage. Ozone is also responsible for damage to forests and other ecosystems.

The BAAQMD began ozone monitoring in a few places in 1959. A large monitoring ozone network was established in 1965. The monitors indicated that the federal one-hour ozone standards were exceeded at a number of locations in the Bay Area. Ozone concentrations have been decreasing over the past four decades leading to fewer days per year when the national and state one-hour standards have been exceeded in the Bay Area. The number of days exceeding the national one-hour ozone standard decreased from the 1960's until about 1990. From 1990 to 1992, no District monitor registered more than two exceedances of the national ozone standard. [Note: the national standard allows up to three expected exceedances at any one site over a three-year period (i.e., less than or equal to an average of one exceedance per year)]. In 1994, the BAAQMD requested that the Bay Area be redesignated to attainment status for the one-hour ozone standard. However, in 1995 there was an increase in the number of days that the one-hour federal ozone standard was exceeded to about 10 days per year. Since 1996, the number of days per year that exceed the federal ozone standard has generally been decreasing (see Table 3.4-3). Therefore, the BAAQMD has requested and U.S. EPA has proposed a finding of attainment of the national one-hour ozone standard for the Bay Area. The proposed finding is based on monitoring from the years 2001, 2002, and 2003.



Source: 2004 California Almanac of Emissions and Air Quality, CARB, 2004.

FIGURE 3.4-1
San Francisco Bay Area Ozone Trend

Volatile Organic Compounds (VOCs)

It should be noted that there are no state or national ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated, however, because VOC emissions contribute to the formation of ozone. They are also transformed into organic aerosols in the atmosphere, contributing to higher PM10 and lower visibility levels.

Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOCs because of interference with oxygen uptake. In general, ambient VOC concentrations in the atmosphere are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis, even at low concentrations. Some hydrocarbon components classified as VOC emissions are thought or known to be hazardous. Benzene, for example, one hydrocarbon component of VOC emissions, is known to be a human carcinogen.

Carbon Monoxide (CO)

CO is a colorless, odorless, relatively inert gas. It is a trace constituent in the unpolluted troposphere, and is produced by both natural processes and human activities. In remote areas far from human habitation, carbon monoxide occurs in the atmosphere at an average background concentration of 0.04 ppm, primarily as a result of natural processes such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline. In 1997, 97 percent of the CO emitted into the Basin's atmosphere was from mobile sources. Consequently, CO concentrations are generally highest in the vicinity of major concentrations of vehicular traffic.

CO is a primary pollutant, meaning that it is directly emitted into the air, not formed in the atmosphere by chemical reaction of precursors, as is the case with ozone and other secondary pollutants. Ambient concentrations of CO in the Basin exhibit large spatial and temporal variations, due to variations in the rate at which CO is emitted, and in the meteorological conditions that govern transport and dilution. Unlike ozone, CO tends to reach high concentrations in the fall and winter months. The highest concentrations frequently occur on weekdays at times consistent with rush hour traffic and late night during the coolest, most stable atmospheric portion of the day.

When CO is inhaled in sufficient concentration, it can displace oxygen and bind with the hemoglobin in the blood, reducing the capacity of the blood to carry oxygen. Individuals most at risk from the effects of CO include heart patients, fetuses (unborn babies), smokers, and people who exercise heavily. Normal healthy individuals are affected at higher concentrations, which may cause impairment of manual dexterity, vision, learning ability, and performance of work. The results of studies concerning the combined effects of CO and other pollutants in animals have shown a synergistic effect after exposure to CO and ozone.

Particulate Matter (PM10)

Of greatest concern to public health are the particles small enough to be inhaled into the deepest parts of the lung. Respirable particles (particulate matter less than about 10 micrometers in diameter) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM10.

PM10 particles are both directly emitted or formed from diverse emission sources. Major sources of directly emitted (primary) PM10 include re-suspended road dust or soil entrained into the atmosphere by wind or activities such as construction and agriculture. Other components of PM10 form in the atmosphere (secondary PM10) from precursor emissions of the gaseous pollutants.

Nitrogen Dioxide (NO_2)

NO_2 is a reddish-brown gas with a bleach-like odor. Nitric oxide (NO) is a colorless gas, formed from the nitrogen (N_2) and oxygen (O_2) in air under conditions of high temperature and pressure which are generally present during combustion of fuels; NO reacts rapidly with the oxygen in air to form NO_2. NO_2 is responsible for the brownish tinge of polluted air. The two gases, NO and NO_2, are referred to collectively as NOx. In the presence of sunlight, NO_2 reacts to form nitric oxide and an oxygen atom. The oxygen atom can react further to form ozone, via a complex series of chemical reactions involving hydrocarbons. Nitrogen dioxide may also react to form nitric acid (HNO_3) which reacts further to form nitrates, which are a component of PM10.

NO_2 is a respiratory irritant and reduces resistance to respiratory infection. Children and people with respiratory disease are most susceptible to its effects.

Sulfur Dioxide (SO_2)

SO_2 is a colorless gas with a sharp odor. It reacts in the air to form sulfuric acid (H_2SO_4), which contributes to acid precipitation, and sulfates, which are a component of PM10 and PM2.5. Most of the SO_2 emitted into the atmosphere is produced by the burning of sulfur-containing fuels.

At sufficiently high concentrations, SO_2 affects breathing and the lungs' defenses, and can aggravate respiratory and cardiovascular diseases. Asthmatics and people with chronic lung disease or cardiovascular disease are most sensitive to its effects. SO_2 also causes plant damage, damage to materials, and acidification of lakes and streams.

3.4.1.3 Current Emissions Sources

The two broad categories of emission sources include stationary and mobile sources.

Stationary Sources

Stationary sources can be further divided between point and area sources.

Point Sources

Point sources are those that are identified on an individual facility or source basis, such as refineries and manufacturing plants. BAAQMD maintains a computer data bank with detailed information on operations and emissions characteristics for nearly 4,000 facilities, with roughly 20,000 different sources, throughout the Bay Area. Parameters that affect the quantities of emissions are updated regularly.

Area Sources

Area sources are stationary sources that are individually very small, but that collectively make a large contribution to the inventory. Many area sources do not require permits from the BAAQMD, such as residential heating, and the wide range of consumer products such as paints, solvents, and cleaners. Some facilities considered to be area sources do require permits from the BAAQMD, such as gas stations and dry cleaners. Emissions estimates for area sources may be based on the BAAQMD data bank, calculated by CARB using statewide data, or calculated based on surrogate variables.

Mobile Sources

Mobile sources include on-road motor vehicles such as automobiles, trucks, and buses, as well as off-road sources such as construction equipment, boats, trains, and aircraft. Estimates of on-road motor vehicle emissions include consideration of the fleet mix (vehicle type, model year, and accumulated mileage), miles traveled, ambient temperatures, vehicle speeds, and vehicle emission factors, as developed from comprehensive CARB testing programs. The BAAQMD also receives vehicle registration data from the Department of Motor Vehicles. Some of these variables change from year to year, and the projections are based upon expected changes. Emissions from off-road mobile sources are calculated using various emission factors and methodologies provided by CARB and U.S. EPA.

3.4.1.4 Non-Criteria Pollutants

Although the primary mandate of the BAAQMD is attaining and maintaining the national and state Ambient Air Quality Standards for criteria pollutants within the BAAQMD jurisdiction, the BAAQMD also has a general responsibility to control, and where possible, reduce public exposure to airborne toxic compounds. The state and federal governments have set health-based ambient air quality standards for criteria pollutants. The air toxics program was established as a separate and complementary program designed to evaluate and reduce adverse health effects resulting from exposure to TACs.

The major elements of the District's air toxics program are outlined below.

- Preconstruction review of new and modified sources for potential health impacts, and the requirement for new/modified sources with non-trivial TAC emissions to use the Best Available Control Technology.
- The Air Toxics Hot Spots Program, designed to identify industrial and commercial facilities that may result in locally elevated ambient concentrations of TACs, to report significant emissions to the affected public, and to reduce unacceptable health risks.
- Control measures designed to reduce emissions from source categories of TACs, including rules originating from the state Toxic Air Contaminant Act and the federal Clean Air Act.
- The toxic air contaminant emissions inventory, a database that contains information concerning routine and predictable emissions of TACs from permitted stationary sources.
- Ambient monitoring of TAC concentrations at a number of sites throughout the Bay Area.

Historically, the BAAQMD has regulated criteria air pollutants using either a technology-based or an emissions-limit approach. The technology-based approach defines specific control technologies that may be installed to reduce pollutant emissions. The emission limit approach establishes an emission limit, and allows industry to use any emission control equipment, as long as the emission requirements are met. The regulation of TACs requires a different regulatory approach as explained in the following subsections.

<u>Air Toxics New Source Review Program</u>

Under the Air Toxics NSR Program, proposed projects involving new or modified sources of toxic air contaminants are reviewed for potential health impacts in accordance with the District's Risk Evaluation Procedure (REP) and Risk Management Policy (RMP) that were established by the District's Board of Directors in 1987. The REP describes the procedures that the District uses to determine and evaluate TAC emission increases. Projects resulting in TAC emission increases that are greater than the de minimus trigger levels identified in the REP are required to undergo a health risk screening analysis. The RMP identifies approval criteria for projects that are required to undergo a health risk screening analysis including thresholds requiring best available control technology, thresholds requiring addition risk reduction measures, and thresholds at which the permit for a project is normally denied.

New and modified stationary source permit applications have been reviewed for air toxic health impacts since 1987. A large increase in risk screening analyses has occurred in recent years due primarily to the removal of permit exemptions in District regulations for standby engines. Prior to 2000, the District completed risk screens for an average of about 175 permit applications per year. This number increased to 255 in 2000, 440 in 2001, 602 in 2002, 432 in 2003, and 403 in 2004.

<u>Air Toxics Hot Spots Program</u>

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. The first step in the AB2588 process is the preparation of an air toxics emissions inventory for facilities with operating permits. In the second step, the District prioritizes facilities for additional scrutiny, based on the quantity and toxicity of pollutants emitted. Each facility is categorized as high, medium or low. The high priority facilities are required to prepare a comprehensive health risk assessment (HRA).

Finally, the Air Toxics Hot Spots program requires that exposed persons be notified regarding the results of HRAs, if the calculated risks warrant such notification. Of the 123 HRAs submitted to the BAAQMD, 30 were Level 1 or greater (maximum cancer risks greater than or equal to 10 in one million), and required public notification. In 1992, the number of Level 1 or greater facilities was reduced to 16. All Level 2 and 3 risks (100 in one million 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 facilities requiring public notification to nine in 1993, five in 1994, two in 1995 and one in 1999.

Control Measures for Categories of Sources

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 six Hazardous Air Pollutants (HAPs), including asbestos, benzene, beryllium, arsenic, mercury, and vinyl chloride.

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. The District must implement and enforce all MACT standards or rules that are at least as stringent. The U.S. EPA has already adopted a significant number of new MACT standards, with the last group expected to be adopted by early 2004.

Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. 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 in addition to the 189 federal HAPs as TACs that CARB has adopted.

ATCMs are developed by CARB and implemented by the BAAQMD through the adoption of regulations of equal or greater stringency. Generally, the ATCMs reduce emissions to achieve exposure levels below a determined health threshold. If no such threshold levels are determined, emissions are reduced to the lowest level achievable through the use of best available control technology unless it is determined that an alternative level of emission reduction is adequate to protect public health. In addition to developing ATCMs, California Health and Safety Code §39658(b) requires CARB to adopt an ATCM for hazardous air pollutants adopted by U.S. EPA pursuant to Section 112 of the federal CAA.

Air Toxics Emission Inventory

The BAAQMD maintains a database that contains information concerning emissions of TACs from permitted stationary sources in the Bay Area. This inventory, and a similar inventory for mobile and area sources compiled by CARB, is used to plan strategies to reduce public exposure to TACs. The detailed emissions inventory is reported in the BAAQMD, Toxic Air Contaminant Control Program, 2002 Annual Report (BAAQMD, 2004). The 2002 emissions inventory shows decreasing emissions of many TACs in the Bay Area. The most dramatic emission reductions in recent years have been for certain chlorinated compounds that are used as solvents including 1,1,1-trichloroethane, methylene chloride, and perchloroethylene.

Ambient Monitoring Network

Table 3.4-4 contains a summary of average ambient concentrations of TACs measured at monitoring stations in the Bay Area by the District in 2002. The air monitoring network operated by the District includes gaseous samples collected over 24-hour periods on a 12-day sampling frequency. The network began in 1986 with six sites and has expanded to its present size of 23 sites. The sampling sites in the network are generally community oriented, and are most directly influenced by area-wide sources. The network also includes a non-urban background site located at Fort Cronkite on the Pacific Ocean coastline. Ambient benzene levels declined dramatically in 1996 with the introduction of CARB Phase 2 reformulated gasoline, with significant reductions in ambient 1,3-butadiene levels also occurring. Due largely to these observed reductions in ambient benzene and 1,3-butadiene levels, the calculated network average cancer risk has been reduced in recent years.

Health Effects

Cancer Risk: The primary health risk of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe that there are not "safe" levels of exposure to carcinogens. Any exposure to a carcinogen poses some risk to causing cancer. The proportion of cancer deaths attributable to air pollution has not been estimated using epidemiological methods. CARB has estimated the average potential cancer risk from outdoor ambient levels of air toxics for 2000. Based on the evaluation by CARB Diesel exhaust PM10 contributes 71 percent to the total cancer risk (see Table 3.4-5) CARB, 2000).

Non-cancer Risk: Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. OEHHA develops RELs for TACs which are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

TABLE 3.4-4
Concentration of Toxic Air Contaminants in the Bay Area (2002)

Monitoring Station (mean ppb)	Chemical[1]											
	BENZ	CCl_4	$CHCl_3$	DCM	EDB	EDC	MTBE	PERC	TCA	TCE	TOL	VC
Oakland – Davie Stadium	0.37	0.11	0.02	0.26	0.01	0.05	0.41	0.05	0.04	0.04	0.95	0.15
San Leandro	0.32	0.10	0.01	0.18	0.01	0.05	0.35	0.03	0.03	0.04	1.31	0.15
Livermore	0.48	0.11	0.02	0.29	0.01	0.05	0.86	0.04	0.44	0.04	1.13	0.15
Oakland – Filbert Street	0.49	0.10	0.02	0.50	0.01	0.05	0.68	0.07	0.04	0.04	1.56	0.15
Pittsburg	0.40	0.12	0.02	0.55	0.01	0.05	0.77	0.06	0.03	0.04	1.09	0.15
Martinez	0.32	0.11	0.01	0.31	0.01	0.05	0.75	0.02	0.12	0.04	0.91	0.15
Crockett	0.24	0.11	0.02	0.56	0.01	0.05	0.40	0.02	0.07	0.04	0.45	0.15
Concord – Treat Blvd.	0.51	0.13	0.03	0.29	0.01	0.05	0.71	0.03	0.05	0.04	1.85	0.15
Richmond	0.44	0.11	0.02	0.27	0.01	0.05	0.61	0.06	0.03	0.04	1.16	0.15
Bethel Island	0.33	0.11	0.01	0.26	0.01	0.05	0.45	0.02	0.03	0.04	0.71	0.15
San Pablo – El Portal Center	0.33	0.10	0.03	0.28	0.01	0.05	0.46	0.02	0.03	0.04	0.69	0.15
Concord – Arnold Ind. Way	0.53	0.11	0.02	0.28	0.01	0.05	0.86	0.07	0.12	0.04	1.05	0.15
San Pablo – Rumrill Blvd.	0.51	0.11	0.01	0.35	0.01	0.05	0.84	0.04	0.03	0.04	5.14	0.15
San Rafael	0.42	0.11	0.01	0.27	0.01	0.05	0.49	0.08	0.04	0.04	0.97	0.15
Fort Cronkite – Sausalito	0.16	0.11	0.01	0.25	0.01	0.05	0.28	0.01	0.04	0.04	0.26	0.15
Napa	0.54	0.11	0.03	0.26	0.01	0.05	1.03	0.03	0.04	004	1.14	0.15
San Francisco	0.44	0.11	0.02	0.27	0.01	0.05	0.61	0.06	0.03	0.04	1.16	0.15
Redwood City	0.63	0.11	0.04	0.27	0.01	0.05	0.91	0.05	0.05	0.16	3.05	0.15
San Jose – 4th Street	0.77	0.11	0.03	0.30	0.01	0.05	1.13	0.08	0.06	0.04	2.04	0.15
Sunnyvale	0.39	0.11	0.03	0.47	0.01	0.05	0.55	0.03	0.03	0.04	0.88	0.15
San Jose – Jackson Street	1.00	0.11	0.03	0.72	0.01	0.05	1.91	0.08	0.05	0.04	2.45	0.15
Vallejo	0.51	0.11	0.03	0.88	0.01	0.05	1.00	0.03	0.04	0.04	1.26	0.15
Santa Rosa	0.46	0.11	0.01	0.28	0.01	0.05	0.67	0.02	1.00	0.04	0.95	0.15

(1) BENZ = benzene, CCl_4 = carbon tetrachloride, $CHCl_3$ = chloroform, DCM = methylene chloride, EDB = ethylene dichloride, MTBE = methyl tertiary butyl ether, perc = perchloroethylene, TCA = 1,1,1-trichloroethane, TCE = trichloroethylene, TOL = toluene, and VC = vinyl chloride.

Source: BAAQMD, 2004.

TABLE 3.4-5

Estimated Statewide Average Potential Cancer Risk From Outdoor Ambient Levels of Air Toxics For 2000[1]

Compound	Potential Cancer Risk[2,3] Excess Cancers/Million	Percent Contribution to Total Risk
Diesel Exhaust PM10	540	71.2
1,3-Butadiene	74	9.8
Benzene	57	7.5
Carbon Tetrachloride	30	4.0
Formaldehyde	19	2.5
Hexavalent Chromium	17	2.2
para-Dichlorobenzene	9	1.2
Acetaldehyde	5	0.7
Perchloroethylene	5	0.7
Methylene Chloride	2	0.1
TOTAL	758	100

(1) CARB, 2000

(2) Diesel exhaust PM10 potential cancer risk based on 2000 emission inventory estimates. All other potential cancer risks based on air toxics network data. 1997 monitoring data were used for para-dichlorobenzene. 1998 monitoring data was used for all other pollutants.

(3) Assumes measured concentrations are equivalent to annual average concentrations and duration of exposure is 70 years, inhalation pathway only.

Based on 2002 ambient monitoring data, the calculated inhalation cancer risk in the District is 163 per million, which is 46 percent less than what was observed in 1995 (BAAQMD, 2004). These figures do not include the risk resulting from exposure to diesel particulate matter. As shown above, recent studies indicate that exposure to diesel particulate matter may contribute to a cancer risk that is greater than all of the other measured TACs combined; however, diesel particulate matter was not sampled in the 2002 monitoring data (BAAQMD, 2004).

<u>Cancer Health Risks from Perc</u>

The U.S. EPA lists perc as one of 188 HAPs and controls the emissions of this chemical through several NESHAPs. OEHHA has established unit risk factors (URFs) and cancer potency factors (CPFs) used to determine the carcinogenic risk to nearby receptors. While the precise carcinogenicity classification of perc has been debated within the scientific community, all major government agencies list perc as a possible or probable carcinogen. Only one organization, a consortium of scientists and physicians funded by the dry cleaning industry, does not classify perc as a carcinogen. Table 3.5-6 lists the various organizations and their current carcinogenicity classifications of perc.

TABLE 3.4-6

Local, National and International Carcinogenicity Classification of Perc

Organization Name	Type of Organization	Perc Carcinogenicity Classification
American Council of Science and Health (ACSH)	Consortium of more than 350 scientists and physicians, funded by the dry cleaning industry (not a government agency)	Not hazardous to humans at typical levels of use.
International Agency for Research on Cancer (IARC)	Part of the World Health Organization, an international organization	Tetrachloroethylene is listed as a probable human carcinogen (Group 2A) but from various international studies on worker exposure in dry cleaning operations, perc is possibly carcinogenic (Group 2B) to humans.
State of California's Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB)	State government agencies under California's Environmental Protection Agency (CalEPA)	Possible human carcinogen. (risk values approved by Scientific Review Panel, body of experts established by state of California law)
United States Environmental Protection Agency (U.S. EPA)	Federal government agency	Hazardous air pollutant; intermediately classified between a probable and possible human carcinogen (Group B/C).

CARB identified perc as a TAC because "there is sufficient evidence that exposure to perc poses a public health hazard, perc is detected in ambient and indoor air and does not break down in the atmosphere at a rate that would eliminate public exposure, and perc is listed as a HAP by the federal government pursuant to section 7412 of Title 42 of the United States Code; therefore, pursuant to section 39655 of the California Health and Safety Code, perc is required to be identified as a TAC." After reviewing available carcinogenicity data, CARB concluded that perc is a "potential human carcinogen." OEHHA's website refers to the classification of perc by IARC as "2B: The agent is possibly carcinogenic to humans," which was the conclusion IARC made from various international studies with regards to worker exposure to perc. OEHHA has established a URF used to determine the maximum individual cancer risk of perc to nearby receptors.

Noncancer Health Risks from Perc

Perc is also listed by OEHHA as causing chronic and acute noncarcinogenic health effects. Effects of perc on human health and the environment depend on the amount of perc present and the length and frequency of exposure. Effects also depend on the health of a person or the condition of the environment when exposure occurs.

The acute health effects from breathing perc for short periods of time target the nervous system, eye, and respiratory system. The predominant route of exposure to the solvents used in dry cleaning is by inhalation, though skin absorption and ingestion may also occur. Symptoms associated with inhalation exposure include: dizziness, headache, drowsiness, nausea, vomiting, irritation of respiratory tract, depression of the central nervous system, impaired memory, confusion, and loss of consciousness. Repeated dermal exposure may result in dermatitis. Eye contact may result in temporary corneal damage. Ingestion exposure may cause damage to the liver and kidneys, nausea, vomiting, headaches, dizziness, and gastrointestinal irritation. Target organs for chronic health effects from longer exposure periods are kidney, gastrointestinal tract, liver, and respiratory system. Chronic effects from overexposure may include damage to kidneys, liver, lungs, blood, or central nervous system.

In addition, a wide range of chemicals are used in ‘spotting’ (treatment of spots); they may include chlorinated solvents, amyl acetate, bleaching agents, acetic acid, aqueous ammonia, oxalic acid, hydrogen peroxide, and dilute hydrogen fluoride solutions.

Perc Emissions Inventory

Currently, there are approximately 635 dry cleaning facilities (675 machines) in the District that emit approximately 214 tons of perc per year. Table 3.4-7 provides the current URFs and RELs which were derived by OEHHA to evaluate cancer and non-cancer risk.

TABLE 3.4-7

Perc Cancer Risk and Non-Cancer Risk Values

	Unit Risk Factor ($\mu g/m^3)^{-1}$	Reference Exposure Level ($\mu g/m^3$) (chronic)	Reference Exposure Level ($\mu g/m^3$) (acute)
Cancer Risk	5.9E-06	N/A	N/A
Non-Cancer Risk	N/A	35	20000

The current usage of perc from existing dry cleaning operations is estimated to be 214 tons per year of TAC emissions. In order to estimate current perc emissions, the SCAQMD tested 20 perc machines with primary and secondary control. The SCAQMD studied purchase records and waste manifest records from each facility and verified the data with perc suppliers and waste recyclers. The perc consumption by an individual dry cleaner ranges from 20 to 245 gallons per year, but the average usage in Southern California is approximately 96 gallons per year (eight gallons per month). The percent of perc emitted from the perc machine is 15 to 92 percent by weight and the average is approximately 50 percent (SCAQMD, 2002). Mass balance data for machines in the Bay Area is similar to that of SCAQMD and the estimated emissions of perc in the Bay Area is 214 tons per year.

3.4.2 SIGNIFICANCE CRITERIA

To determine whether or not air quality impacts from the proposed project are significant, impacts will be evaluated and compared to the significance criteria in Table 3.4-8. If impacts equal or exceed any of the following criteria, they will be considered significant.

TABLE 3.4-8

Air Quality Significance Thresholds for Project Operations

Significance Thresholds for Localized Impacts	
Pollutant	**Significance Threshold**
Toxic Air Contaminants (TACs)	Maximum Exposed Individual (MEI) Cancer Risk $\geq$ 10 in 1 million Hazard Index $\geq$ 1.0 at the MEI
Significance Thresholds for Regional Impacts	
Pollutant	**Significance Threshold**
ROG	Regulation 2, Rule 5 results in a net increase in emissions
NOx	Regulation 2, Rule 5 results in a net increase in emissions
PM10	Regulation 2, Rule 5 results in a net increase in emissions

3.4.3 ENVIRONMENTAL IMPACTS

This subchapter evaluates secondary air pollutant emissions that could occur as a consequence of efforts to reduce TAC emissions. Secondary air quality impacts are potential increases in air pollutants that occur indirectly from implementation of control measures that may be necessary to comply with the Air Toxics NSR Rules.

3.4.3.1 Criteria Pollutants

The potential secondary air quality impacts for criteria pollutants are evaluated in this section.

Secondary Air Quality Impacts from Construction Activities

PROJECT-SPECIFIC IMPACTS: The BAAQMD considers construction emission impacts to be less than significant if the recommended construction mitigation measures are used.

While implementing the Air Toxic NSR rules are expected to reduce TAC emissions, construction-related activities associated with installing or replacing equipment, for example, are expected to generate emissions from construction worker vehicles, trucks, and construction equipment. Implementation of some of the Air Toxics NSR rules may require construction of new infrastructure including construction of controls at stationary sources, and modifications to dry cleaning facilities.

Construction activities include the installation of control equipment, which would not involve extensive construction activities and would not be expected to result in significant emissions. Further, construction projects are expected to implement the BAAQMD construction mitigation measures, so that secondary air quality impacts from construction impacts are not expected to be significant.

PROJECT-SPECIFIC MITIGATION: Each individual project should employ the current BAAQMD-recommended construction emissions to reduce impacts. Implementation of the BAAQMD construction mitigation measures are expected to reduce secondary air quality impacts from construction impacts to less than significant.

Secondary Impacts from Control of Stationary Sources

PROJECT SPECIFIC IMPACTS: Emission reductions from the control of emissions at certain stationary sources could result in secondary emissions. A number of additional pollutants will be included in the Air Toxic NSR rules that could require additional control (see Table 3.4-9).

The Air Toxic NSR Rules could result in an increased use of air pollution control equipment to decrease VOC emissions. The methods to control fugitive VOC emissions could include leakless valves and vapor recovery devices. Some vapor abatement devices, e.g., afterburners, incinerators, or flares, might also be installed resulting in combustion emissions, including NOx and CO emissions. Some control equipment may cause a small increase in CO and NOx emissions. The emission control devices require air permits to operate. Emissions from vapor abatement devices are generally controlled by using efficient combustion practices, so that the secondary impacts from these control measures are expected to be less than significant.

PROJECT-SPECIFIC MITIGATION: No significant secondary air quality impacts from control of stationary source have been identified so no mitigation measures are required.

Secondary Impacts from Alternatives to Perc Use

Limiting or eliminating perc emissions will result in substantial air quality and health benefits to residents and businesses near dry cleaners. The benefit of decreases in perc emission is expected to reduce cancer risk, as well as, chronic and acute health effects of residents in the District.

Alternative technologies to perc dry cleaning equipment currently available include: wet cleaning, carbon dioxide (CO_2) cleaning, hydrocarbon-based alternative solvents such as synthetic aliphatic hydrocarbon or substituted aliphatic glycol ether, and exempt VOC alternative cleaners such as volatile methylated siloxanes (VMS). VMS is exempt from the definition of a VOC, but is classified as a Group II depleter, or a greenhouse gas.

Testing by the manufacturer on VMS indicates minimal toxicity with most categories reporting no significant toxic responses (SCAQMD, 2002).

TABLE 3.4-9

Potentially Emitted Chemicals and Associated Health Effects

CHEMICAL	Carcinogen	Noncarcinogen	
		Chronic	Acute
Acrylic Acid		X	X
Antimony Compounds		X	
Arsine		X	X
Chlorine dioxide		X	
Chloracetophenone, 2-		X	
Chloroprene		X	
Chromium trioxide (as chromic acid mist)	X	X	
Cyanide and Compounds (inorganic)		X	X
Diethanolamine		X	
Dimethyl formamide, N,N-		X	
Epoxybutane, 1,2-		X	
Ethylbenzene		X	
Ethylene glycol		X	
Fluorides and compounds		X	X
Hydrogen selenide			X
Methyl tertiary-butyl ether (MTBE)	X	X	
Mineral fibers (<1% free silica)		X	
Ozone		X	X
Propylene (propene)		X	
Propylene glycol monomethyl ether		X	
Sulfates		X	X
Sulfuric acid and oleum		X	X
Triethylamine		X	X
Vanadium compounds			X
Vinyl acetate		X	
Vinyl bromide		X	

While there are various compliance options, hydrocarbon cleaning equipment currently tends to be the preferred choice of alternative technology. The choice of a hydrocarbon-based cleaner such as synthetic aliphatic hydrocarbon or substituted aliphatic glycol ether would result in an increase in VOC emissions in the district. The amount of increase is dependent upon the number of facilities that choose this alternative, the type of solvent chosen, such as synthetic aliphatic hydrocarbon or substituted aliphatic glycol ether, the amount of solvent used and the emission rate from the replacement machines.

The SCAQMD conducted a sampling of hydrocarbon machines using standard sampling and data collection techniques, and standard laboratory procedures. Actual solvent usage was obtained from the purchase records and waste manifests from nine dry cleaner facilities. Much of the data were verified from solvent suppliers and waste recyclers (SCAQMD, 2002). The data collected by the SCAQMD on the maximum and average hydrocarbon emission were used to estimate the potential increase in VOC emissions if all perc dry cleaning machines in the Bay Area were converted to hydrocarbon machines (see Table 3.4-10).

TABLE 3.4-10

Range of Potential Daily VOC Emissions From Perc Dry Cleaners Converting to Hydrocarbon Solvents in the Bay Area

			Hydrocarbon Solvent Options			
All Affected Equipment	Solvent Usage (gallons/ month)[1]	Operation (days/month)	VOC Content Synthetic Aliphatic Hydrocarbon (lbs/gal)	VOC Content Substituted Aliphatic glycol ether (lbs/gal)	VOC Emissions	Potential VOC Emissions (lbs/day)
675	22.5 (maximum potential)	22	6.4	7.3	34%	1,502 – 1,713* (0.75 – 0.86 tons/day)
675	5.3 (actual)	22	6.4	7.3	34%	353 – 403** (0.18 - 0.20 tons/day)

[1]Source: SCAQMD, 2002.
Note: lbs = pounds; gal = gallon
#This calculation assumes an operating schedule of 5 days per week, 52 weeks/year. (5 days/week x 52 weeks/year)/12 months/year = 22 days per month;
* 6.4 lbs/gal x 22.5 gallon/month / (22 days/month) x 675 machines x 34% = 1,502 lbs per day
7.3 lbs/gal x 22.5 gallon/month / (22 days/month) x 675 machines x 34% = 1,713 lbs per day
** 6.4 lbs/gal x 5.3 gallon/month / (22 days/month) x 675 machines x 34% = 353 lbs per day
7.3 lbs/gal x 5.3 gallon/month / (22 days/month) x 675 machines x 34% = 403 lbs per day

The maximum potential solvent usage is the typical maximum solvent usage limited on a facility's air quality permit, although the actual limits on hydrocarbon machines are determined on a case-to-case basis. The amount of 22.5 gallons per month of hydrocarbon solvent was used to reflect a typical dry cleaner's maximum potential usage although industry records show a much lower actual usage (SCAQMD, 2002).

The potential increase in VOC emissions from solvent cleaning machines is based on a "worst-case" analysis, which means all existing 675 permitted dry cleaning machines using perc in the District would switch to solvent cleaning and use the solvent with the highest VOC content, substituted aliphatic glycol ether, which has a VOC content of 7.3 pounds per gallon. Depending upon how much solvent and which solvent is used, VOC emissions in the district could increase between 353 pounds per day to about 1,713 pounds per day. This estimate is based upon an assumption using maximum potential solvent usage and the highest VOC concentration on each machine at each cleaner. Information obtained during the sampling by the SCAQMD, however indicates that estimated actual average solvent usage is likely to be far less. Using this estimated actual average usage information and the most popular solvent, it is estimated that an actual increase in VOCs would be approximately 403 pounds per day. In either case, the potential VOC emissions would exceed the BAAQMD's regional mass daily significance threshold.

Because affected facilities have other compliance options to choose from, actual environmental impacts are expected to be less. Table 3.4-10 lists the variables used in the calculation, as well as the methodology used in the calculation, to determine the range of potential daily VOC emission increases from the proposed project if all dry cleaners switched to two known solvents as their non- perc alternative. VOCs contribute to ozone formation and the District is currently mandated by state and federal law to develop an ozone strategy that demonstrates attainment of all state and ambient air quality standards. Demonstrating attainment requires including control measures aimed at reducing ozone precursors (VOCs and NO_X). The BAAQMD prepared the 2000 CAP and the 2001 Ozone Attainment Plan, which demonstrates how the Bay Area will attain and maintain the state and federal ozone standards, respectively.

Although the above air quality analysis provides a range of potential VOC emission increases based on estimated actual average solvent usage to maximum potential solvent usage, it should be noted that the analysis is a conservative, "worst-case" analysis. First, it is unlikely that all dry cleaners will need to eliminate the use of perc to comply with the 10 per million cancer risk threshold for new and modified sources, however, over several decades many dry cleaners will undoubtedly switch to alternatives. Dry cleaners in commercial or industrial areas where no sensitive receptors are located may be able to continue to use perc. Second, it is unlikely, for instance, that all perc dry cleaning facilities would switch to hydrocarbon technologies, or would use the solvent with the highest VOC content, or would use the maximum potential solvent amount permitted. The solvent with the highest VOC content has not been the most popular solvent of choice. The synthetic aliphatic hydrocarbon (DF-2000) is currently the most commonly used solvent in hydrocarbon machines in the District (about 225 machines) and the VOC content of the synthetic aliphatic hydrocarbon is 6.4 pounds per gallon. Staff is not aware of any facilities in the District using the substituted aliphatic glycol ether, which has a VOC content of 7.3 pounds per gallon. Third, dry cleaners with an emission increase will be subject to BACT. BACT, by definition is the most stringent emissions control that has been achieved in practice. However, in the meantime, there is a potential increase of VOC emissions from hydrocarbon technology installed and operated to comply with the proposed project, which exceed the BAAQMD's significance thresholds and are considered potentially significant. The public health benefits associated with reduced exposure to perc will compensate for the regional increase in VOC emissions.

An increase in mobile source emissions from delivery trucks is not expected because the trucks needed to deliver the new solvents for hydrocarbon dry cleaning equipment should not substantially change from the current number of delivery trips of perc. SCAQMD studies reflected a lower amount of solvent consumption, 30 to 140 gallons per year compared to the perc usage from 20 to 245 gallons per year. Because customer behavior to dry clean clothes is not expected to be altered by the cleaning method, dry cleaning facilities are not expected to substantially change the amount of laundry being cleaned as a result of the proposed project. The same holds true for waste disposal trucks. The amount of sludge will not significantly change between perc machines and hydrocarbon machines because the level of dirt, lint, and detergent on clothes constituting the sludge will not be altered by the cleaning method (SCAQMD, 2002). Therefore, no additional emissions are expected from delivery trucks or waste recyclers.

Other alternative dry cleaning technologies do not create any known air quality impacts. The proposed new rules will not create localized impacts because VOC is an ozone precursor and ozone is considered a regional pollutant. Wet cleaning equipment does not create any adverse air quality impacts and does not require an air quality permit. Like wet cleaning, operations using liquid CO_2 would not be subject to certain air quality rules, assuming the detergents and additives used in the operations contained less than 50 grams per liter of VOC. Additionally, these machines would not require a BAAQMD Permit to Operate.

PROJECT SPECIFIC MITIGATION: The analysis is conservative and “worst-case” because it is unlikely that all perc dry cleaning facilities would switch to hydrocarbon technologies and actual average solvent usage is expected to be much lower. Current and future ozone control measures, and strict local regulation and restrictions will assist in reducing the potential increase in VOC emissions. The BAAQMD prepared the 2000 CAP and the 2001 Ozone Attainment Plan, which demonstrates how the Bay Area will attain and maintain the state and federal ozone standards, respectively. A new Bay Area Ozone Strategy is currently being prepared to update the previous ozone plans and will include additional control measures to minimize VOC and NOx emissions, and ultimately ozone concentrations. The new ozone plan is expected to be available this summer.

Additional VOC emission reductions may occur when owners or operators of affected facilities voluntarily take permit caps on their solvent usage and they comply with TBACT on their technology of choice at the time of permitting. To avoid having to offset emission increases through purchases of costly emission reduction credits, facilities in the past have voluntarily taken a permit cap. Solvent machines with potential VOC emissions over ten pounds per day require a permit and compliance with BACT requirements. In addition, the District, along with the California EPA (Cal EPA) and CARB, provides educational outreach to the industry and available to the public in the form of a self-inspection handbook. The handbook is designed to help understand air pollution control laws dealing with the dry cleaning industry and its operations. It reminds industry that perc is toxic, provides reaction to the exposure of perc at various concentrations, and reminds the owner/operator of the equipment to check for leaks, fix problems, and store the solvent properly.

While there is no enforceable mitigation measure to directly offset or reduce the VOC emissions generated by the increased operation of hydrocarbon equipment, the BAAQMD will still attain the goal of ozone reduction, maintain consistency with the ozone strategy, and demonstrate compliance with federal and state ambient air quality standards.

REMAINING AIR QUALITY IMPACTS: The air quality analysis concluded that significant adverse air quality impacts could be created by the proposed amendments. Because the mitigation measure listed above will not directly reduce the increased VOC emissions, the air quality impacts remain significant.

Secondary Impacts from Increased Electricity Demand

PROJECT-SPECIFIC IMPACTS: Electricity is often used as the power source to operate various components of add-on control equipment, such as ventilation systems, fan motors, vapor recovery systems, etc. Increased demand for electrical energy may require generation of additional electricity, which in turn could result in increased indirect emissions of criteria pollutants in the Bay Area and in other portions of California.

An incremental increase in electricity demand would not create significant adverse air quality impacts. However, if electricity demand exceeds available power, additional sources of electricity would be required. Electricity generation within the District is subject to BAAQMD Regulation 9, Rule 9, which regulates NOx emissions (the primary pollutant of concern from combustion to generate electricity) from existing power generating equipment. Regulation 9, Rule 9 establishes NOx concentration limits from electric generating facilities. As a result, NOx emissions from existing electric generating facilities will not increase significantly, regardless of increased power generation for add-on control equipment or electrification activities.

New power generation equipment would be subject to Regulation 9, Rule 9. New power generating equipment would not result in air quality impacts because they would be subject to BACT requirements, and all emission increases would have to be offset (through emission reduction credits) before permits could be issued.

The BAAQMD does not regulate electricity generating facilities outside of the District so the rules and regulations discussed above do not apply to electricity generating facilities outside of the District. About 82 percent of the electricity used in California is generated in-state and about 18 percent is imported (CEC, 2002). While these electricity generating facilities would not be subject to BAAQMD rules and regulations, they would be subject to the rules and regulations of the local air pollution control district and the U.S. EPA. These agencies also have established New Source Review regulations for new and modified facilities that generally require compliance with BACT or lowest achievable emission reduction technology. Most electricity generating plants use natural gas, which provides a relatively clean source of fuel (as compared to coal- or diesel-fueled plants). The emissions from these power plants would also be controlled by local, state, and federal rules and regulations, minimizing overall air emissions. These rules and regulations may differ from the BAAQMD rules and regulations because the ambient air quality and emission inventories in other air districts are different than those in the Bay Area. Compliance with the applicable air quality rules and regulations are expected to minimize air emissions in the other air districts to less than significant.

Electricity in California is also generated by alternative sources that include hydroelectric plants (about 23 percent), geothermal energy (about five percent), wind power (one percent), and solar energy (less than one percent) which are clean sources of energy. These sources of electricity generate little, if any, air emissions. Increased use of these and other clean technologies will continue to minimize emissions from the generation of electricity.

PROJECT-SPECIFIC MITIGATION: No significant secondary air quality impacts from increased electricity demand have been identified so no mitigation measures are required.

Miscellaneous Air Quality Issues

The purpose of the Air Toxic NSR rules is to reduce exposure to TACs. The proposed project has the potential to increase VOC emissions due to the use of alternatives to the use of perc in the dry cleaning industry. The 2000 Clean Air Plan or (2000 CAP) addresses state and national air quality planning requirements for ozone and includes control measures to reduce VOC and NOx emissions, in order to reduce ozone formation.

Issues on the CEQA environmental checklist related to impacts on the air quality plan, rules and regulations or future compliance dates are not applicable to the Air Toxic NSR rules. No significant adverse impacts are anticipated on the air quality plan as sufficient control measures are included in the 2000 CAP to demonstrate attainment of federal ozone standards. Therefore, no significant adverse impacts have been identified for the CEQA environmental checklist topics under the air quality plan, rules and regulations, and future compliance dates.

3.4.3.2 Non-Criteria Pollutants

PROJECT SPECIFIC IMPACTS: The proposed project is not expected to create significant adverse toxic air contaminant impact to air quality, but rather will provide a toxic air quality benefit by reducing perc emissions and other TACs. The proposed project will provide beneficial impacts to public health by reducing exposure to TACs. No significant adverse impacts or emission increases associated with non-criteria pollutants are expected as the proposed Air Toxic NSR rules will reduce the allowable exposure levels and regulate more pollutants which requires that TAC emissions be reduced or demonstrate to be within acceptable limits.

3.4.4 MITIGATION MEASURES

Mitigation measures have been discussed under each subcategory. In summary, feasible mitigation measures were required due to potential increases in VOC emissions associated the conversion of perc dry cleaning machines to hydrocarbon machines, as they would exceed the BAAQMD significance thresholds. Specific mitigation measures to reduce the VOC emission increases to less than significant have not been identified.

3.4.5 CUMULATIVE IMPACTS

3.4.5.1 Criteria Pollutants

The preceding analysis concluded no additional construction activities are anticipated beyond what would be expected when dry cleaning facilities normally replace their equipment. Construction activities are required to implement BAAQMD mitigation measures. Consequently, no cumulative construction air quality impacts are anticipated from implementing the Air Toxics NSR Program.

If new, modified, or relocated perc dry cleaning equipment is permitted in the future, it is expected that there would be a potential increase of VOC emissions from hydrocarbon technology installed and operated to comply with the proposed project. Cumulative air quality impacts from the proposed project and all other ozone control measures considered together, however, are not expected to be significant because implementation of all control measures is expected to result in net emission reductions and overall air quality improvement. The proposed project has the potential to increase VOC emissions due to the use of alternatives to the use of perc in the dry cleaning industry. The 2000 CAP (BAAQMD, 2000) and the 2001 Ozone Attainment Plan addresses state and national air quality planning requirements for ozone and includes control measures to reduce VOC and NOx emissions, in order to reduce ozone formation A new Bay Area Ozone Strategy is currently being prepared to update the previous ozone plans and will include additional control measures to minimize VOC and NOx emissions, and ultimately ozone concentrations. The new ozone plan is expected to be available this summer. Future VOC control measures will assist in achieving and maintaining attainment of the state and federal ozone standards. Cumulative air quality impacts are expected to be less than significant.

3.4.5.2 Non-Criteria Pollutants

The Air Toxics NSR Program is not expected to create significant adverse toxic air contaminant impact to air quality, but rather will provide a toxic air quality benefit by reducing perc emissions and other TACs, reducing exposure to TACs, and providing a public health benefit due to reduced exposure to TACs. Dry cleaners will no longer be allowed to exceed the 10 per million cancer threshold when replacing machines. It is expected that some dry cleaners will convert to non-perc technologies in order to comply with the proposed new rule. The proposed project would also change some of the assumptions used in HRAs, which will overall lead to a reduction in the allowable emissions. In addition, the proposed project would regulate additional TACs that are not currently regulated. This is expected to require additional air pollution control equipment within the District and reduce overall exposure to TACs.

3.4.6 CUMULATIVE MITIGATION MEASURES

No mitigation measures are required because existing rules and regulations, as well as implementation of current and future ozone control measures will result in an overall improvement in air quality.

3.5 BIOLOGICAL RESOURCES

3.5.1 ENVIRONMENTAL SETTING

The Bay Area supports an extensive diversity of distinct vegetative communities. Broad habitat categories generally include coastal scrubs, oak woodlands, grasslands, estuaries, coastal salt marsh, riparian habitats, and eucalyptus groves, wetlands and rivers and streams. Wetlands, estuaries, rivers and streams, and urban disturbed habitats are not vegetative communities but provide wildlife habitats. The California Department of Fish and Game (CDFG) has identified several specific native vegetative communities as rare and/or sensitive. These natural communities are of special significance because present rate of loss indicates that further habitat degradation may threaten the viability of plant and wildlife species within the community and hinder the long-term sustainability of the community or species. Natural communities within the Bay Area generally include coastal shrub and chaparral, grasslands, riparian, coastal marsh and estuaries, wetlands, woodlands, eucalyptus grove, and rivers and streams. These communities support a large diversity of wildlife.

The San Francisco Bay and Delta make up the Pacific Coast’s largest estuary, encompassing roughly 1,600 miles of waterways and draining over 40 percent of California’s fresh water. The Sacramento and San Joaquin Rivers flow from Northern California’s inland valleys into the Delta’s winding system of islands, sloughs, canals, and channels before emptying into San Francisco Bay and the Pacific Ocean (MTC, 2001). The marine environment supports a wide variety of species including fish, birds and mammals. The U.S. Fish and Wildlife Service recognizes several threatened and endangered species that occur in San Francisco Bay. These include the Steller sea lion (*Eumetopias jubatus*), the loggerhead sea turtle (*Caretta caretta*), the leatherback turtle (*Dermochelys coriacea*), the olive ridley sea turtle (*lepidochelys olivacea*), and several fish species including coho salmon, steelhead, tidewater goby, delta smelt, Pacific lamprey, and Sacramento splittail. The four later species are native residents; the other species, however, are expected to use open water habitat either seasonally or infrequently (MTC, 2001).

The facilities affected by the proposed Air Toxic NSR Rules are expected to be located in the commercial and industrial areas within the Bay Area. These commercial/industrial areas have been graded to develop the various structures, and are typically surrounded by other commercial and industrial facilities. Native vegetation, other than landscape vegetation, has usually been removed from these facilities.

3.5.2 SIGNIFICANCE CRITERIA

The impacts on biological resources will be considered significant if any of the following criteria apply:

> The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
>
> The project interferes substantially with the movement of any resident or migratory wildlife species.
>
> The project adversely affects aquatic communities through construction or operation of the project.

3.5.3 ENVIRONMENTAL IMPACTS

No direct or indirect impacts from implementing the proposed Air Toxic NSR Rules were identified which could adversely affect plant and/or animal species in the District. The effects of implementing the proposed Air Toxic NSR Rules result in new or modifications to equipment at commercial or industrial facilities to control or further control emissions. New and existing commercial or industrial facilities are generally located in appropriately zoned commercial or industrial areas, which typically do not support candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or U.S. Fish and Wildlife Service. Similarly, modifications at existing facilities would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with native or resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Further, since the proposed Air Toxic NSR Rules primarily regulates stationary emission sources at commercial or industrial facilities, it does not directly or indirectly affect land use policy that may adversely affect riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or identified by the CDFG or U.S. Fish and Wildlife Service. Improving air quality is expected to provide health benefits to plant and animal species in the District.

The proposed Air Toxic NSR Rules may require modifications at existing industrial or commercial facilities to control or further control emissions at these affected facilities. As a result, the proposed project will not affect land use policies or designations.

3.5.4 MITIGATION MEASURES

The impacts on biological resources associated with the Air Toxic NSR Rules are less than significant so no mitigation measures are required.

3.5.5 CUMULATIVE IMPACTS

Implementation of various air quality plans, rules and regulations typically affect commercial or industrial facilities, so they are not expected to generate any new construction of buildings or other structures that would require construction outside of existing industrial/commercial facilities. Therefore, the cumulative impacts on biological impacts are expected to be less than significant.

3.5.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative biological impacts are expected so no mitigation measures are required.

3.6 CULTURAL RESOURCES

3.6.1 ENVIRONMENTAL SETTING

Cultural resources are defined as buildings, sites, structures, or objects that 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 moderate climate, combined with the abundant natural resources found throughout the Bay Area, have supported human habitation for several thousand years. Rising sea levels, the formation of the San Francisco Bay, and the resulting filling of inland valleys have covered these early sites, which were most likely located along the then existing bayshore and waterways. Existing evidence indicates the presence of many village sites from at least 5,000 years ago in the region (MTC, 2001).

Six different groups of native population, identified by their language, lived within the Bay Area, including Coastanoan, Eastern Miwok, Patwin, Coast Miwok, Pomo and Wappo. These native populations increased between 5,000 years ago and the arrival of the Spanish in the later 18th century. Native villages and campsites were inhabited on a temporary basis and are found in several ecological niches due to the seasonal nature of their subsistence base (MTC, 2001). Approximately 6,800 Native American and historic cultural resources have been recorded in the Bay Area and are listed with the Historical Resources Information System. About 760 cultural resources are listed on the National Register of Historic Places, of which approximately 240 are designated California Historic Landmarks. The California Inventory of Historic Resources includes a total of about 820 historic buildings, sites, or objects and 2,340 archaeological sites. The greatest concentration of listed historic resources occurs in San Francisco with 171 sites on the National Register. Alameda County has the second highest number of listed historic resources with 138 (MTC, 2001).

Dense concentrations of the Native American archaeological sites occur along the historic margins of San Francisco and San Pablo Bays. Archaeological sites have also been identified in the following environmental settings in all Bay Area counties: along historic bayshore margins, near sources of water (such as vernal pools and springs), along ridgetops, on midslope terraces, at the base of hills, and on alluvial flats (MTC, 2001).

CEQA Guidelines define a significant cultural resources as a "resource listed or eligible for listing on the California Register of Historical Resources" (Public Resources Code Section 5024.1). A project would have a significant impact if it would cause a substantial adverse change in the significance of a historical resource (CEQA Guidelines Section 15064.5(b)).

3.6.2 SIGNIFICANCE CRITERIA

Impacts to cultural resources will be considered significant if:

> The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
>
> Unique paleontological resources are present that could be disturbed by construction of the proposed project.
>
> The project would disturb human remains.

3.6.3 ENVIRONMENTAL IMPACTS

Implementing the proposed Air Toxic NSR Rules is primarily expected to result in controlling stationary source emissions at commercial or industrial facilities. Affected facilities are typically located in appropriately zoned commercial or industrial areas that have previously been graded and developed. Because potentially affected facilities are existing facilities, and controlling stationary source emissions does not typically require extensive cut-and-fill activities, or excavation, it is unlikely that additional stationary source control measures that may result from the proposed Air Toxic NSR Rules will: (1) adversely affect historical or archaeological resources as defined in CEQA Guidelines §15064.5; (2) destroy unique paleontological resources or unique geologic features; or (3) disturb human remains interred outside formal cemeteries.

In a small number of cases, the proposed Air Toxic NSR Rules may require minor site preparation and grading at an affected facility to install new or modify existing equipment. Under this circumstance, it is possible that archaeological or paleontological resources could be uncovered. Even if this circumstance were to occur, significant adverse cultural resource impacts are not anticipated because there are existing laws in place that are designed to protect and mitigate potential adverse impacts to cultural resources. As with any construction activity, should archaeological resources be found during construction that results from implementing the proposed BAAQMD rules, the activity would cease until a thorough archaeological assessment is conducted.

3.6.4 MITIGATION MEASURES

The cultural resources impacts associated with the Air Toxic NSR Rules are less than significant so no mitigation measures are required.

3.6.5 CUMULATIVE IMPACTS

Implementation of various air quality plans, rules and regulations, including the Toxic NSR rule, typically affect commercial or industrial facilities, so they are not expected to generate any new construction of buildings or other structures that would require construction outside of existing industrial/commercial facilities. In general, construction activities could uncover archaeological or paleontological resources. Significant adverse cultural resource impacts are not anticipated because there are existing laws in place that are designed to protect and mitigate potential adverse impacts to cultural resources. As with any construction activity, should archaeological resources be found during construction that results from implementing the proposed BAAQMD rules, the activity would cease until a thorough archaeological assessment is conducted.

3.6.6 CUMULATIVE MITIGATION MEASURES

The cumulative cultural resources impacts are expected to be less than significant so no mitigation measures are required.

3.7 GEOLOGY AND SOILS

3.7.1 ENVIRONMENTAL SETTING

The Bay Area is located in the Coast Range geomorphic province, with portions of Contra Costa and Solano Counties extending into the Great Valley geomorphic province. The Coast Range extends about 400 miles along the Pacific Coast, from Oregon into southern California. The province is characterized by a series of northwest trending ridges and valleys controlled by tectonic folding and faulting and generally characterize the geologic setting of the San Francisco Bay region, examples of which include the Suisun Bay, East Bay Hills, Briones Hills, Vaca Mountains, Napa Valley, and Diablo Ranges.

Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of sandstone interfingered with siltstone and shale. Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay. The estuarine sediments found along the shorelines of Solano County are soft, water-saturated mud, peat and loose sands. The organic, soft, clay-rich sediments along the San

Francisco and San Pablo Bays are referred to locally as Bay Mud and can present a variety of engineering challenges due to inherent low strength, compressibility and saturated conditions. Landslides in the region occur in weak, easily weathered bedrock on relatively steep slopes.

The San Francisco Bay Area is a seismically active region, which is situated on a plate boundary marked by the San Andreas Fault System. Several northwest trending active and potentially active faults are included with this fault system. Under the Alquist-Priolo Earthquake Fault Zoning Act, Earthquake Fault Zones were established by the California Division of Mines and Geology along "active" faults, or faults along which surface rupture occurred in Holocene time (the last 11,000 years). In the Bay area, these faults include the San Andreas, Hayward, Calaveras, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Seal Cove-San Gregorio and West Napa faults (Figure 3.7-1). Other smaller faults in the region classified as potentially active include the Southampton and Franklin faults. The San Andreas and the Hayward faults are the two main active, strike-slip faults in the Bay Area and have experienced movements within the last 150 years. The San Andreas Fault is a major structural feature in the region and forms a boundary between the North American and Pacific tectonic plates. Recent earthquakes over 5.0 magnitude are included in Table 3.7-1.

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.

Liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibration (e.g., earthquake). The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. Soil liquefaction causes ground failure that can damage homes, buildings, roads, pipelines, etc. Liquefaction can occur in areas characterized by water-saturated, cohesionless, granular materials at depths less than 40 feet. In addition, liquefaction can occur in areas with unconsolidated or artificial fill sediments such as those located in reclaimed areas along the margin of the San Francisco Bay. Liquefaction potential is highest in areas underlain by Bay fills, Bay Mud, and unconsolidated alluvium.

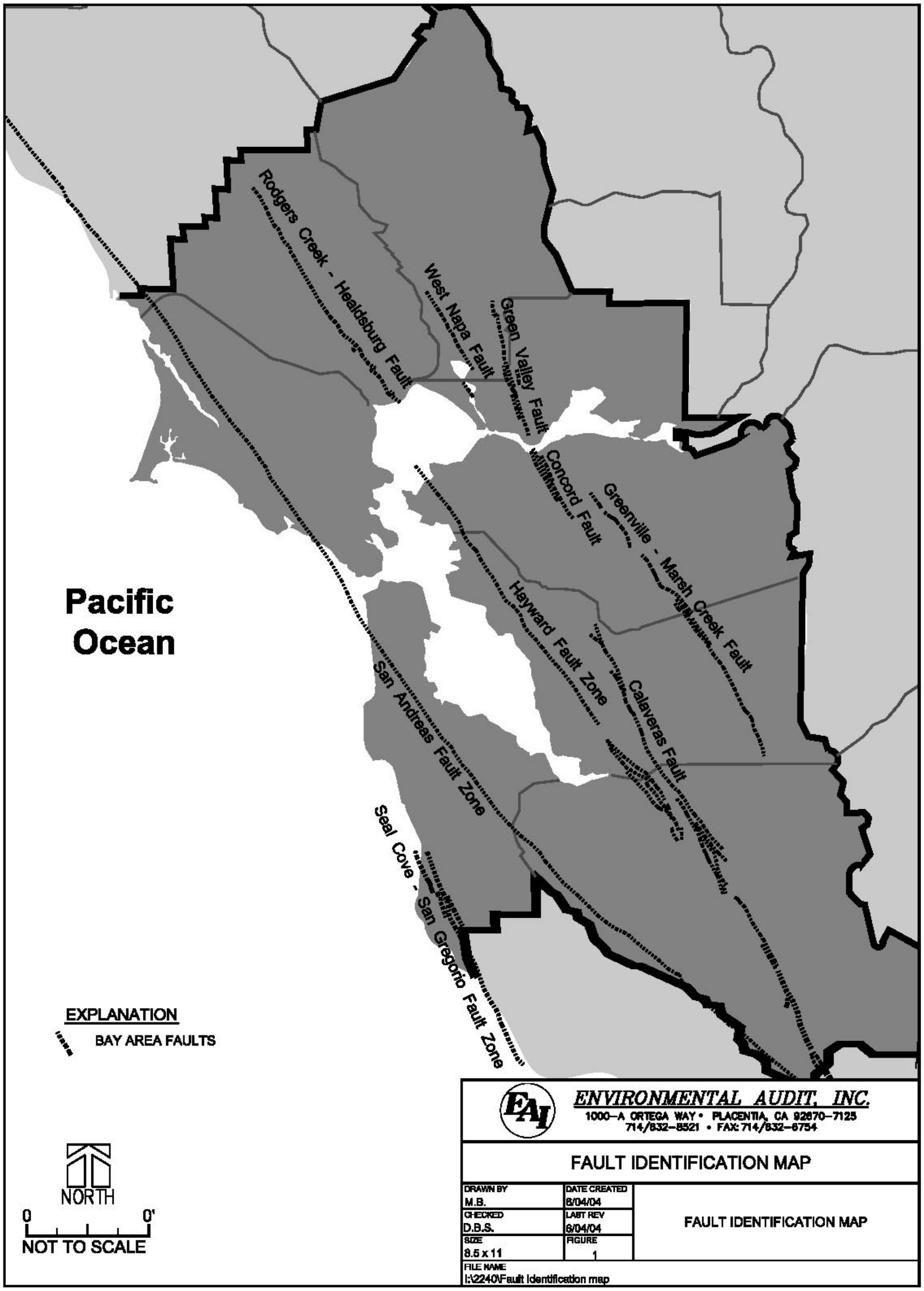

Rodgers Creek - Healdsburg Fault
West Napa Fault
Green Valley Fault
Concord Fault
Greenville - Marsh Creek Fault
Hayward Fault Zone
Calaveras Fault
San Andreas Fault Zone
Seal Cove - San Gregorio Fault Zone
Pacific Ocean
EXPLANATION
BAY AREA FAULTS
NORTH
0
0'
NOT TO SCALE
ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92870-7125
714/632-8521 • FAX: 714/632-6754
FAULT IDENTIFICATION MAP
DRAWN BY
M.B.
DATE CREATED
6/04/04
CHECKED
D.B.S.
LAST REV
6/04/04
SIZE
8.5 x 11
FIGURE
1
FAULT IDENTIFICATION MAP
FILE NAME
I:\2240\Fault Identification map

FIGURE 3.7-1

TABLE 3.7-1

EARTHQUAKES OVER 5.0 MAGNITUDE SINCE 1960

YEAR	LOCATION (epicenter)	MAGNITUDE
1960	West of Cape Mendocino	6.2
1980	Livermore	5.8
1984	Morgan Hill	6.1
1984	Mendocino Fracture Zone	6.7
1989	Loma Prieta	7.1
1992	Cape Mendocino	7.2
1992	Cape Mendocino	6.5
1992	Cape Mendocino	6.6
1994	Mendocino Fracture Zone	6.9
2000	Mendocino Fracture Zone	5.9

Source: California Division of Mines and Geology, 2004

Tsunamis are tidal waves or period waves that are caused by underwater seismic disturbances, volcanic eruptions, or submerged landslides. Tsunamis affecting the Bay Area would most likely originate west of the Bay, within the Pacific Rim. During the period between 1854 and 1964, approximately 21 tsunamis were recorded at the Fort Point tide gauge in San Francisco. The largest wave height recorded was 7.4 feet resulting from the 1964 Alaska earthquake. It is estimated that a tsunami with a wave height or run up to 20 feet could pass through the Golden Gate every 200 years. A ten-foot wave is estimated to occur every 90 years. Areas that are highly susceptible to tsunami inundation tend to be located in low-lying coastal areas such as tidal flats, marshlands, and former bay margins that have been artificially filled (MTC, 2001).

3.7.2 SIGNIFICANCE CRITERIA

The impacts on the geological environment will be considered significant if any of the following criteria apply:

> Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
>
> Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
>
> Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
>
> Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.

Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

3.7.3 ENVIRONMENTAL IMPACTS

The proposed Air Toxic NSR Rules will not directly expose people or structures to earthquake faults, seismic shaking, seismic-related ground failure including liquefaction, landslides, mudslides or substantial soil erosion: BAAQMD rules or regulations do not directly or indirectly result in construction of new structures. Some new structures, or structural modifications at existing affected facilities may occur as a result of installing control equipment or making process modifications, e.g., new drycleaning equipment. In any event, existing affected facilities or modifications to existing facilities would be required to comply with relevant Uniform Building Code requirements in effect at the time of initial construction or modification of a structure.

New structures must be designed to comply with the Uniform Building Code Zone 4 requirements since the District is located in a seismically active area. The local cities or counties are responsible for assuring that projects comply with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the Code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some non-structural damage; and (3) resist major earthquakes without collapse but with some structural and non-structural damage. The Uniform Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation conditions at the site.

Any potentially affected facilities that are located in areas where there has been historic occurrence of liquefaction, e.g., coastal zones, or existing conditions indicate a potential for liquefaction, including expansive or unconsolidated granular soils and a high water table, may have the potential for liquefaction induced impacts at the project sites. The Uniform Building Code requirements consider liquefaction potential and establish more stringent requirements for building foundations in areas potentially subject to liquefaction. Therefore, compliance with the Uniform Building Code requirements is expected to minimize the potential impacts associated with liquefaction. The issuance of building permits from the local cities or counties will assure compliance with the Uniform Building Code requirements. Therefore, no significant impacts from liquefaction are expected.

Because facilities affected by any BAAQMD control equipment are typically located in industrial or commercial areas, which are not typically located near known geological hazards (e.g., landslide, mudflow, seiche, tsunami or volcanic hazards), no significant adverse geological impacts are expected.

Although the proposed Air Toxic NSR Rules may require modifications at existing industrial or commercial facilities, such modifications are not expected to require substantial grading or construction activities. Any new air pollution control equipment is not expected to substantially increase the area subject to compaction or overcovering since the subject areas would be limited in size and, typically, have already been graded or displaced in some way. Therefore, significant adverse soil erosion impacts are not anticipated from implementing the Air Toxic NSR Rules.

The CEQA environmental checklist includes a discussion of septic tanks and alternative wastewater disposal systems within the discussion of Geology and Soils. Therefore, a discussion of septic tanks and alternative septic systems is included herein for completeness. Septic tanks or other similar alternative wastewater disposal systems are typically associated with small residential projects in remote areas. The proposed Air Toxic NSR Rules do not contain any requirements which generate construction of residential projects in remote areas. BAAQMD rules typically affect existing industrial or commercial facilities, which already are hooked up to appropriate sewerage facilities so no impacts on septic tanks or alternative wastewater disposal systems are expected.

3.7.4 MITIGATION MEASURES

No significant adverse impacts on geology and soils are expected so no mitigation measures are required.

3.7.5 CUMULATIVE IMPACTS

The cumulative impacts are essentially the same as the direct impacts outlined above. The projected increase in population in the Bay Area will result in increased risk of exposure of people and property to the potentially damaging effects of strong seismic shaking, fault rupture, seismically induced ground failure and slope instability. The potential for structural failures, injuries and loss of life would be greatest on raised structures, on earthquake susceptible soils and within fault zones. These issues are related to population growth and not to air quality plans, rules or regulations. The 2000 Clean Air Plan or (2000 CAP) addresses state and national air quality planning requirements for ozone and includes control measures to reduce VOC and NOx emissions, in order to reduce ozone formation. Therefore, no significant cumulative impacts on geology and soils are expected.

3.7.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative impacts on geology and soils are expected so no mitigation measures are required.

3.8 HAZARDS AND HAZARDOUS MATERIALS

3.8.1 ENVIRONMENTAL SETTING

The goal of the Air Toxic NSR Rules are to reduce emissions of TACs, thus improving air quality and protecting public health. Some of the proposed control equipment intended to improve overall air quality may, however, have direct or indirect hazards associated with their implementation. Hazard concerns are related to the potential for fires, explosions or the release of hazardous substances in the event of an accident or upset conditions.

The potential hazards associated with industrial activities are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facility. The hazards likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events:

- **Toxic gas clouds:** Toxic gas clouds are releases of volatile chemicals (e.g., anhydrous ammonia, chlorine, and hydrogen sulfide) that could form a cloud and migrate off-site, thus exposing individuals. “Worst-case” conditions tend to arise when very low wind speeds coincide with an accidental release, which can allow the chemicals to accumulate rather than disperse.

- **Torch fires (gas and liquefied gas releases), flash fires (liquefied gas releases), pool fires, and vapor cloud explosions (gas and liquefied gas releases):** The “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:** 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.

3.8.1.1 Hazardous Materials Incidents

The California Hazardous Materials Incident Reporting System (CHMIRS) is a post incident reporting system to collect data on incidents involving the accidental release of hazardous materials. Information on accidental releases of hazardous materials are reported to and maintained by OES. In 2001, there were a total of 1,398 incidents reported in the nine counties regulated by the BAAQMD (see Table 3.8-1).

TABLE 3.8-1
Hazardous Materials Transportation Incidents 2001 by County

COUNTY	REPORTED INCIDENTS
Alameda	307
Contra Costa	372
Marin	72
Napa	33
San Francisco	97
San Mateo	133
Santa Clara	128
Solano	143
Sonoma	113
Total No. of Incidents	1,398

Source: Governor's Office of Emergency Services, 2001

3.8.1.2 Perchloroethylene Used In Dry Cleaning

Perchloroethylene, whose product name is tetrachloroethylene, is a chlorinated aliphatic hydrocarbon compound containing a double bond. At room temperature, Perchloroethylene or perc is a nonflammable, colorless, dense liquid with a mildly sweet, chloroform-like odor. It is relatively insoluble in water, but miscible in alcohol, ether, chloroform, and benzene. Perc is available in many forms, from worm pills to dry-cleaning grades containing various stabilizers. A majority of dry cleaning facilities in the district use perc in their dry cleaning operations. Perc is harmful if swallowed or inhaled. Exposure to perc can occur in the workplace or in the environment following releases to the air. Exposure can also occur when people use products containing perc, spend time in dry cleaning facilities that use perc, live above or adjacent to dry cleaning facilities or bring dry cleaned garments into their home. Perc enters the body when breathed in with contaminated air and is less likely to be absorbed through skin contact. Once in the body, perc can remain, stored in fat tissue.

A number of physical or chemical properties may cause a substance to be hazardous, including toxicity, ignitability, corrosivity, and reactivity. Based on a hazard rating from 0 to 4 (0 = no hazard; 4 = extreme hazard) located on the Material Safety Data Sheet (MSDS) for perc, health is rated 3 (severe, cancer causing), contact is rated 3 (severe, life), flammability is rated 0 (none) and reactivity is rated 0 (none). Perc or its vapors in contact with flames or hot glowing surfaces may form corrosive acid fumes and therefore is recommended to keep perc away from heat, sparks and flame. The boiling point for perc is 250 degrees Fahrenheit and the vapor pressure at typical ambient temperature is 0.25 psi. A closed perc container exposed to heat may explode, however it is considered an unusual fire and explosion hazard. Firefighters are instructed to use water to keep fire-exposed containers of perc cool and to move the containers from a fire area if it can be done without risk. According to the MSDS, some toxic gases which may be produced if perc is exposed to fire are hydrogen chloride, phosgene, carbon monoxide and carbon dioxide.

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. Potential risk of upset is a factor in the production, use, storage and transportation of hazardous materials. Risk of upset concerns are related to the risks of explosions or the release of hazardous substances in the event of an accident or upset conditions.

3.8.1.3 Hazardous Materials Management Planning

State law requires detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of to prevent or mitigate injury to health or the environment in the event that such materials are accidentally released. Federal laws, such as the Emergency Planning and Community-Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act or SARA, Title III) impose similar requirements. These requirements are enforced by the California Office of Emergency Services.

The Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business or government agency that handles hazardous materials prepare a business plan, which must include the following (HSC, Section 25504):

- details, including floor plans, of the facility and business conducted at the site;
- an inventory of hazardous materials that are handled or stored on the site;
- an emergency response plan; and
- a training program in safety procedures and emergency response for new employees, and an annual refresher course in the same topics for all employees.

3.8.1.4 Hazardous Materials Transportation

The U.S. Department of Transportation (DOT) has the regulatory responsibility for the safe transportation of hazardous materials between states and to foreign countries. DOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by the U.S. Postal Service (USPS) regulations. DOT regulations are contained in the Code of Federal Regulations, Title 49 (49 CFR); USPS regulations are in 39 CFR.

Every package type used by a hazardous materials shipper must undergo tests, which imitate some of the possible rigors of travel. While not every package must be put through every test, most packages must be able to meet the following generic test criteria: the ability to be (a) kept under running water for one-half hour without leaking; (b) dropped, fully loaded, onto a concrete floor; (c) compressed from both sides for a period of time; (d) subjected to low and high pressure; and (e) frozen and heated alternately.

Common carriers are licensed by the California Highway Patrol (CHP) pursuant to the California Vehicle Code, §32000, which requires licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards.

Under the federal Resource Conservation and Recovery Act (RCRA) of 1976, the U.S. EPA set standards for transporters of hazardous waste. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the state; state regulations are contained in CCR, Title 13. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

Two state agencies have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies: the CHP and the California Department of Transportation (Caltrans). CHP enforces hazardous materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at 72 locations throughout the state and can respond in the event of an emergency.

3.8.1.5 Hazardous Material Worker Safety Requirements

The California Occupational Safety and Health Administration (Cal/OSHA) and the Federal Occupational Safety and Health Administration (Fed/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations.

Under the authority of the Occupational Safety and Health Act of 1970, Fed/OSHA has adopted numerous regulations pertaining to worker safety (contained in 29 CFR – Labor). These regulations set standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries. Some OSHA regulations contain standards relating to hazardous materials handling, including workplace conditions, employee protection requirements, first aid, and fire protection, as well as material handling and storage. Because California has a federally-approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in 29 CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace (which are detailed in CCR, Title 8) include requirements for employee safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances as well as communicating hazard information related to hazardous substances and their handling. The hazard communication program also requires that Material Safety Data Sheets (MSDSs) be available to employees and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and emergency evacuation training).

Both federal and state laws include special provisions for hazard communication to employees, including training in chemical work practices. The training must include methods in the safe handling of hazardous materials, an explanation of MSDSs, use of emergency response equipment and supplies, and an explanation of the building emergency response plan and procedures. Chemical safety information must also be available. More detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in 29 CFR. Emergency equipment and supplies, such as fire extinguishers, safety showers, and eye washes, must also be kept in accessible places. Compliance with these regulations reduces the risk of accidents, worker health effects, and emissions.

National Fire Codes (NFC), Title 45 (published by the National Fire Protection Association) contains standards for facilities using chemicals, which are not requirements, but are generally employed by organizations in order to protect workers. These standards provide basic protection of life and property through prevention and control of fires and explosions, and also serve to protect personnel from exposure to non-fire health hazards.

While NFC Standard 45 is regarded as a nationally recognized standard, the California Fire Code (24 CCR) contains state standards for the use and storage of hazardous materials and special standards for buildings where hazardous materials are found. Some of these regulations consist of amendments to NFC Standard 45. State Fire Code regulations require emergency pre-fire plans to include training programs in first aid, the use of fire equipment, and methods of evacuation.

3.8.1.6 Hazardous Waste Handling Requirements

RCRA created a major federal hazardous waste regulatory program that is administered by the U.S. EPA. Under RCRA, U.S. EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave." RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. HSWA specifically prohibits the use of certain techniques for the disposal of some hazardous wastes.

Under RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements. U.S. EPA approved California's program to implement federal regulations as of August 1, 1992.

The Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency Department of Toxic Substance Control (DTSC). Under HWCL, DTSC has adopted extensive regulations governing the generation, transportation, and disposal of hazardous wastes. HWCL differs little from RCRA; both laws impose "cradle to grave" regulatory systems for handling hazardous wastes in a manner that protects human health and the environment. Regulations implementing HWCL are generally more stringent than regulations implementing RCRA.

Regulations implementing HWCL list over 780 hazardous chemicals as well as 20-30 more common materials that may be hazardous; establish criteria for identifying, packaging and labeling hazardous wastes; prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Under both RCRA and HWCL, hazardous waste manifests are required to be prepared by the facility that generates hazardous waste. The hazardous waste manifest must accompany the hazardous waste as it is transported, treated and/or disposed. Hazardous waste manifests list a description of the waste, its intended destination and regulatory information about the waste. A copy of each manifest must be filed with DTSC. The generator must match copies of hazardous waste manifests with certification notices from the treatment, disposal, or recycling facility.

3.8.1.7 Emergency Response to Hazardous Materials and Wastes Incidents

Pursuant to the Emergency Services Act, the State has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government agencies and private persons. Response to hazardous materials incidents is one part of this plan. The Plan is administered by the state Office of Emergency Services (OES), which coordinates the responses of other agencies including CalEPA, CHP, the Department of Fish and Game, the Regional Water Quality Control Board (RWQCB), and local fire departments. (See California Government Code, §8550.)

In addition, pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985 (the Business Plan Law), local agencies are required to develop "area plans" for response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the business plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning of procedures for emergency response, notification and coordination of affected government agencies and responsible parties, training, and follow-up.

3.8.2 SIGNIFICANCE CRITERIA

The impacts associated with hazards will be considered significant if any of the following occur:

> Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
>
> Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

3.8.3 ENVIRONMENTAL IMPACTS

3.8.3.1 Hazards Associated with Alternatives to Perc

<u>Flammability and Fire Hazards</u>

Perc is considered to be a nonflammable solvent. Some replacement solvents are more flammable than perc. By providing incentives to use alternatives to perc, the Air Toxic NSR Rules could result in the increased use of flammable materials, such as some of the hydrocarbon solvents. There could be a potentially significant increase in fire hazards at affected facilities or an increase in the probability of a release of flammable materials into the environment in the event of an accidental release during transport. The replacement solvents will, however, be used in equipment that has been designed to comply with stringent flammability standards. Wet cleaning is a water-based system, is not flammable and is not considered further in this analysis. Likewise, carbon dioxide (CO_2) is not flammable.

Historically, perc has been used in the dry cleaning industry because it is effective and non-flammable. Before perc, the dry cleaning industry has used a variety of petroleum solvents such as Stoddard, 140F, and LPA-142 in dry cleaning operations. Because these substances are highly flammable VOCs, the dry cleaning industry has been motivated to develop solvents that have fewer or less severe physical or chemical properties.

With the development of closed-loop technology, a new generation of solvents has been developed. These newer hydrocarbon solvents, including synthetic aliphatic hydrocarbon, VMS (decamethylcyclopentasiloxane) and substituted aliphatic glycol ether, may have greater hazardous physical or chemical properties (e.g., higher flashpoint, autoignition temperature, etc.) than perc (see Table 3.8-2). The newer hydrocarbon alternatives are regulated as Class III combustible liquids according to the National Fire Protection Association (NFPA) ratings. Perc is non-combustible.

TABLE 3.8-2
Hazards Associated with Alternatives to Perc Use at Dry Cleaners[(1)]

	SOLVENT CLEANING				
Hazard Characteristic	**synthetic aliphatic hydrocarbon**	**decamethylcycl-opentasiloxane**	**substituted aliphatic glycol ether**	**CO_2**	**Wet Cleaning**
Flashpoint	145°F	170°F	>200°F	N/A	N/A
Flammable Limits					
LEL	1.3	0.7	0.7	1.7	N/A
UEL	8.8	Unknown	7.0	6.7	N/A
Auto ignition Temperature	640°F	738°F	451°F	>700° F	N/A
NFPA*					
Health	1	0	1	2	
Flammability	2	2	2	1	
Reactivity	0	0	0	0	
HMIS**					
Health	1	0	1		
Flammability	2	2	2		
Reactivity	0	0	0		

(1) Source: SCAQMD, 2002.
* National Fire Protection Association
** Hazardous Materials Identification System
0 = minimal; 1 = slight, 3 = serious, 4 = severe
LEL = lower explosive limit UEL = upper explosive limit

NFPA regulations require closed-loop machines using solvents that are combustible to be equipped with either a fire suppressant or a prevention system. A fire suppressant system injects an inert gas (e.g. nitrogen or argon) to displace available oxygen to keep the concentration of oxygen present below eight percent by volume. The timing of the inert gas injection depends on the solvent used in the machine and is linked to a percentage of the solvent's assigned lower explosive limit (LEL). The LEL of a substance is the minimum concentration of gas or vapor in air below which the substance will not burn when exposed to a source of ignition. This concentration is usually expressed in percent by volume. Below this concentration, the mixture is too "lean" to burn or explode. The upper explosive limit (UEL) of a substance is the maximum concentration of gas or vapor above which the substance will not burn when exposed to a source of ignition. Above this concentration, the mixture is too "rich" to burn or explode. Some closed-loop machines are equipped with a fire prevention system that maintains the operating equipment under a vacuum to remove oxygen so that its concentration is maintained below eight percent by volume to eliminate a condition that could result in fire or an explosion (SCAQMD, 2002).

Solvent machines are not expected to result in flammability hazards because all four elements needed for flammability (solvent, flash point temperature, oxygen, and a flame or source of ignition) will never be together. As noted above, the oxygen is removed and the temperature is lowered before the door is opened when oxygen enters the chamber. Also, the solvent will never reach 143, 147 or 170 degrees Fahrenheit, which are the flash points of the HC-DCF, DF 2000 and Green Earth ™ solvents, respectively (SCAQMD, 2002).

The proposed Air Toxic NSR rules would not affect equipment, fire suppressant or prevention system specifications. Equipment would continue to comply with NFPA requirements. Neither would the proposed project interfere with, or alter, local governments' and fire departments' approval process for installing and operating dry cleaning machines. Local fire departments regularly inspect dry cleaning facilities before and during operation to ensure the equipment and cleaning process complies with the fire codes and regulations. City, county and regulatory agencies usually adopt the Uniform Fire Code (UFC), which outline these fire codes. For example, according to Section 3602.4.3 (Article 36 – Dry Cleaning of the 1997 UFC), "dispensing of flammable or combustible liquids for spotting operations shall be from approved containers. The amount of flammable and combustible liquid solvents at each workstation shall not exceed one gallon." Facilities are required to make design or process changes to satisfy the local fire prevention authorities before operating. The more significant design requirements of the UFC include the following:

- Operating temperature limits with visual and audible alarms;
- Room occupancy (design) requirements;
- Fire sprinkler systems for dry cleaning facilities;
- Remote location of boilers with open flame heating, and four-hour fire resistance separating wall;
- Room ventilation of one cubic foot per square foot of floor area;
- Emergency relief ventilation for solvent tanks and containers;
- Pressure relief devices for pressure operated filters;

- Explosion-proof electrical wiring, controls, and motors; and
- Bonding and grounding of system components.

Because perchloroethylene is not flammable, perchloroethylene machines are not designed for combustion control. It is therefore imperative that any new installation of alternative technologies includes the installation of all required safety devices and adaptations necessary to ensure both fire prevention (e.g., nitrogen blanketing, oxygen monitoring, temperature limits) and fire protection (internal sprinklers, pressure vents, explosion-proof motors, air-purge devices, etc.). The proposed Air Toxic NSR rules do not require the use of petroleum solvents in dry cleaning operations. Even so, the safety controls on a number of perc alternative dry cleaning machines are designed for operation with hydrocarbon solvents with a flash point and an LEL at safe parameters and one type of machine can operate without the necessity of nitrogen interjection, temperature limitation or vacuum drying (SCAQMD, 2002).

235 dry cleaning facilities in the district have already converted and are successfully operating hydrocarbon solvent technology. The likelihood of requiring sprinkler systems and firewalls are dependent on the local permitting authority and generally reviewed on a case-by-case basis. Dry cleaners are required to obtain a permit from the local fire authority. Fire codes generally require that dry cleaning plants and associated operations be separated from other occupancies by fire-resistive occupancy separations and limits the quantity of material that can be stored on-site without more resistive fire walls. Dry cleaning rooms containing Class II (perc) or Class IIIA solvents are usually separated from other uses including solvent storage, offices, laundering, scouring, scrubbing, pressing and ironing operations by fire-resistive occupancy separations. Local fire departments can also allow for alternate methods of compliance which allow for less restrictive requirements where there is minimal storage of dry cleaning chemicals or when dry cleaning using non-flammable materials occurs.

Concerns have been raised regarding the potential flammability of hydrocarbon emissions emanating from petroleum solvent machines. In response to these concerns, SCAQMD staff visited three dry cleaning shops operating five DF2000 petroleum solvent machines in June 2002. The object of these visits was to measure hydrocarbon emissions within the shop utilizing a calibrated organic vapor analyzer (Foxboro Century OVA-108). For all three shops the measurements typically ranged from 10 to 30 parts per million (ppm) [based on distances ranging from 20 feet from the machine up to the machine’s flanges, valves, seals, and filters]. During the visit one shop was experiencing a major breakdown resulting in a significant leak. The hydrocarbon leakage caused by the breakdown was measured to be a maximum of 250 ppm. It should be noted that the 250 ppm concentration is less than four percent of the lower explosive limit for hydrocarbons from typical petroleum solvent formulations (SCAQMD, 2002).

In conclusion, compliance with NFPA standards, which are established, enforceable regulations, and compliance with fire prevention, combined with improved equipment design and safety mechanisms, will reduce the potential fire hazards associated with flammable solvents to a less than significant impact.

PROJECT SPECIFIC MITIGATION MEASURES: None Required

Hazards Associated with CO_2 Equipment

The CO_2 machines pressurize the liquid carbon dioxide gas in a drum between 700 and 800 pounds per square inch (psi). The potential danger of explosion is minimal particularly when comparing pressure with similar products found in residential or commercial facilities. For example, a refrigerator is at 350 psi pressure, a fire extinguisher is at 800 psi, and a home oxygen tank is at 2,400 psi. CO_2 has no flash point and is not flammable. In addition, compliance with American Society of Mechanical Engineers (ASME) ensures safety standards and strict enforcement of mechanical performance regulations, combined with improved equipment design and safety mechanisms, should eliminate the danger of explosion and provide a safe environment for workers and customers.

In conclusion, compliance with ASME standards, which are established, enforceable regulations, and compliance with mechanical performance regulations, combined with improved equipment design and safety mechanisms, will reduce the potential explosive properties related to CO_2 equipment to a less than significant impact.

PROJECT SPECIFIC MITIGATION MEASURES: None required.

Transport of Hazardous Materials

Dry cleaning facilities are not expected to increase or decrease the amount of laundry being cleaned as a result of the proposed project. Therefore, the number of trucks needed to deliver the new solvents for hydrocarbon dry cleaning equipment should not significantly change from the current number of delivery trips of perc. There is no regular delivery necessary for wet cleaning equipment since water is used to clean the garments and CO_2 machines use approximately one quart per week of CO_2, which is non-hazardous. Therefore deliveries of CO_2 should not occur as often as for perc or hydrocarbon solvents (SCAQMD, 2002). Thus, there would generally be little or no net change in the probability of accidental releases of solvent materials compared to perc.

The consequences of an accidental spill involving perc is pooling and evaporation of a TAC into the atmosphere. Inhalation of perc is the most significant route of exposure. Perc is easily absorbed from the lung following inhalation exposure. Acute (short-term) exposure to very high levels of perc in humans has caused death. Effects noted from acute, inhalation exposure include intense irritation of the upper respiratory tract and eyes, kidney dysfunction, and neurological effects, such as reversible mood and behavioral changes, impairment of coordination and anesthetic effects. Perc, however is not flammable and unless under unusual circumstances, such as being enclosed with extreme high heat, perc will not explode. In the case of a large spill, the MSDS instructs users to wear a National Institute for Occupational Safety and Health (NIOSH)-approved respirator and to ventilate the area. Additional instructions include constructing a dike to retain the fluid and not flushing it to a sewer or waterway (SCAQMD, 2002).

The hydrocarbons, including substituted aliphatic glycol ethers, synthetic aliphatic hydrocarbon, and decamethylcyclopentasiloxane are flammable and, thus, could be a potential hazard if in contact with a flame. "Combustible" is listed as a special firefighting procedure but all standard firefighting media is recommended for extinguishing fires from these substances. The handling of a hydrocarbon spill is not substantially different from the cleanup of a perc spill except to remove sources of ignition. A respirator is also recommended during a spill cleanup and the material is to be placed in a container for disposal. CO2 is also not flammable and if released, will dissipate rapidly and harmlessly into the atmosphere (SCAQMD, 2002). As a result of existing accidental response procedures, potential adverse hazard impacts from transporting alternative dry cleaning solvents are not anticipated.

PROJECT SPECIFIC MITIGATION MEASURES: None required.

<u>Other Hazard Impacts</u>

The following discussion of "Other Hazard Impacts" discusses additional topics on the CEQA Environmental Checklist, and some of these topics are not applicable to the Air Toxic NSR Rule. Government Code §65962.5 typically refers to a list of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits. Most facilities affected by the proposed project rules are not expected to be on this list and would not typically be expected to generate large quantities of hazardous materials. For any facilities affected by the proposed rule that are on the list, it is anticipated that they would continue to manage any and all hazardous materials in accordance with federal, state and local regulations.

The proposed rule will not adversely affect any airport land use plan or result in any safety hazard for people residing or working in the District. U.S. Department of Transportation – Federal Aviation Administration Advisory Circular AC 70/7460-2K provides information regarding the types of projects that may affect navigable airspace. Projects that involve construction or alteration of structures greater than 200 feet above ground level within a specified distance from the nearest runway; objects within 20,000 feet of an airport or seaplane base with at least one runway more than 3,200 feet in length and the object would exceed a slope of 100:1 horizontally (100 feet horizontally for each one foot vertically from the nearest point of the runway; etc.), may adversely affect navigable airspace. The proposed Air Toxic NSR rules are not expected to require construction of tall structures near airports so potential impacts to airport land use plans or safety hazards to people residing or working in the vicinity of local airports are not anticipated. This potential impact is not considered to be significant.

The proposed rules will not impair implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan. Any existing commercial or industrial facilities affected by the proposed rules will typically have their own emergency response plans for their facilities already in place. Emergency response plans are typically prepared in coordination with the local city or county emergency plans to ensure the safety of not only the public, but the facility employees as well. Adopting the proposed Air Toxic NSR rules is not expected to interfere with any emergency response procedures or evacuation plans and, therefore, is not considered to be significant.

The proposed Air Toxic NSR rules would typically affect existing urbanized, commercial or industrial facilities in appropriately zoned areas. Since urbanized, commercial and industrial areas are not typically located near wildland or forested areas, implementing the proposed rule is not expected to increase the risk of wildland fires. This impact is considered less than significant.

3.8.4 MITIGATION MEASURES

No significant adverse hazard impacts are expected so no mitigation measures are required.

3.8.5 CUMULATIVE IMPACTS

The preceding analysis concluded no additional construction activities are anticipated beyond what would be expected when new projects are being constructed. New dry cleaners or dry cleaning facilities that replace equipment may require different equipment under the proposed rules but the proposed rules are not expected to require additional construction activities. Consequently, no cumulative construction air quality impacts are anticipated from implementing the proposed Air Toxics NSR rules.

The Air Toxics NSR rules are expected to increase the use of air pollution control equipment and encourage alternatives to the use of perc in the dry cleaning industry. It is expected that the increased use of certain hazardous compounds (e.g., solvents) would generally be balanced by a decreased use of other hazardous and flammable materials (e.g., perc). Therefore, no significant cumulative impacts are identified.

The proposed Air Toxics Rules are not expected to create significant adverse toxic air contaminant impact to air quality, but rather will provide a toxic air quality benefit by reducing perc and other TAC emissions and the related health impacts associated with exposure to perc and other TACs.

There are no provisions of Air Toxic NSR Rules that result in either project-specific or cumulative hazard impacts. Since the proposed project is not expected to create significant adverse project-specific hazard impacts, the proposed project's contribution to significant adverse cumulative hazard impacts are less than cumulatively considerable (CEQA Guidelines §15130(a)(3)) and, therefore, are not significant.

3.8.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative hazard impacts are expected so no mitigation measures are required.

3.9 HYDROLOGY AND WATER QUALITY

3.9.1 ENVIRONMENTAL SETTING

3.9.1.1 Bays and Estuaries

The San Francisco Bay and the San Joaquin-Sacramento River Delta combine to form the West Coast's largest estuary, where fresh water from rivers and numerous smaller tributaries flows out through the Bay into the Pacific Ocean. The San Francisco Bay Estuary (Estuary) encompasses roughly 1,600 square miles, drains more than 40 percent of the state, provides drinking water to approximately two-thirds of California, and irrigates 4.5 million acres of farmland. The Estuary also enables residents of the Bay Area to pursue diverse activities including shipping, fishing, recreation, and commerce (SFEP, 2004). The Estuary is composed of three distinct hydrographic regimes: The South Bay extends from the Bay Bridge to the southern terminus of the Bay in San Jose, and the Central and North Bays connect the Delta and the Pacific Ocean.

The North Bay consists of several small bays, the two largest being San Pablo Bay and Suisun Bay. The bays are connected to each other and the ocean by deep, narrow channels ranging from 42 feet deep in San Pablo Bay to over 360 feet deep at the Golden Gate. San Pablo Bay is characterized by a deep channel surrounded by broad shoals. San Pablo Bay is connected to Suisun Bay by the narrow Carquinez Strait. Suisun Bay is a shallow basin consisting of braided channels and shallow shoals.

The Central Bay has a highly complex bathymetry. East of the Golden Gate, the depth is approximately 300 feet, where extensive intertidal mudflats are present at the eastern edge of the Central Bay. In addition, several islands are located within the Central Bay, including Treasure, Alcatraz, and Angel islands.

The South Bay is characterized by large areas of broad shallows incised by a main channel 30 to 65 feet deep. It has similar bathymetry to San Pablo and Suisun Bays. A relatively deep channel extends along the western side of the South Bay, surrounded by broad mudflats.

Beneficial uses of the Bay include agricultural supply, fish spawning, and wildlife habitat, commercial and sport fishing, estuarine habitat, fresh water replenishment, ground water recharge, industrial water supply, fish migration, municipal and domestic water supply, navigation, industrial process water supply, preservation of rare and endangered species, contact and non-contact water recreation, and shellfish harvesting, (RWQCB, 1995).

3.9.1.2 Water Quality

The region discharges an estimated 5,000 to 40,000 metric tons of at least 65 pollutants into the Estuary each year. These pollutants come from industry, commerce, transportation, agriculture, household maintenance and other activities. The 200 sewage plants and industries that discharge wastewater directly into the Estuary via a specific pipe or drain are known as point sources of pollution. Pollutants also reach the Estuary from "non-point" sources that include urban and agricultural runoff, spills, atmospheric fallout, dredging, landfill seepage, natural erosion, and decay processes (SFEP, 2004).

The overall goals of water quality regulation according to the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) are to protect and maintain thriving aquatic ecosystems and the resources those systems provide to society, and to accomplish these goals in an economically and socially sound manner (RWQCB, 1995).

The San Francisco Estuary Institute (SFES) had administered a Regional Monitoring Program for the Regional Water Quality Control Board (RWQCB) and major wastewater dischargers into the Bay since 1993. Most dischargers to the Bay are required to participate as a condition of their discharge permit. SFEI conducts monitoring three times a year along the central line of the Bay from the Delta to the South Bay. The Regional Monitoring Program measures concentrations of trace constituents in water, sediment, and transplanted bivalves at various locations in the Estuary.

The Regional Monitoring Program monitors conventional water quality (such as salinity, dissolved oxygen, and temperature) and chemistry (such as metals and pesticides), water toxicity (effects on laboratory organisms), sediment characteristics and chemistry, sediment toxicity (effects on laboratory organisms), and contaminant bioaccumulation in shellfish.

Based on water quality analyses, the level of contamination in the Estuary is high enough to impair the health of the ecosystem. The Estuary is described as moderately impaired. Indications of impairment include the toxicity of the water and sediment samples; the frequent presence of contaminant concentrations exceeding water, sediment and fish guidelines; and altered communities of sediment dwelling organisms. Overall, sites in the lower South Bay, the Petaluma River mouth, and San Pablo Bay are more contaminated than other sites. Contamination in the Central Bay is lower primarily due to mixing with relatively clean ocean water. Of all the contaminants measured by the Bay's RMP, results suggest that those of greatest concern are mercury, polychlorinated biphenyls (PCBs), and diazinon, and chlorpyrifos (two pesticides). Also of concern are copper, nickel, zinc, DDT, chlordane, dieldrin, dioxins, polyaromatic hydrocarbons (PAHs) and selenium (SFEI, 2004).

3.9.1.3 Drainage and Runoff

Stormwater pollution occurs when rain comes into contact with materials and picks up and washes contaminants into storm drains, creeks or the Bay. Common sources of pollution include equipment and vehicles that may leak oil, grease, hydraulic fluid or fuel, construction materials and products, waste materials, landscaping runoff containing fertilizers, pesticides or weed killers, and erosion of disturbed soil. Stormwater discharges associated with industrial and construction activities are regulated according to California Code of Regulations Section 402(p) under the National Pollutant Discharge Elimination System (NPDES) permitting system.

Typical pollution control measures include Best Management Practices (BMPs) that are designed to reduce quantities of materials used that may produce pollutants, change the way various products are handled or stored, employ various structural devices to catch and restrict the release of pollutants from the site, and set out appropriate responses to spills and leaks. Examples of BMPs include: temporary silt fences; protection devices such as rock aprons at pipe outlets; stabilized pads or aggregate at points where construction site leads to or from a public street; temporary drain inlet protection devices such as filter fabric and sand bags; concrete washouts for cement mixers; preservation of existing vegetation; vehicle and equipment cleaning, etc. Site-specific BMPs are described in a stormwater pollution prevention plan (SWPPP).

SWPPPs are designed to identify and evaluate sources of pollutants associated with industrial and construction activities that may effect the quality of stormwater discharges and authorized non-stormwater discharges from a facility; and to identify and implement site-specific BMPs to reduce or prevent pollutants associated with industrial or construction activities in stormwater discharges or authorized non-stormwater discharges.

3.9.1.4 Floodplain Risk

Some areas of the Bay along the shoreline and drainages leading to the Bay are potential floodplains. Risk associated with building in a floodplain include threats to life and property. The level of risk is determined by the nature of the facility, its location and appropriate mitigation measures. Local city or county government agencies regulate floodplain construction, management, and mitigation through land use controls, based on determinations of flood elevations.

3.9.1.5 Groundwater

Groundwater is subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated. Where groundwater occurs in a saturated geologic unit that contains sufficient permeable thickness to yield significant quantities of water to wells and springs, it is called an aquifer. A groundwater basin is a hydrogeologic unit containing one large aquifer or several connected and interrelated aquifers. There are three basins beneath the greater San Francisco Bay Area: The San Francisco, Santa Clara, and San Pablo Basins. The San Francisco Basin extends north from the

Dumbarton Bridge to the shoreline south of Richmond and the San Pablo Basin extends north of the San Francisco Basin. The Santa Clara Basin is located south of the San Francisco Basin. The San Francisco and Santa Clara Basins have a similar stratigraphic and tectonic development, while the San Pablo Basin appears to have had a different history. Bedrock appears to be the primary boundary between the San Francisco and San Pablo Basin. The Hayward Fault appears to form a groundwater barrier along portions of the basins (Norfleet Consultants, 1998).

Saltwater intrusion occurred in upper aquifers between Alameda and Niles Cone in the Santa Clara Basin between the mid 1920's and late 1940's. A combination of drought and overpumping caused groundwater levels to fall below sea level in about 1924. When this occurred, there was widespread saltwater intrusion through the young bay mud into the upper aquifer and eventually into the deeper aquifers. Evaluation for the intrusion revealed that there were no natural direct pathways to the deeper aquifers. Intrusion occurred via abandoned wells and reverse hydrostatic head from high pumping rates (Norfleet Consultants, 1998).

The Department of Water Resources (DWR) has identified 31 individual ground water basins in the San Francisco Bay Region that were or could serve as sources of high quality drinking water. Maintaining the high quality of groundwater is the primary objective of the RWQCB, which defines the lowest concentration limit required for groundwater protection. The RWQCB also has water quality limits for bacterial, chemical constituents, radioactivity, taste and odor. Maximum Contaminant Levels (MCLs) and Secondary Maximum Contaminant Levels (SMCLs), have also been implemented to protect the beneficial uses of municipal and domestic drinking water sources (RWQCB, 1995).

3.9.2 SIGNIFICANCE CRITERIA

Potential impacts on water resources will be considered significant if any of the following criteria apply:

> The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
>
> The project will cause the degradation of surface water substantially affecting current or future uses.
>
> The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
>
> The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
>
> The project results in alterations to the course or flow of floodwaters or places structures within a 100-year flood zone.

3.9.3 ENVIRONMENTAL IMPACTS

3.9.3.1 Water Quality Impacts

Implementation of the proposed Air Toxics NSR Rules could impact water quality. Perc is the most common solvent currently used in dry cleaners. The proposed new rules would likely result in less use of perc. Although perc is not readily miscible in water, a small amount of perc does dissolve into water. Drycleaners are not supposed to dispose of their separator water by pouring it into a sanitary sewer. Water used to wash dry cleaning equipment might become contaminated with perc and be disposed to the sanitation system. The local sanitation authorities test for perc in wastewater and dry cleaning represents the largest industrial user of perc. It is assumed that some perc in wastewater comes from dry cleaners.

The Air Toxic NSR Rules will likely result in a reduction in the use of perc at dry cleaning facilities. Reducing the use of perc would also remove it as a source of water contamination, providing some water quality benefits through eliminating or reducing the amount of perc used at dry cleaning facilities. Perc would be replaced by alternative dry cleaning technologies, some of which have little or no water quality impacts, i.e., wet cleaning and CO2. In general, the alternative hydrocarbon solvents are less toxic than perc.

3.9.3.2 Stormwater/Flood Zone Impacts

The proposed Air Toxics Rules would primarily impact existing commercial and industrial stationary sources. Any flooding, seiche, tsunami, 100-year flood, or mudflow risks would be associated with the existing situation. The proposed project could result in modified facilities, e.g., alternatives to perc use or additional control equipment at commercial/industrial areas. The proposed project would not alter the location of these facilities and would not exacerbate any of these potential hazards.

3.9.3.3 Potential Impacts Associated with Ground Water Depletion

The potential increase in water demand is less than significant as discussed in Section 3.17 herein.

3.9.4 MITIGATION MEASURES

No significant adverse hydrology and water impacts are expected so no mitigation measures are required.

3.9.5 CUMULATIVE IMPACTS

Wastewater generated as a result of implementing the Air Toxics NSR rules are expected to be beneficial by reducing the use of perc and the potential water quality impacts.

Implementation of other control measures will have only minor incremental impacts on water quality compared to impacts due to population growth and is not considered significant. There may be significant cumulative impacts on hydrology and water quality due to increases in population associated with increased population (e.g., increased water demand, increased wastewater discharged, etc.). However, these cumulative impacts are not related to the District rules and regulations. No other cumulative impacts have been identified.

3.9.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative hydrology and water impacts are expected so no mitigation measures are required.

3.10 LAND USE AND PLANNING

3.10.1 ENVIRONMENTAL SETTING

The San Francisco Bay Area has grown from the sparsely populated Native American and Spanish settlements of the past, to an urban area of nearly seven million people today. The pattern of land use in the Bay Area runs from one of the most densely populated urban centers in the United States (the City of San Francisco), to open hills and shorelines, and from growing suburban areas, to still-viable farming areas.

Since the mid 1940's, the San Francisco Bay Area has grown from a primarily agricultural region with one major city (San Francisco), to the fourth most populous metropolitan region in the United States with multiple centers of employment, residential development, and peripheral agricultural areas. The pattern of land uses in the Bay Area includes a mix of open space, agriculture, intensely developed urban centers, a variety of suburban employment and residential areas, and scattered older towns. This pattern reflects the landforms that physically define the region, the Bay, rivers, and valleys. Major urban areas are centered around the Bay, with the older centers close to the Golden Gate. Newer urban areas are found in Santa Clara County to the south, the valleys of eastern Contra Costa and Alameda Counties, and Sonoma and Solano Counties to the north.

The Pacific coast and the northern valleys are primarily in agricultural and open space use, while the agricultural areas adjoining the Central Valley have seen substantial suburban development in recent years, particularly in Solano County and western Contra Costa County.

Land uses vary greatly within the Bay Area and include commercial, industrial, residential, agricultural, and open space uses. The amount of land developed in each of the nine counties varies from a low of four percent in Napa County to a high of 81 percent in San Francisco. The Bay Area includes 98 cities. Residential uses continue to consume the greatest amount of urban land, approximately 70 percent. With respect to residential densities, after San Francisco, the Berkeley/Albany, Daly City/San Bruno, and Sunnyvale/Mountain View areas have the highest densities, while Healdsburg/Cloverdale, Santa Rosa/Sebastopol, and San Ramon/Danville have the lowest. Most of the Bay Area's population and economy is situated along the perimeter of San Francisco Bay (the Bay), in the older, larger cities such as San Francisco, Oakland, and San Jose. However, the majority of new residential and commercial land use development is occurring in the peripheral cities located in the valleys surrounding the Bay, such as Santa Rosa, Fairfield, and Livermore.

The percent of developed land is forecast to increase by 115,000 acres between 2000 and 2020, an increase of 17 percent. This regional development will result in just over 18 percent of all Bay Area land being developed by 2020.

3.10.2 SIGNIFICANCE CRITERIA

Land use and planning impacts will be considered significant if the proposed project conflicts with the land use and zoning designations established by the local jurisdiction (e.g., City or County).

3.10.3 ENVIRONMENTAL IMPACTS

The proposed Air Toxic NSR Rules generally are expected to impose control requirements on stationary sources at existing commercial or institutional facilities. As a result, the proposed Air Toxic NSR Rules do not require construction of structures for new land uses in any areas of the District and, therefore, is not expected to create divisions in any existing communities or conflict with any applicable habitat conservation or natural community conservation plan.

There are existing links between population growth, land development, housing, traffic and air quality. The MTC as the regional transportation planning agency accounts for these links when designing ways to improve air quality, transportation systems, land use, compatibility and housing opportunities in the region. Any facilities affected by the proposed Air Toxic NSR Rules would still be expected to comply with, and not interfere with, any applicable land use plans, zoning ordinances, habitat conservation or natural community conservation plans.

Land use and other planning considerations are determined by local governments. Nevertheless, some potential control measures encourage local governments to favorably consider mixed-use development, in-fill development, jobs/housing balance, and limits on suburban growth.

3.10.4 MITIGATION MEASURES

No significant adverse land use and planning impacts have been identified so no mitigation measures are required.

3.10.5 CUMULATIVE IMPACTS

The forecast development of residential and employment land uses in the Bay Area over the next 25 years would result in significant expansion of urban areas and significant changes in land use and the character of neighborhoods in the Bay Area. The Air Toxics NSR rules and other air quality plans and control measures have been developed, in part, to develop a strategy for attaining and maintaining compliance with ambient air quality standards in spite of this development. While general population growth may impact land use and planning, the District responds to proposed growth by developing control strategies to attain and maintain ambient air quality in spite of substantial population growth.

While the BAAQMD has no land use authority and cannot directly affect the pattern that future land uses will take, it can continue to participate and promote efforts to coordinate regional smart growth efforts to use land more efficiently, optimize transportation and preserve open space. Therefore, no significant cumulative impacts on land use and planning related to the Air Toxics NSR rules are expected.

3.10.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative land use impacts were identified so no mitigation measures are required.

3.11 MINERAL RESOURCES

3.11.1 ENVIRONMENTAL 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 so that land uses and the affected environment vary greatly throughout the area. The facilities affected by the proposed control measures are expected to be located in the urban portions within the Bay Area.

3.11.2 SIGNIFICANCE CRITERIA

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

> The project 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.
>
> The proposed project results 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.

3.11.3 ENVIRONMENTAL IMPACTS

There are no provisions of the proposed rule which would directly result in the loss of availability of a known mineral resource 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 Air Toxic NSR Rules are not expected to deplete non-renewable mineral resources, such as aggregate materials, metal ores, etc., at an accelerated rate or in a wasteful manner because BAAQMD rules and regulations are typically not mineral resource intensive measures. While mineral resources will need to be evaluated as each rule is promulgated, significant adverse impacts to mineral resources are not expected due to the Air Toxic NSR Rule.

3.11.4 MITIGATION MEASURES

No significant adverse mineral resource impacts have been identified so no mitigation measures are required.

3.11.5 CUMULATIVE IMPACTS

The proposed Air Toxics NSR rules and other air quality plans, rules and regulations, are not expected to impact mineral resources. Further, these air quality plans, rules and regulations are not expected to deplete mineral resources on a cumulative basis. Therefore, no significant cumulative impacts on mineral resources are expected.

3.11.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative mineral resources impacts were identified so no mitigation measures are required.

3.12 NOISE

3.12.1 ENVIRONMENTAL SETTING

Noise is defined as unwanted sound. The range of sound pressure perceived as sound is extremely large. The decibel is the preferred unit for measuring sound since it accounts for these variations using a relative scale adjusted to the human range for hearing (referred to as the A-weighted decibel or dBA). The A-weighted decibel is a method of sound measurement which assigns weighted values to selected frequency bands in an attempt to reflect how the human ear responds to sound. The range of human hearing is from 0 dBA (the threshold of hearing) to about 140 dBA which is the threshold for pain. Principal Bay Area noise sources are airports, freeways, arterial roadways, port facilities, and railroads. Additional noise generators included industrial manufacturing plants and construction sites. Local collector streets are not considered to be a significant source of noise since traffic volume and speed are generally much lower than for freeways and arterial roadways.

Vehicle traffic background noise levels vary throughout the day based on the average density of noise sources in a given area. Traffic noise at a particular location depends upon the traffic volume on the roadway, the average vehicle speed, distance between the receptor and the roadway, the presence of intervening barriers between source and receiver, and the ratio of trucks (particularly heavy trucks) and buses to automobiles.

A number of factors control how traffic noise levels affect nearby sensitive land uses. These include roadway elevation compared to grade; structures or terrain intervening between the roadway and the sensitive receptors; and the distance between the roadway and receptors. Caltrans or other sponsors for freeway projects conduct detailed noise studies for the environmental documents when these projects are ready for implementation.

The Bay Area has a large number of freeways and arterial roadways. Typical arterial roadways have one or two lanes of traffic in each direction, with some containing as many as four lanes in each direction. Noise from these sources can be a significant environmental concern where buffers (e.g., sound walls, buildings, landscaping, etc.) are inadequate or where the distance from centerline to sensitive uses is relatively small.

The two basic types of railroad operations are freight trains, and passenger rail operations, the latter consisting of commuter and intercity passenger trains and steel-wheeled urban rail transit. Generally, freight operations occur at all hours of the day and night, while passenger rail operations are concentrated within the daytime and evening periods.

Trains can generate high, relatively brief, intermittent noise events. Train noise is an environmental concern for sensitive uses located along rail lines and in the vicinities of switching yards. Locomotive engines and the interaction of steel wheels and rails generate primary rail noise. The latter source creates three types of noise: (1) rolling noise due to continuous rolling contact; (2) impact noise when a wheel encounters a rail joint, turn out or crossover; and (3) squeal generated by friction of tight curves. For very high-speed rail vehicles, air turbulence can be a significant noise source (MTC, 2001).

Construction can be another significant, although typically short-term source of noise. Construction is most significant when it takes place near sensitive land uses (e.g., schools and hospitals), occurs at night, or in early morning hours. Local governments typically regulate noise associated with construction equipment and activities through enforcement of noise ordinance standards, implementation of general plan policies, and imposition of conditions of approval for building or grading permits.

The principle noise sources in an industrial area are impact, friction, vibration, and air turbulence from air and gas streams. Process equipment, heaters, cooling towers, pumps and compressors, contribute to noise emitted from industrial facilities. Elevated noise sources are not attenuated as quickly as ground sources due to the lack of interference from fences, structures, buildings, etc.

3.12.2 SIGNIFICANCE CRITERIA

Impacts on noise will be considered significant if:

> Construction noise levels exceed the local noise ordinance or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
>
> The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

3.12.3 ENVIRONMENTAL IMPACTS

The proposed rules may require existing commercial or industrial owners/operators of affected facilities to install air pollution control equipment or modify their operations to reduce stationary source emissions. Potential modifications will occur at facilities typically located in appropriately zoned industrial or commercial areas. Ambient noise levels in commercial and industrial areas are typically driven primarily by freeway and/or highway traffic in the area and any heavy-duty equipment used for materials manufacturing or processing at nearby facilities. It is not expected that any modifications to install air pollution control equipment would substantially increase ambient operational noise levels in the area, either permanently or intermittently, or expose people to excessive noise levels that would be noticeable above and beyond existing ambient levels. It is not expected that affected facilities would exceed noise standards established in local general plans, noise elements, or noise ordinances currently in effect.

Dry cleaning equipment, like other industrial equipment, emits a certain level of noise, however the noise produced by the alternative non-perc technologies will not increase the ambient levels from the noise currently produced by the perc machines. The facilities with perc machines are subject to local noise ordinances whose requirements will not change when alternative non-perc technologies are installed. These facilities are expected to comply with noise standards and there is no evidence to conclude that these standards will be violated when alternative non-perc technologies are operated. Dry cleaning equipment is generally located inside of commercial buildings so no increase in noise would be expected from dry cleaning facilities.

It is also not anticipated that the proposed control measures will cause an increase in ground-borne vibration levels because air pollution control equipment is not typically vibration intensive equipment. Consequently, the Air Toxic NSR rules will not directly or indirectly cause substantial noise or excessive groundborne vibration impacts.

Affected facilities would still be expected to comply, and not interfere, with any applicable airport land use plans and disclose any excessive noise levels to affected residences and workers pursuant to existing rules, regulations and requirements. It is assumed that operations in these areas are subject to, and in compliance with, existing community noise ordinances and applicable OSHA or Cal/OSHA workplace noise reduction requirements. In addition to noise generated by current operations, noise sources in each area may include nearby freeways, truck traffic to adjacent businesses, and operational noise from adjacent businesses. There are no components of the proposed rules that would substantially increase ambient noise levels from stationary sources, either intermittently or permanently.

<u>Miscellaneous Noise Impacts</u>

The CEQA environmental checklist includes a discussion of impacts on airports and airport land use plans so a discussion of those impacts are included in this section for completeness. Some Air Toxic NSR rules could apply to facilities within an airport land use plan or within two miles of a public airport or private airstrip. Affected facilities would be expected to comply, and not interfere, with any applicable airport land use plans and disclose any excessive noise levels to affected residences and workers pursuant to existing rules, regulations and requirements, such as CEQA. It is assumed that operations in these areas are subject to and in compliance with existing community noise ordinances and applicable OSHA or Cal/OSHA workplace noise reduction requirements. In addition to noise generated by current operations, noise sources in each area may include nearby freeways, truck traffic to adjacent businesses, and operational noise from adjacent businesses. There are no components of the proposed Air Toxic NSR rules that would substantially increase ambient noise levels, either intermittently or permanently so that no significant impacts would be expected.

3.12.4 MITIGATION MEASURES

No significant adverse noise impacts have been identified, therefore, no mitigation measures.

3.12.5 CUMULATIVE IMPACTS

The control equipment that may be required due to the Air Toxic NSR rules and other related air quality plans and rules are responding to population growth. The growth in traffic throughout the Bay Area could produce unquantifiable cumulative noise impacts that would increase noise but may not reach thresholds for perceptible increases. The cumulative increase in noise related to traffic is a factor of population growth, where as the Air Toxic NSR rules are responding to the population growth in an attempt to attain and maintain ambient air quality standards. Therefore, the cumulative impact of the proposed project and other related projects are not expected to result in significant adverse noise impacts.

3.12.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative noise impacts were identified so no mitigation measures are required.

3.13 POPULATION AND HOUSING

3.13.1 ENVIRONMENTAL SETTING

The Bay Area's population has increased by 90 percent over the previous 40 years, while jobs have increased 200 percent. Looking ahead to the next 25 years, the Association of Bay Area Governments (ABAG) projects that the Bay Area's population will grow another 18.5 percent (1.3 million more residents) and employment will increase by another 33 percent (1.2 million additional jobs).

During the past 40 years, the locations of people and jobs have become much more dispersed as new urban centers have formed and cities have gained population on the edge of the region. This shift in growth patterns is illustrated in Table 3.13-1. Santa Clara County is now the most populous county in Bay Area, and is home to about 25 percent of the region's residents. The county's largest city, San Jose, is also the largest city in the Bay Area with a population of 895,000. Currently, there are 12 cities in the Bay Area with more than 100,000 residents (MTC, 2001).

TABLE 3.13-1

Population Growth in the Bay Area (1980 – 2025)

COUNTY	1980	2000	2025	Growth: 1980 - 2000	Growth: 2000 - 2025
Alameda	1,105,379	1,462,695	1,701,599	357,316	238,904
Contra Costa	656,380	941,900	1,213,899	285,520	271,999
Marin	222,568	250,402	278,401	27,834	27,999
Napa	99,199	127,600	165,601	28,401	38,001
San Francisco	678,984	799,009	804,804	120,035	5,795
San Mateo	587,329	737,095	823,901	149,766	89,806
Santa Clara	1,295,071	1,755,333	2,062,906	460,262	307,573
Solano	235,203	401,300	581,400	166,097	180,100
Sonoma	299,681	455,305	591,597	155,624	136,292
Region	**5,179,784**	**6,930,639**	**8,224,108**	**1,750,855**	**1,293,469**

Source: Metropolitan Transportation Commission, 2001.

3.13.2 SIGNIFICANCE CRITERIA

The impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

> The demand for temporary or permanent housing exceeds the existing supply.
>
> The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

3.13.3 ENVIRONMENTAL IMPACTS

The proposed Air Toxic NSR rules will generally affect existing commercial or industrial facilities located in predominantly industrial or commercial urbanized areas throughout the District. It is expected that the existing labor pool within the Bay Area would accommodate the labor requirements for any modifications at affected facilities. In addition, it is not expected that affected facilities will be required to hire additional personnel to operate and maintain new control equipment on site because air pollution control equipment is typically not labor intensive equipment. In the event that new employees are hired, it is expected that the existing local labor pool in the District can accommodate any increase in demand for workers that might occur as a result of adopting the proposed Air Toxic NSR rules. As such, adopting the proposed Air Toxic NSR rules is not expected to result in changes in population densities or induce significant growth in population.

Although wet cleaning operations require more labor because of resizing, and finishing requirements, it is not expected that the increase in the number of employees at these facilities would be significant enough to result in the creation of any new industries that would affect population growth, or directly or indirectly induce the construction of single- or multiple-family units. For example, even if every dry cleaner in the district required two additional employees (2 x 675) to operate wet cleaning equipment, this would only be 1,350 new employees. Such a small number could be easily accommodated by the existing labor pool in the district. Therefore, implementation of the proposed Air Toxic NSR rules are not growth inducing so no new housing would be required. Further, dry cleaners are dispersed throughout the district, so the creation of a few new positions per facility would not require relocation of the population or housing.

Because of the region's available workforce, history of mobility and existing patterns whereby individuals do not typically live close to their workplaces, any demand for new employees can be accommodated from the local region so no substantial population displacement is expected. Therefore, construction of replacement housing elsewhere in the District is not anticipated.

3.13.4 MITIGATION MEASURES

No significant impacts to population and housing are expected so no mitigation measures are required.

3.13.5 CUMULATIVE IMPACTS

Some of the District's rules and air quality control measures are largely in response to population growth in order to attain and maintain ambient air quality standards despite of the existing population and anticipated population of the area. To the extent that improved air quality attracts population growth to the area the air quality rules could have an impact on population growth. However, air quality regulations themselves are not expected to provide housing or jobs that would attract more population to the area. Therefore, the cumulative impacts on population and housing are considered less than significant.

3.13.6 CUMULATIVE MITIGATION MEASURES

No significant cumulative impacts on population and housing were identified so no mitigation measures are required.

3.14 PUBLIC SERVICES

3.14.1 ENVIRONMENTAL SETTING

Given the large area covered by the BAAQMD that includes all or parts of nine counties, 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.

3.14.2 SIGNIFICANCE CRITERIA

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

3.14.3 ENVIRONMENTAL IMPACTS

Some of the potential alternative non-perc technologies are more flammable than perc. The possibility of increased fire protection may result due to storing these materials, although fire codes apply. 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. While the potential demand for the fire department could increase if dry cleaning facilities transition to hydrocarbon alternatives and are not careful with the handling and maintenance of the hydrocarbon product, the impact to fire department resources is not anticipated to be significant. The comprehensive emergency response currently available to serve the cities in the district, coupled with the strict design standards of equipment, and the fact that the dry cleaning facilities are located throughout the district reducing impact on an individual local fire department, should ensure potential impacts are not significant.

There is no potential for significant adverse public service impacts as a result of adopting the proposed Air Toxic NSR Rule. The proposed project would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives. No additional need for fire or police services would be expected. New hydrocarbon dry cleaning machines may require permits and inspection from the local fire authority. However, most existing perc dry cleaning facilities require permits and inspection from the local fire authority. The proposed project would not increase the need for fire services. No additional need for fire or police services would be expected.

Adopting the proposed Air Toxic NSR rules would not induce population growth or alter the distribution of existing population. Thus, implementing the Air Toxic NSR rules would not increase or otherwise alter the demand for schools and parks in the District. No significant adverse impacts to schools or parks are foreseen as a result of adopting the proposed Air Toxic NSR rules.

Based upon the above information, adopting the proposed Air Toxic NSR rules is not expected to create significant adverse public service impacts.

3.14.4 MITIGATION MEASURES

No significant adverse impacts to public services are expected so no mitigation measures are required.

3.14.5 CUMULATIVE IMPACTS

There are no provisions of Air Toxic NSR Rules that result in either project-specific or cumulative public services impacts. Since the proposed project is not expected to create significant adverse project-specific public services impacts, the proposed project's contribution to significant adverse cumulative public services impacts are less than cumulatively considerable (CEQA Guidelines §15130(a)(3)) and, therefore, are not significant.

3.15.6 CUMULATIVE MITIGATION MEASURES

No significant cumulative adverse impacts to public services are expected so no mitigation measures are required.

3.15 RECREATION

3.15.1 ENVIRONMENTAL SETTING

The BAAQMD includes 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. Numerous recreational opportunities are available throughout the Bay Area. The facilities affected by the proposed rule are expected to be located in urban centers within the Bay Area. Public recreational land uses are located throughout the Bay Area, but generally not within the confines of the commercial and industrial areas.

3.15.2 SIGNIFICANCE CRITERIA

The impacts to recreation will be considered significant if:

> The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
>
> The project adversely affects existing recreational opportunities.

3.15.3 ENVIRONMENTAL IMPACTS

As discussed under "Land Use and Planning" above, there are no provisions in the proposed rule which would affect land use plans, policies, ordinances, or regulations. Land use and other planning considerations are determined by local governments. No land use or planning requirements, including those related to recreational facilities, will be altered by the proposed project. The proposed rule does not have the potential to directly or indirectly induce population growth or redistribution. As a result, the proposed rule would not increase the use of, or demand for existing neighborhood and/or 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. As a result, no significant adverse impacts on recreation are expected.

3.15.4 MITIGATION MEASURES

No significant adverse impacts to recreation are expected so no mitigation measures are required.

3.15.5 CUMULATIVE IMPACTS

No project specific impacts on recreational activities are expected. The potential for recreational activities associated with other air quality rules, regulations and plans are not expected since these measures usually do not result in land use changes and potential changes in recreations opportunities. Therefore, no significant cumulative impacts on recreational activities are expected.

3.15.6 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative impacts on recreation were identified so no mitigation measures are required.

3.16 TRANSPORTATION AND TRAFFIC

3.16.1 ENVIRONMENTAL SETTING

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 9,860 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. Bay Area residents make about 21 million person trips per day divided among the following transportation modes: 82.2 percent automobiles; 6.2 percent transit, 1.3 percent bike, and 10.3 percent walk (MTC, 2001).

Cars, buses, and commercial vehicles travel about 128 million miles a day (1998) on the Bay Area Freeways and local roads. Transit serves about 1.1 million riders on the average weekday (MTC, 2001).

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. 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.

Projected population and employment growth in the Bay Area will lead to further travel demand. Total person trips are projected to increase by 24 percent, or close to one percent per year on average, by 2025. This growth rate is higher than population growth, projected at 19 percent, but lower than the growth of employment (33 percent) (MTC, 2001).

There will also be substantial growth in trips from neighboring counties to the Bay Area as they increasingly supply homes for Bay Area workers, who are unable to find affordable housing in the nine counties. There are three major gateways with significant interregional trips: (1) San Joaquin Valley (Altamont Pass); Interstate 80 (Sacramento); and Route 17 (Santa Cruz). Emerging gateways into the Bay Area include U.S. Highway 101 South (San Benito and Monterey counties). In addition, Route 152 (San Joaquin County to Santa Clara County is a major commercial truck route from the San Joaquin Valley into the Bay Area, and Route 4 access the Central Valley as well.

The facilities affected by the proposed rule are expected to be located in the commercial and industrial areas within the Bay Area and are accessed via highways and local roadway systems.

3.16.2 SIGNIFICANCE CRITERIA

The impacts on transportation/traffic will be considered significant if any of the following criteria apply:

> Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to E or F for more than one month.
>
> An intersection's volume to capacity ratio increases by 0.02 (two percent) or more when the LOS is already E or F.
>
> A major roadway is closed to all through traffic, and no alternate route is available.
>
> There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
>
> The demand for parking facilities is substantially increased.
>
> Water borne, rail car or air traffic is substantially altered.
>
> Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

3.16.3 ENVIRONMENTAL IMPACTS

Wet cleaning operations at dry cleaning facilities may require additional employees. Please refer to the discussion under Section 3.13 "Population and Housing." Again, if two additional employees are required for each dry cleaning facility, and all dry cleaning facilities install wet cleaning equipment, 1,350 new employees would be needed.

Therefore, 1,350 new additional commute trips would be generated and spread throughout the district. This is not a substantial increase nor would it adversely affect the LOS at any one intersection. Further, less than 1,350 new trips would be generated because this assumes all existing perc is replaced with wet cleaners, which is not likely.

Miscellaneous Traffic/Transportation Issues

The CEQA environmental checklist includes a discussion of air traffic impacts, emergency access and the potential conflicts with adopted policies, plans and programs, so the following discussion is provided. Neither air traffic nor air traffic patterns are expected to be directly or indirectly affected by adopting the proposed Air Toxic NSR rules. Controlling emissions at existing commercial or industrial facilities do not require constructing any structures that could impede air traffic patterns in any way.

Controlling emissions at existing commercial or industrial facilities, are not expected to affect in any way emergency access routes at any affected commercial or industrial facilities. The reason for this conclusion is that the process of controlling emissions (from stationary sources in particular) is not expected to require construction of any structures that might obstruct emergency access routes at any affected facilities.

No significant parking impacts would be expected. Dry cleaning facilities may use alternative technologies. Even if the implementation of the proposed amended rule would require additional full-time employees, such as in the wet cleaning operations, inadequate parking capacity would not result. It is unlikely that the number of new employees per facility (e.g. two) would strain parking facilities.

The adoption and subsequent implementation of the Air Toxic NSR rules is expected to reduce toxic emissions throughout the Bay Area. As such, there are no provisions in the proposed amended rule that in any way conflict with adopted policies, plans, or programs supporting alternative transportation.

3.16.4 MITIGATION MEASURES

No significant adverse impacts on transportation and traffic were identified so no mitigation measures are required.

3.16.5 CUMULATIVE IMPACTS

There are no provisions of Air Toxic NSR Rules that result in either project-specific or cumulative transportation and traffic impacts. Since the proposed project is not expected to create significant adverse project-specific transportation and traffic impacts, the proposed project's contribution to significant adverse cumulative transportation impacts are less than cumulatively considerable (CEQA Guidelines §15130(a)(3)) and, therefore, are not significant.

3.16.5 CUMULATIVE MITIGATION MEASURES

No significant adverse cumulative impacts on transportation and traffic were identified so no mitigation measures are required.

3.17 UTILITIES AND SERVICE SYSTEMS

3.17.1 ENVIRONMENTAL 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. Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies.

3.17.1.1 Wastewater

Wastewater treatment is handled by many local wastewater treatment agencies. A discussion of some of the larger wastewater treatment agencies is provided below.

San Francisco Public Utilities Commission

The San Francisco Public Utilities Commission (PUC) is a department of the City and County of San Francisco that provides water, wastewater, and municipal power services to San Francisco. Under contractual agreement with 29 wholesale water agencies, the SFPUC supplies water to 1.6 million customers within three Bay Area counties. The SFPUC system provides four distinct services: Regional Water, Local Water, Clean Water (wastewater collection, treatment and disposal), and Power. The wastewater collection, treatment and disposal system consists of a combined sewer system (which collects both sewer and storm water), three water pollution control plants and effluent outfalls to the San Francisco Bay and Pacific Ocean. The combined sewer system reduces pollution in the San Francisco Bay and Pacific Ocean by treating urban runoff that would otherwise flow to the Bay and Ocean. The collection system consists of approximately 900 miles of underground pipes throughout the City (www.sfwater.org).

The San Francisco PUC treats and discharges approximately 84 million gallons per day of treated wastewater during dry weather to the San Francisco Bay and Pacific Ocean. During wet weather, with additional facilities and increased operations, the plants can treat approximately 465 million gallons of combined flows per day (www.sfwater.org).

Both sanitary wastewater and stormwater are fully combined in San Francisco's collection system. The City has developed a complex web of transport structures to facilitate the capture of storm water and minimize overflows to the receiving waters. The city has over 898 miles of combined sewers that serve the resident population of 800,000. There remains approximately 5% inflow from industrial sources (www.sfwater.org).

In 2004, the San Francisco PUC Wastewater Enterprise served 147,372 residential accounts with a discharge rate for the year of 20,575,000 Ccf. There are about 2,500 significant non-residential dischargers (commercial, industrial, governmental and other businesses) which accounted for 4,702,925 Ccf of discharge for the FY 2004. Minor dischargers (approximately 15,000 non-residential customers not considered to be significant dischargers) accounted for 5,304,454 Ccf. Total discharge for the area was 30,582,379 Ccf (SFPUC, 2005).

<u>East Bay Municipal Utility District</u>

The East Bay Municipal Utility District (East Bay MUD) is a publicly owned utility formed under the Municipal Utility District Act in 1921. The East Bay MUD wastewater system services approximately 640,000 people in an 83-square mile area of Alameda and Contra Costa counties along the Bay's east shore, extending from Richmond on the north, southward to San Leandro. The cities included in this service are Alameda, Albany, Berkeley, El Cerrito, Emeryville, Kensington, Oakland and Piedmont (EBMUD, 2005).

Service in the city of Oakland alone covers approximately 39 square miles and includes 4.5 million linear feet of pipe. Oakland sewer pipes range from 6 to 72 inches in diameter, with most lines predating 1938, and with some parts of the systems more than 100 years old. Most of the system is gravity-fed, with approximately five pumping stations. Some areas of Oakland do not have sewer service. These areas consist primarily of former military bases, cemeteries, large parks and some hillside areas. Over 90 percent of users of the wastewater system in Oakland are residential users (City of Oakland, 2002).

The East Bay MUD has six wastewater treatment plants that can filter and process more that 375 million gallons of water per day. The water treatment plants are Upper San Leandro in Oakland, San Pablo in Kensington, Sobrante in El Sobrante, and plants located in and named for Orinda, Lafayette and Walnut Creek (EBMUD, 2005).

Wastewater collected by the interceptors flows to East Bay MUD's wastewater treatment plant in Oakland near the entrance of the San Francisco-Oakland Bay Bridge. Primary treatment removes floating material, oils and greases, sand and silt and organic solids heavy enough to settle in water. Secondary treatment biologically removes most of the suspended and dissolved organic and chemical impurities that would rob life-giving oxygen from the waters of the Bay if allowed to decompose naturally. The treated effluent is then disinfected, dechlorinated and discharged one mile off the East Bay shore through a deep-water outfall into San Francisco Bay (EBMUD, 2005).

The East Bay MUD provides secondary treatment for a maximum flow of 168 million gallons per day. Primary treatment can be provided for up to 320 million gallons per day. Storage basins provide plant capacity for a short-term hydraulic peak of 415 million gallons per day. The average annual flow is currently 80 million gallons per day (EBMUD, 2005).

Union Sanitary District

The Union Sanitary District (USD) is an independent special district which provides wastewater collection, treatment and disposal services to the residents and businesses of the cities of Fremont, Newark and Union City in Southern Alameda County, covering 60.2 square miles. This includes 756 miles of pipelines which are generally located within public streets or easements used for District use. In January 2004, the population served by USD numbered 323,050. Residential customers account for approximately 73 percent of the sewer flow, commercial customers for approximately 12.5 percent of the flow and industrial customers the remaining 14.5 percent. The USD maintains 164 miles of sewer and treats an average dry weather flow of approximately 29 million gallons per day (USD,2005).

City of San Mateo

The City of San Mateo's Public Works Division is among other things, responsible for the maintenance and repair of 260 miles of sewers, 75 miles of storm drains, 23 sanitary sewer pump stations, 11 storm drainage system pump stations and a wastewater treatment plant that handles all sewage treatment and disposal of treated wastewater and sewage sludge for the cities of San Mateo, Foster City, Part of Hillsborough, the Highlands area of San Mateo County, and a portion of Belmont (about 130,000 people) (San Mateo, 2005).

The City of San Mateo's underground collection system is comprised of 260 miles of sanitary sewer lines and 75 miles of storm drains. Storm drains, or "outdoor storage", typically flows to the nearest creek or watercourse. Indoor waste drains are connected to a network of sewer lines that flow into a wastewater treatment plant. The sewage passes through a series of physical and biological processes which result in high quality effluent being discharged to the deep-water channel of the San Francisco Bay. The wastewater treatment plant has been in operation since 1935 and treats and average of 12.1 million gallons per day. An average of 7.5 dry tons of biosolids (sludge) are removed from the plant process each day (San Mateo, 2005).

Napa

The Napa Sanitation District Collection System Department (NSDCSD) provides wastewater collection and sewer line repair and maintenance services to more than 33,000 homeowner and business connections. The Collection System Department has 13 employees whose job is to ensure that 250 miles of underground pipeline (sewers), which vary in size from 4" to 66" in a 23 square mile area, are able to collect and transport wastewater to NSD's Soscol Water Recycling Facility. The Collection System Department also maintains over 33,143 sewer laterals and 5,651 manholes (NSDCSD, 2005).

3.17.1.2 Water Demand

In 1957, the Department of Water Resources (DWR) published Bulletin 3, the *California Water Plan* (CWP). Bulletin 3 was followed by the Bulletin 160 series, published six times between 1966 and 1993, which updated the CWP. A 1991 amendment to the CWP directed the DWR to update the plan every five years. Bulletin 160-98 is the latest in this series (DWR, 1998). This document is in the ~~Draft~~ *Final* stage, with finalization expected in the Fall of 2005. When possible, the Update 2004 data has been used in the write-up that follows. (www.waterplan.water.ca.gov/b160/workgroups/chapterreviewgroup.htm)

California's moisture originates in the Pacific Ocean. Average annual statewide precipitation is about 23 inches, amounting to a volume if nearly 200 million acre-feet (maf) over California's land surface. Approximately 65 percent of this precipitation is consumed through evaporation and plant transpiration, the remaining 35 percent comprises the State's average annual runoff of about 71 maf. Less than half this runoff is depleted by urban or agricultural use. Available surface water supply totals 78 maf when out-of-state supplies from the Colorado and Klamath Rivers are added. Groundwater supplies about 30 percent of California's urban and agricultural water use (DWR, 1998).

The DWR has divided the state into four districts. The area that includes the BAAQMD area is referred to as the Central District. The state of California is divided up into 10 hydrologic regions. The San Francisco Bay hydrologic region is a portion of the DWR's Central District. The San Francisco Bay region includes the counties of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and all of Solano and Sonoma Counties (www.water.ca.gov). The San Francisco Bay hydrologic region and the BAAQMD area are almost identical, except that the San Francisco Bay region includes the entire counties of Solano and Sonoma, whereas the BAAQMD area only covers portions of those two counties. The San Francisco Bay region is split into to areas, the North Bay and South Bay.

The region is highly urbanized, covers 4,506 square miles (2.8 percent of the state) and includes the San Francisco, Oakland and San Jose metropolitan areas. Average annual precipitation in the region is 25.4 inches. Total reservoir storage capacity is 746 thousand acre feet (taf). As of 2000, there were 71,000 acres of irrigated agriculture. Agricultural acreage is mostly in the north, with the predominate crop being grapes. In the south, more than half of the irrigated acres are in high-value specialty crops, such as artichokes or flowers (DWR, 2005). Table 3.17-1 shows the applied water uses for the San Francisco Hydrologic region.

TABLE 3.17-1

San Francisco Region Applied Water Uses for Water Years 1998, 2000, 2001 (thousand acre-feet)

Year	Urban	Irrigated Agriculture	Wild & Scenic Rivers	Instream Flow	Required Delta Outflow	Managed	Total
1998	991	92	0	23	0	6	1112
2000	1069	110	0	22	0	6	1207
2001	1110	120	0	20	0	6	1256

Source: DWR, 2005.

Table 3.17-2 shows the dedicated water supplies for the San Francisco Hydrologic region.

TABLE 3.17-2

San Francisco Region Dedicated Water Supplies for Water Years 1998, 2000, 2001 (thousand acre-feet)

Year	Local Projects	Colorado Project	Federal Projects	State Project	Ground Water	Dedicated Environ.	Reuse & Recycle	Total
1998	775	0	142	134	38	0	22	1111
2000	747	0	143	155	139	0	22	1206
2001	746	0	147	121	220	0	22	1256

Source: DWR, 2005.

Both the North and South Bay areas are continually working to manage the water supply to the San Francisco Bay hydrologic region. Local agencies are investigating all available options to continue to meet projected water needs. These options include desalination plants, water rights agreements, limitations on future water developments, developing water supply master plans, groundwater banking, water recycling, water transfers, and conservation (DWR, 1998).

North Bay

Municipal and industrial water use will continue to grow as the population in the North Bay grows. The fastest growing communities have been the municipalities in southwestern Solano County. Rapid growth has also been seen in the larger communities of Sonoma and Napa counties. Growth in Marin County has been slow, initially because of a water connection moratorium administered in the 1970's by the Marin Municipal Water District (MWD), and more recently because of the lack of land available for development. A second moratorium was imposed during the 1987-92 drought. It was lifted in 1993 with the adoption of an integrated water supply program and the signing of a new Russian River water supply contract (DWR, 1998).

There are four major water suppliers within the North Bay (see Table 3.17-3 below): The Sonoma County Water Agency (WA), the Marin MWD, the Napa County Flood Control and Water Conservation District and the Solano County WA. The Sonoma County WA, which wholesales water throughout Sonoma and Marin Counties, is forecasting no water shortages through 2020, and is not looking at water supply reliability enhancement options (DWR, 1998).

TABLE 3.17-3

Major North Bay Water Suppliers

Agency	Primary Source of Supply
Sonoma County WA	Russian River Project
Marin MWD	Local surface and Sonoma County WA contract
Napa County FC & WCD	Local surface and SWP
Solano County WA	Solano Project and SWP

Source: DWR, 1998.

The Marin MWD has negotiated a supplemental water supply contract with Sonoma County WA for 10 taf and now expects to have a more reliable supply as it develops infrastructures to import additional Russian River water (DWR, 1998).

The Napa County Flood control and Water Conservation District (FC&WCD) has a contract for State Water Plan (SWP) with a maximum entitlement of 25 taf per year. The City and County of Napa are examining water supply enhancement options to ensure future supply reliability (DWR, 1998).

The Solano County WA anticipates a water supply deficiency as municipalities in the western part of the county urbanize rapidly without developing additional water supply sources. Solano County WA's 1995 SWP supply was about 21 taf. The agency's annual SWP entitlement is 42 taf. Benicia is the most vulnerable of the agency's service areas to drought year shortages. Vallejo has its own supply from the Delta, which is now conveyed through North Bay Aqueduct facilities (DWR, 1998).

<u>South Bay</u>

The South Bay is highly urbanized – about 16 percent of the State's population lives in two percent of the State's land area. A minor portion of South Bay water use is for agriculture. The South Bay has six major water suppliers (see Table 3.17-4). Those areas not served by the listed suppliers get their water from groundwater and from small locally developed surface supplies. Small independent water systems, such as those along the San Mateo coast, also suffer water supply reliability problems during droughts.

Theses systems often rely on a single source, such as groundwater, and do not have connections to the larger systems in the Bay Area. Alameda County Water District (WD), Zone 7 Water Agency, and Santa Clara Valley Water District recharge and store local and imported surface water in local groundwater basins. Each of the major water agencies supplies several municipalities or water retailers serving the South Bay (DWR, 1998).

TABLE 3.17-4

Major South Bay Water Suppliers

Agency	Primary Source of Supply
San Francisco PUC	Hetch Hetchy Project and local surface
Santa Clara Valley WD	Local surface, groundwater, CVP, and SWP
Alameda County WD	Local surface, groundwater, SWP and Hetch Hetchy Project
Zone 7 WA	Local surface, groundwater, and SWP
East Bay MUD	Mokelumne River project and local surface
Contra Costa WD	CVP and local surface

Source: DWR, 1998.

The San Francisco PUC provides water to more than 2.3 million people in San Francisco, San Mateo, Santa Clara and Alameda Counties, and is forecasting drought year shortages through 2020. In 1991, San Francisco PUC adopted, but did not implement, a 45 percent rationing plan. Recently revised instream flow requirements in the Tuolumne River Basin have reduced the available Hetch Hetchy supply. The city's studies indicate that the annual yield of the Hetch Hetchy system has dropped from 336 taf to 271 taf (DWR, 1998).

The Santa Clara Valley WD, which supplies water to about 1.7 million people, provides water to 16 municipal and industrial retailers as well as to agricultural users in Santa Clara County. A number of these facilities also contract with the San Francisco PUC for water from Hetch Hetchy. The district utilizes imported state project and federal project water, locally developed surface supplies and extensive groundwater recharge programs. Some retailers in the district are vulnerable to drought deficiencies imposed by the State Water Project (SWP), CVP, and Hetch Hetchy Project. These deficiencies may be intensified by diminished local runoff during drought conditions (DWR, 1998).

Alameda County WD serves a population of 292,000 in south-western Alameda County, adjacent to San Francisco Bay. Alameda County WD's Niles Cone groundwater basin supply is augmented by SWP and Hetch Hetchy supplies. The district is vulnerable to drought deficiencies imposed by SWP or San Francisco PUC (DWR, 1998).

Zone 7 WA delivers water in the Livermore-Almaden Valley in eastern Alameda County, as well as agricultural and industrial customers. Zone 7 has an annual SWP entitlement of 46 taf (DWR, 1998).

East Bay Municipal Utility District (MUD) provides water to 1.2 million people in the remainder of northern Alameda County, and part of western Contra Costa County.

Virtually all of the water used by East Bay MUD comes from the 577 square-mile watershed of the Mokelumne River, which collects runoff from Alpine, Amador and Calaveras Counties, on the west slope of the Sierra Nevada. East Bay MUD has water rights for up to 364 taf per year from the Mokelumne River. In average years, district reservoirs in the East Bay capture an additional 30 taf from local watershed runoff. In drought years, evaporation and other reservoir losses may exceed local runoff (DWR, 1998).

Contra Costa WD delivers municipal and industrial water throughout central and eastern Contra Costa County. Deliveries from Contra Costa WD go up during droughts as industrial diverters stop diverting with their own Delta water rights (because of water quality constraints) and use Contra Costa WD's CVP supplies instead. Contra Costa WD's 195 taf CVP contract includes operation of the Los Vaqueros Reservoir. During drought conditions, Contra Costa WD receives 85 percent of the contracted amount of water. Under severe drought conditions, the CVP supply may be reduced to 75 percent of historical use. Contra Costa WD has a smaller locally developed source at Mallard Slough, with an associated right to take up to 26.7 taf per year, however diversions are unreliable due to poor water quality. Average annual diversion from this source from 1988-1998 was only 5.6 taf (DWR, 1998).

3.17.1.3 Stormwater

The storm water setting is addressed in Section 3.9.1.3.

3.17.1.4 Solid Waste

Permit requirements, capacity, and surrounding land use are three of the dominant factors limiting the operations and life of landfills. Landfills are permitted by the local enforcement agencies with concurrence from the California Integrated Waste Management Board (CIWMB). Local agencies establish the maximum amount of solid waste which can be received by a landfill each day and the operational life of a landfill. Landfills are operated by both public and private entities (CIWMB, 2002a).

There are three primary classes of landfill sites permitted to receive varying severity of waste materials. Class I sites are facilities that can accept hazardous waste as well as municipal solid waste, construction debris, and yard waste. Class II sites may receive certain designated waste along with municipal solid waste, construction debris, and yard waste. Class III sites can only accept non-hazardous waste, e.g., solid waste construction debris, wood and yard waste, and certain non-hazardous industrial waste.

A total of 21 Class III active landfills are located within the District with a total capacity of 52,517 tons per day (see Table 3.17-5).

TABLE 3.17-5

Number of Class III Landfills Located within the Bay Area and Related Landfill Capacity

County	Number of Landfills	Capacity (tons/day)
Alameda[(1)]	3	16,014
Contra Costa	3	7,500
Marin	2	2,375
Napa	1	300
San Mateo	2	3,998
Santa Clara	7	13,100
Solano	2	6,730
Sonoma	1	2,500
TOTAL	21	52,517

(1) Sources: California Integrated Waste Management System.

In addition, there are a total of 16 green waste composting facilities in the Bay Area.

3.17.1.5 Hazardous Waste

There are two hazardous waste (Class I) facilities in California, the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow (Kern County). Kettleman Hills has an estimated nine million cubic yard capacity (four million currently, with an additional five million expected upon completion of a berm expansion). The facility expects to continue receiving wastes for approximately nine years under its current permit. The facility is in the process of permitting a new landfill that would extend the life of the operation another 15 years. (Personal Communication, Terry Yarbough, Chemical Waste Management Inc., June 2004). Buttonwillow receives approximately 960 tons of hazardous waste per day and has a remaining capacity of approximately nine million cubic yards. The expected life of the Buttonwillow Landfill is approximately 40 years (Personal Communication, Marianna Buoni, Safety-Kleen (Buttonwillow), Inc., June 2004).

Hazardous waste also can 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.
About 611,400 tons of hazardous waste were generated in the nine counties that comprise the District in 2003 (see Table 3.17-6). The most common types of hazardous waste

generated in the Bay Area include waste oil, other inorganic solid waste, contaminated soils, organic solids, asbestos-containing waste, and unspecified oil-containing wastes. Not all wastes are disposed of in a hazardous waste facility. Many of the wastes generated, including waste oil, are recycled.

TABLE 3.17-6

Hazardous Waste Generation in the Bay Area (tons per year)

WASTE NAME	Alameda	Contra Costa	Marin	San Francisco	San Mateo	Santa Clara	Napa	Solano(1)	Sonoma(1)
Waste Oil	67,850	2,396	130	813	2,739	17,899	62	9,154	298
Inorganic Solid Waste	12,940	10,047	699	4,369	1,548	7,726	1	1,672	3,265
Contaminated Soils	10,159	71,497	1,310	52,592	2,132	12,219	460	2,193	626
Organic Solids	1,582	6,947	61	457	976	5,930	116	410	264
Asbestos Waste	5,854	4,860	1,039	11,602	2,160	5,968	539	896	663
Oil-Containing Waste	2,030	2,197	34	1,077	933	2,048	39	2,753	129
Unspecified Aqueous Solution	424	191	34	27	118	1,640	15	725	7
Unspecified Solvent Mixture	1,491	331	9	48	285	1,167	12	178	60
Aqueous Solution with Organic Residues	5,683	199	36	60	1,217	4,936	15	5,360	100
Total Waste Generated in County	174,412	140,543	5,099	96,912	39,689	105,402	1,771	36,473	11,100

(1) Data presented is for entire county and not limited to the portion of the county within the Bay Area jurisdiction.
Source: DTSC, 2004.

3.17.1.6 Other Issues

Electricity

The two largest power plants in the Bay Area are located in Contra Costa County. Both of these plants consume natural gas, and provide over 1400 Mega Watts (MW) of electricity. Additionally, a 600 MW facility is under construction in Santa Clara County, and is scheduled to open in the summer of 2005 (CEC, 2004). Local electricity distribution service is provided to customers within the District by privately-owned utilities such as Pacific Gas and Electric (PG&E). Many public-owned utilities, such as Alameda Power and Telecom, East Bay Municipal Utility District and the Santa Clara Electric Department also provide service. PG&E is the largest electricity utility in the Bay Area, with a service area that covers all, or nearly all, of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties. Pacific Gas and Electric (PG&E) provides approximately 94 percent of the total electricity demand in the District (CEC, 2001).

Table 3.17-7 shows the amount of electricity delivered to residential and nonresidential entities in the counties in the BAAQMD in 2000.

TABLE 3.17-7

Bay Area Utility Electricity Deliveries for 2000 by County

	Residential		Non-Residential		Total	
County	**Number of Accounts**	**kWh[1] (million)**	**Number of Accounts**	**kWh (million)**	**Number of Accounts**	**KWh (million)**
Alameda	507,929	3,066	53,839	7,539	561,768	10,605
Contra Costa	341,276	2,761	29,705	4,054	371,426	6,815
Marin	99,628	734	13,489	834	113,117	1,568
Napa	45,477	366	7,671	618	53,148	984
San Francisco	312,258	1,481	31,862	4,267	344,120	5,748
San Mateo	253,893	1,661	26,191	3,474	280,084	5,135
Santa Clara	555,775	3,990	60,054	13,853	615,829	17,843
Solano	126,607	984	14,023	2,088	140,630	3,071
Sonoma	171,448	1,258	24,367	1,735	195,815	2,993
TOTAL	2,414,291	16,301	261,201	38,462	2,675,937	54,762

Source: CEC, 2002

[1] kilowatt-hour (kWh): The most commonly used unit of measure telling the amount of electricity consumed over time. It means one kilowatt (1000 watts) of electricity supplied for one hour.

Natural Gas

Four regions supply California with natural gas. Three of them—the Southwestern U.S., the Rocky Mountains, and Canada—supply 85 percent of all the natural gas consumed in California. The remainder is produced in California. In 2000, approximately 35 percent of all the natural gas consumed in California was used to generate electricity. Residential consumption represented approximately one-fourth of California's natural gas use with the balance consumed by the industrial, resource extraction, and commercial sectors. PG&E provides natural gas service throughout the Bay Area (CEC, 2002a). CEC staff expects that PG&E will need to expand its pipeline capacity to access Canadian supplies by 2013 to meet the projected natural gas demand (CEC, 2003a).

Table 3.17-8 provides the estimated use of natural gas in California by residential, commercial and industrial sectors in 2000. About 71 percent of the natural gas consumed in California is for industrial and electric generation purposes.

TABLE 3.17-8

California Natural Gas Consumption for 2000

Sector	Utility	Non-Utility	Total
Residential	1,381	--	1,381
Commercial	505	--	505
Industrial	1,327	1,044	2,371
Electric Generation	2,281	45	2,326
Total	**5,495**	**1,089**	**6,584**

Source: CEC, 2002

3.17.2 SIGNIFICANCE CRITERIA

The impacts to utilities/service systems will be considered significant if any of the following criteria are met:

> The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
>
> An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
>
> The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.
>
> The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

3.17.3 ENVIRONMENTAL IMPACTS

The potential impacts on utilities and service systems have been divided into separate sections to discuss the potentially significant impacts on: (1) wastewater, water demand, storm water, solid and hazardous waste, and energy (electricity and natural). The impacts for each of these resources are discussed in separate subsections below.

3.17.3.1 Wastewater

Although the percentage of dry cleaning facilities expected to use wet cleaning may increase water usage slightly, this would not require the construction of new wastewater treatment or storm water drainage facilities or expansion of existing facilities. The proposed Air Toxics rules should be expected to cause a small but insignificant increase in wastewater generation. This small increase is not expected to place any significant increase demand on wastewater treatment facilities. The number of facilities using wet cleaning is expected to be limited. Consequently, the proposed project has no provisions that would require the construction of additional water resource facilities, the need for new or expanded water entitlements, or an alteration of drainage patterns. Based on the above, the proposed rules are not expected to significantly increase the volume of wastewater, require additional wastewater disposal capacity, or otherwise substantially degrade water quality. Further, the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge because the proposed project will affect operations at minimum number of facilities. The proposed rules would not create or contribute runoff water at affected facilities that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

3.17.3.2 Water Demand

According to the University of California, Los Angeles (UCLA)/Occidental College study, “An Assessment of Factors Influencing a Switch from Dry Cleaning to Professional Wet Cleaning” (Pollution Prevention Education and Research Center, February 29, 2000), wet cleaning uses approximately 1.77 times more water than perc based dry cleaning. The study indicated that in 1997 average water use per facility was 125,714 gallons per year. An average wet cleaning facility would be expected to use 223,333 gallons per year. As a “worst case” scenario, if all existing permitted dry cleaning facilities that currently use perchloroethylene switched to wet cleaning, the expected annual water use would be 142 million gallons per year. The resulting per day increase for a five-day workweek would be 388,540 gallons per day. Actually, only a small number of facilities are expected to use wet cleaning so the actual water demand is expected to be much lower. This is less than significant, and there are sufficient water supplies available to serve the project from existing entitlements and resources.

Although some sources of water in the Bay Area include groundwater supply, the increase in water use only represents a 0.021 percent increase. This does not represent a significant impact on groundwater sources. Further, it is not likely that every dry cleaning facility in the district would switch to wet cleaning, so the above estimate, although not significant, substantially over-estimates potential water demand from dry cleaners as a result of the proposed new/amended rules.

3.17.3.3 Stormwater

The proposed Air Toxics Rules would primarily impact existing stationary sources. Any flooding, seiche, tsunami, 100-year flood, or mudflow risks would be associated with the existing situation. The proposed project would not exacerbate any of these potential hazards.

3.17.3.4 Solid/Hazardous Waste

Impacts Associated with Alternative Dry Cleaning Technologies

The proposed Air Toxic NSR Rules may result in replacement of many existing dry cleaning machines; it is expected that the dry cleaning equipment will be replaced at the end of its useful life as new equipment is required. Therefore, the landfills or scrap metal collectors would be receiving this equipment whether the new requirements are imposed or not. The impact of the proposed new/amended rules is not expected to increase solid waste from dry cleaning facilities.

The proposed amended rule would not increase the volume of solid or hazardous wastes from existing dry cleaning operations, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations. In fact, newer non-perc technology closed-loop machines would likely generate less waste than the older transfer machines. Older transfer machines typically utilize cartridge filters that are disposed of along with the collected waste as hazardous waste. The newer closed loop machines typically use spin disc filters, which are cleaned and reused. Because customer behavior to dry clean clothes is not expected to be altered by the cleaning method, dry cleaning facilities are not expected to substantially change the amount of laundry being cleaned as a result of the proposed project. The amount of sludge will not significantly change between perc machines and hydrocarbon machines because the level of dirt, lint and detergent on clothes constituting the sludge will not be altered by the cleaning method (SCAQMD, 2002). Consequently, no significant adverse solid or hazardous waste impacts are anticipated.

Additional Air Pollution Control Equipment

It is difficult to quantify the number of facilities that would employ new air pollution control equipment, the rate of disposal necessary to maintain the equipment, type of waste generated by the equipment (i.e., hazardous or non-hazardous) and the timing by which these technologies would come into use.

Particulate matter collected on filters is expected to be small. The amount of material collected from these types of control equipment is expected to be minor and is expected to be handled within the capacity of existing disposal facilities.

Baghouses and HEPA filters collect particulate emissions from stationary sources. These types of filtration control equipment can effectively remove particulate matter, including heavy metals, asbestos, as well as other toxic and nontoxic compounds.

Polytetrafluoroethylene (PTFE) membranes or HEPA filters can increase a system's removal efficiency up to 99.9 percent. In general, as particulate size decreases, the surface area to volume ratio increases, thus increasing the capacity of these filters to adsorb smaller particles (including hazardous materials). An increase in the use of membranes and filters may increase solid waste requiring disposal in landfills in amounts greater than what would be produced if the Air Toxic NSR rules were not adopted. In some cases, the waste generated will be hazardous. The increase in the amount of waste generated from the use of filters and the collection of additional particulate matter are expected to be small as the amount of material collected is small. Therefore, the potential impacts of the use of additional filtration equipment on solid/hazardous waste generation are less than significant.

The Air Toxic NSR rules could result in an increase in the use of oxidation catalysts to control acrolein and other similar compounds. Catalytic oxidation beds generally use a precious metal to add in the conversion of air pollutants. Catalytic oxidizers require periodic replacement of the catalyst bed. The expected life of the catalyst is approximately three to five years, depending on the concentration of materials and type of exhaust flows controlled. Metals used in the catalyst are generally recovered because they are made from precious and valuable metals (e.g., platinum and palladium). These metals could then be recycled. The remaining material would most likely need to be disposed of at a hazardous waste landfill.

If the catalyst is not hazardous, jurisdiction for its disposal then shifts to local agencies such as regional water quality control boards or county environmental agencies. The RWQCB has indicated that if a spent catalyst is not considered a hazardous waste, it would probably be considered a Designated Waste. A Designated Waste is characterized as a non-hazardous waste consisting of, or containing pollutants that, under ambient environmental conditions, could be released at concentrations in excess of applicable water objectives, or which could because degradation of the waters of the state. The type of landfill that the material is disposed at will depend upon its final waste designation. Due to the recycling of catalysts used in catalytic oxidation, no significant impacts on waste disposal are expected.

State law requires hazardous waste generators to attempt to recycle their wastes in lieu of disposal. OEHHA has implemented a hazardous waste exchange program to promote the use, reuse and exchange of hazardous wastes. The program is designed to assist generators of hazardous wastes to recycle their wastes and encourage the reuse of the wastes. The DTSC also publishes a directory catalog of industrial waste recyclers annually so that industries will know where to buy, sell, or exchange their wastes.

Carbon Adsorption

The proposed rule may generate additional solid or hazardous waste in the form of carbon used to control organic emissions, should facilities choose to comply using activated carbon filters. The amount of solid waste, which may be generated by the carbon adsorption process would depend on the number of carbon adsorbers installed, the operating characteristics, and the frequency of carbon replacement.

If carbon adsorption systems are used, the amount of hazardous waste generated on an annual basis is expected to be minimal. Spent carbon is usually recycled and reused rather than disposed of in landfills. Most facilities contract out with vendors that take the spent carbon and deliver regenerated carbon. Activated carbon can have a lifetime of five to 10 years; however, the operating characteristics of the control device may result in a shorter lifetime. Another alternative to the land disposal of regenerated carbon is to burn the spent carbon in a thermal incinerator. With thermal incineration, the organic materials contained in the carbon are oxidized to carbon dioxide, water, and in most cases, harmless combustion by-products. Incineration destroys the toxic constituents and significantly reduces the volume of carbon to be disposed of, thus reducing solid waste impacts. The disadvantage of incineration is that without additional add-on control devices, there may be an increase in criteria pollutant emissions. Incinerators are controlled by District rules and regulations within the Bay Area. In other locations, incinerators are controlled by federal regulations and other local air pollution control districts. Compliance with local and federal regulations is expected to minimize emissions from incinerators to less than significant. It is expected that facilities will continue to choose other more cost-effective options to comply with the rules. Therefore, the solid waste impacts resulting from the use of carbon adsorption are expected to be less than significant.

Early Retirement of Equipment

The California Integrated Waste Management Act of 1989 (AB 939) required cities and counties in California to reduce the amount of solid waste disposed in landfills by 25 percent by 1995 and by 50 percent by 2000, through source reduction, recycling and composting activities. Many cities and counties have not met these waste reduction goals. The generation of additional waste could impact the abilities of cities and counties to further reduce wastes. However, as discussed above, the increase in solid waste which is expected to be diverted to a landfill is small and many of the waste streams are recyclable. Therefore, the proposed project is not expected to have adverse impacts on landfills.

3.17.3.5 Others

Electricity

The potential increase in electricity use due to implementation of the proposed Air Toxic NSR rules is associated with the potential installation of add-on control equipment. The new rule could result in the installation of add-on control equipment. For stationary sources, the increase in electricity demand is expected to be negligible.

The replacement of older machines with newer equipment that would result from the conversion of perc based equipment with equipment designed for alternative solvents would not result in significant adverse energy impacts. Newer equipment is expected to be more energy efficient. An equipment distributor familiar these systems indicated that only CO2 equipment requires additional electrical power (SCAQMD, 2002). A typical CO2 system requires approximately 70 to 150 amperes (amp) service to operate the refrigeration system necessary to maintain the CO2 in a liquid state. The electricity required to operate the basket motor and compressor on a typical CO2 machine could be up to 20 kilowatt-hour. Most other dry cleaning equipment, including perc, wet cleaning and solvent alternatives require approximately 70 to 100 amp service. For a perc machine, the electricity required to operate the wash motor, extract motor, fan motor, pump motor, air exchange motor and compressor at maximum operating load could be up to 10 kilowatt-hour. Therefore, assuming the same operational time, CO2 equipment could require approximately twice as much electricity as currently used with perc machines. The increase in electricity, however, would not be considered significant.

There are a number of projects under construction or in the planning stages that will provide additional electricity to the region. Assuming all 635 dry cleaning facilities transition into CO2 equipment, the increased amount of electricity consumed would be 12,700 kilowatt-hour (as compared to the total electricity use in the Bay Area of 54,762 million kwh). The analysis indicates that the proposed project will increase electricity demand by 0.000023 percent which is a negligible impact on electricity use. The proposed project will have a negligible effect on the electricity capacity and, therefore, no impact on peak or base demands for electricity.

In general, the proposed project has no potential to conflict with energy conservation plans, result in the need for new or substantially altered power or natural gas utility systems, create any significant effects on local or regional energy supplies and on requirements for additional energy, or create any significant effects on peak and base period demands for electricity and other forms of energy.

Natural Gas

For stationary sources, a slight increase in natural gas demand is expected from the use of add-on air pollution controls. Some air pollution control devices, e.g., thermal oxidizers or afterburners, require natural gas. The amount of natural gas to run these control devices is unknown. Add-on controls are expected to be used only if they are needed for compliance.

It is estimated that the proposed Air Toxic NSR Rule will result in a very small increase in natural gas use (i.e., less one percent), which is an extremely small increase in the amount of natural gas used in California. In 2010, almost 25,000 million therms of natural gas will be consumed in California. The increase in natural gas use associated with the Air Toxic NSR rules are expected to be within the statewide projections for natural gas use. The natural gas impacts from the implementation of the proposed Air Toxic NSR Rule is expected to be less than significant. These energy impacts are expected to be less than significant because sufficient natural gas capacity and supplies are expected be available.

3.17.4 MITIGATION MEASURES

No significant utility and service system impacts were identified so no mitigation measures are proposed.

3.17.5 CUMULATIVE IMPACTS

Cumulative Wastewater and Water Demand Impacts

The cumulative impacts on wastewater and water demand are expected to be less than significant. The increase in water use and wastewater demand are expected to be within the demand created by population growth. Further, the increase in water use is limited to CO2 machines. CO2 machines are not expected to be commonly used for dry cleaning machines. The use of alternative hydrocarbon solvents are expected to be more commonly used than CO2 machines. Therefore, the overall cumulative impacts associated with the wastewater and water demand are expected to be less than significant.

Cumulative Solid/Hazardous Waste Impacts

The proposed Air Toxic NSR rules are not expected to result in significant, cumulative adverse impacts on solid or hazardous waste. Significant impacts were not identified for an increase in waste from the Air Toxic NSR Rule. The new rules are expected to allow a number of different control methods to comply with required emission reductions. The most cost effective control equipment would be expected to be used. The replacement of perc dry cleaning machines will generally occur as the life of the old equipment is exhausted. Further, recycling of catalysts and carbon is common and expected to continue. Therefore, the increase in solid waste is expected to be within the permit capacity so that no significant cumulative impacts would be expected.

Cumulative Energy Impacts

The analysis of adverse cumulative impacts to energy resources is different than the comparable analysis for other impacts areas. It is difficult to predict if an affected facility will alter its energy demand in the future or switch to a different resource as a result of complying with the Air Toxic NSR rules or because of other business considerations. For example, an affected facility owner might switch to an alternative clean fuel if equipment using that alternative clean fuel is much more efficient than the old equipment using conventional fuels. This decision could have been made for a variety of reasons such as cost savings, increased production capacity, etc., and may not be related to the Air Toxic NSR Rule.

There are no provisions of Air Toxic NSR Rules that result in either project-specific or cumulative energy impacts. Since the proposed project is not expected to create significant adverse project-specific utilities and service systems impacts, the proposed project's contribution to significant adverse cumulative utilities and service system impacts are less than cumulatively considerable (CEQA Guidelines §15130(a)(3)) and, therefore, are not significant.

3.17.6 CUMULATIVE MITIGATION MEASURES

No significant cumulative utility and service system impacts were identified so no mitigation measures are proposed.

M:\DBS\2373:BAAQMD NSR Rule\Final EIR\NSR FEIR 3b-rev.doc

CHAPTER 4

ALTERNATIVES

4.1 INTRODUCTION

This EIR provides a discussion of alternatives to the proposed project as required by CEQA. According to the CEQA guidelines, alternatives should include realistic measures to attain the basic objectives of the proposed project and provide means for evaluating the comparative merits of each alternative (CEQA, Guidelines, § 15126.6(a)). In addition, though the range of alternatives must be sufficient to permit a reasoned choice, they need not include every conceivable project alternative (CEQA Guidelines §15126.6(a)). The key issue is whether the selection and discussion of alternatives fosters informed decision making and public participation. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (CEQA Guidelines, § 15126.6(f)(3)).

The alternatives typically included in CEQA documents are developed by breaking down the project into distinct components (e.g., emission limits, compliance dates, applicability, exemptions, etc.) and varying the specifics of one or more of the components. Different compliance approaches that generally achieve the objectives of the project may also be considered as project alternatives.

4.2 ALTERNATIVES REJECTED AS INFEASIBLE

In accordance with CEQA Guidelines §15126.6(c), a CEQA document should identify any alternatives that were considered by the lead agency, but were rejected as infeasible during the scoping process and briefly explain the reason underlying the lead agency's determination. Section 15126.6(c) also states that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental impacts.

Consideration was given to an alternative that would require that the risk assessment for new permits would include the all sources within the entire effected facility, adjacent facilities within the community and include mobile sources in the vicinity of the facility. This alternative was rejected because no state guidelines have been prepared to address this type of "cumulative risk assessment". The "adjacent facilities" that would be included within the community could include numerous sources making these types of risk assessments very complex, delaying or preventing the issuance of air permits, creating staffing problems at the BAAQMD, substantially increasing the cost of permits, and using substantial resources within the District. New thresholds would need to be developed that would encompass total risk levels rather than project-specific risk levels. Facilities could be denied permits, even though their facility was operating within all required rules and regulations. No state guidelines exist for completing this type of risk assessment. Developing these guidelines would take considerable District resources and, in some cases, involve the expertise of agencies outside the District. Therefore, this alternative was rejected as infeasible.

Another alternative considered was the “precautionary principle,” was has received considerable attention in a number of international discussions on human health and the environment. Although some statements of the principle are more detailed than others, each has at its core the idea that action should be taken to prevent or minimize harm to human health and the environment even if scientific evidence is inconclusive. For example, the 1998 Wingspread Statement on the Precautionary Principle summarizes the principle in the following manner: "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." The February 2, 2000, European Commission Communication on the Precautionary Principle indicates: "The precautionary principle applies where scientific evidence is insufficient, inconclusive or uncertain and preliminary scientific evaluation indicates that that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the high level of protection chosen by the EU."

Unfortunately, the precautionary principle does not specify what should trigger action (e.g., how is a potential health threat established, and how is it determined if existing scientific information is inadequate or inconclusive?), nor does it specify what action should be taken after it is triggered. The precautionary principle is therefore difficult to craft into workable policies or regulations and is considered not feasible at this time.

The District believes that many elements of the precautionary principle are built into the proposed Regulation 2, Rule 5. The methods used to estimate health risks are not without uncertainty, but are based on well-established scientific principles, and are intended to err on the side of health protection. The program is designed so that updates in HRA methodology can be used based on improvements in scientific knowledge. (The ATHS program provides a mechanism for the District to address updated HRA information for sources that have already received District permits). Further, the use of incremental project risk significance levels provides a practical and objective basis for determining which projects warrant more detailed assessment and public scrutiny within the pre-construction permitting process. The District intends on monitoring any workable applications of the precautionary principle that may emerge and serve to further improve the Air Toxics NSR Program.

4.3 ALTERNATIVES TO THE NSR RULE STRATEGY

4.3.1 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

The No Project Alternative, would mean the District would not adopt Regulation 2: Permits, Rule 5: New and Modified Sources of Toxic Air Contaminants, and Manual of Procedures Volume II: Engineering Permitting Procedures, Part 4: New and Modified Sources of Toxic Air Contaminants. The District also would not make amendments to: (1) the BAAQMD Rules and Regulations User’s Guide; (2) Regulation 2: Permits, Rule 1: General Requirements; (3) Regulation 2: Permits, Rule 2: New Source Review; (4)

Regulation 2: Permits, Rule 9: Interchangeable Emission Reduction Credit; (5) Regulation 3: Fees; (6) Regulation 8: Organic Compounds, Rule 34: Solid Waste Disposal Sites; (7) Regulation 8: Organic Compounds, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks; (8) Regulation 8: Organic Compounds, Rule 47: Air Stripping and Soil Vapor Extraction Operations; and (9) Regulation 11: Hazardous Pollutants, Rule 16: Perchloroethylene and Synthetic Solvent Dry Cleaning Operations.

The No Project Alternative would continue the current policies for regulating TACs from new, modified, or relocated equipment as part of the permit review process. The APCO would continue to have the discretion to issue or deny a permit for a proposed project that exceeds specified health risk thresholds, depending on a number of factors. These factors include the degree of uncertainty in the risk analysis, possible net air quality benefits of updated replacement equipment, the lifetime of the project, incorporation of all feasible risk reduction measures, the costs of mitigation, and any benefit of the project to the local community and society.

Consequently, the No Project Alternative would continue regulation of TACs at new and modified facilities using the existing significant threshold levels of: (1) 1.0 per million for the proposed project; (2) 10 per million if all sources in the project have TBACT; and (3) 100 per million for dry cleaners that have TBACT and all reasonable risk reduction measures have been taken. Further, the District would continue to evaluate chronic health effects but not acute health effects under this alternative.

The current versions of the District's REP and RMP were adopted on February 3, 2000, with the exception of the RMP for diesel-fueled engines which was adopted on January 11, 2002. These documents describe the existing District Air Toxics NSR Program which would continue to be implemented under the No Project Alternative. Portions of the REP and RMP are outdated because OEHHA has revised toxicity values and exposure assumptions. While modifications to update the existing air toxics policy would not be made under the No Project Alternative, it is assumed that the District would take action to make the existing air toxics policy consistent with recent OEHHA and CARB revisions to toxicity values and exposure assumptions.

Since the No Project Alternative does not lower interim or final action levels, a limited number of facilities would be required to implement risk reduction measures. Further, there would be less incentive for dry cleaners to convert from the use of perc to another dry cleaning alternative.

4.3.2 ALTERNATIVE 2: RETAIN THE DISCRETION OF THE APCO

Under Alternative 2, the discretionary risk management actions of the APCO for proposed projects that exceed project risk limits would be clarified and expanded.

The existing RMP indicates that the APCO is responsible for risk management at the District and may consider a number of factors in determining whether to issue or deny a permit for a proposed project together with the results of a risk screening analysis. Under this alternative, the District would retain this provision, which has been eliminated under the proposed project.

Under Alternative 2, the following criteria would be met before a permit would be issued if the risks for a proposed project exceed stated project risk requirements (e.g., 10 in a million cancer risk):

1. Specified facility risk limits would be met for existing sources and the proposed project. These are a cancer risk of 100 in a million, non-cancer hazard indices of 10.0, and a cancer burden of 1.0.

2. The facility would be required to implement all reasonable risk reduction measures. The risk reduction measures would be applied to the proposed new and modified sources in the project. In addition, unless onsite contemporaneous emission reductions from existing sources indicate that the net health risk is within project risk limits (e.g., 10 in a million cancer risk), the risk reduction measures would also be applied to all existing permitted sources with TAC emissions at the facility.

3. A Specific Findings Report would be prepared in which a number of factors are identified which may be considered by the APCO in making a discretionary permitting decision. In addition to the results of the HRSA for the proposed project, these factors would include: (1) the degree of uncertainty in the HRSA, (2) the period of time over which the emissions from the project are expected to occur, (3) the frequency at which an acute hazard index greater than 1.0 is expected to occur and a summary of the severity of these potential adverse health effects, (4) the existing air quality of the project area, based on available information, (5) the location of the project relative to sensitive receptors, (6) a summary of required risk reduction measures, (7) the results of a net-project health risk demonstration, if applicable, (8) the results of the HRA completed for the entire facility, if applicable, (9) any federal, state, or local mandates that require the permit applicant to propose the project, (10) any benefits that the project would have on the local community, (11) the findings of the Lead Agency for the proposed project under CEQA, and (12) any other information that the APCO determines to be relevant in making a risk management decision for the proposed project.

4. The APCO would be required to inform individuals in the area of the proposed project of any preliminary decision to issue a permit, and would consider any comments received before a final permit is issued.

If a permit is to be issued, the APCO would be required to find that the proposed project will comply with Section 41700 of the California Health and Safety Code. These findings are that the emissions from the proposed source(s) would not: (1) cause injury, detriment, nuisance, or annoyance to the public, nor (2) endanger the comfort, repose, health, or safety of any such persons or the public.

It is assumed that all other portions of the proposed project would be implemented under Alternative 2.

4.3.3 ALTERNATIVE 3: ALTERNATE HEALTH RISK THRESHOLDS

Under Alternative 3, it is assumed that the health risk thresholds would be reduced. The maximum cancer risk threshold would be limited to 1 per million and the hazard index would be limited to 0.2 for all cases. There would be no additional allowance for projects to go to 10 per million with TBACT. It is assumed that additional air pollution control equipment would be required under this alternative than the proposed project, in order to comply with the 1 per million threshold.

4.4 ALTERNATIVES ANALYSIS

The environmental analyses completed in Chapter 3 concluded that the potential impacts of the Air Toxics NSR rules on some of the environmental resources were very minor including potential impacts on aesthetics, agricultural resources, biological resources, cultural resources, geology, hydrology and water quality, land use, mineral resources, noise, population/housing, public services, recreation, and transportation and traffic. The alternatives would involve introduction of either similar or fewer components as the proposed project. Therefore, the potential impact of Alternatives 1, 2, and 3 on aesthetics, agricultural resources, cultural resources, geology, hydrology and water quality, land use, mineral resources, population/housing, public services, recreation, and transportation and traffic are expected to be less than significant. The potential impacts of the alternatives on the remainder of the environmental resources are addressed in this section.

4.4.1 AIR QUALITY

The proposed project could result in potentially significant VOC emissions associated with the conversion of perc dry cleaning machines to hydrocarbon machines. Other potential secondary impacts including construction impacts, secondary emissions associated with the use of additional control equipment, and increase in electricity demand, are expected to be less than significant. The proposed project is expected to provide a beneficial impact to public health by reducing TAC emissions and the potential exposure to TACs.

4.4.1.1 Alternative 1 - No Project Alternative

Under the No Project Alternative, the existing Air Toxic Policy would remain in place. Therefore, no additional incentive would be created to convert perc dry cleaning machines to alternative cleaning solvents. Under Alternative 1, it is expected that fewer existing dry cleaning machines would be converted to hydrocarbon machines so that the potentially significant impacts of VOC emissions would be reduced to less than significant.

However, Alternative 1 is expected to result in higher TAC emissions than the proposed project since the higher cancer risk level of 100 per million would continue to be allowed for dry cleaners that took all reasonable risk reductions measures. Further, acute exposures would not be evaluated and permit applications would not be evaluated for acute health effects. Therefore, Alternative 1 could result in permit approvals for facilities that exceed the CEQA significance threshold level of 10 per million and the acute hazard index of 1.0. Alternative 1 would result in potentially significant impacts associated with exposure to TACs.

4.4.1.2 Alternative 2 – Retain the Discretion of the APCO

Under Alternative 2, the discretionary risk management actions of the APCO that exceed project risk limits would be clarified and expanded. Alternative 2 is expected to result in fewer sources being converted to less toxic alternatives as compared to the proposed project and less air pollution control equipment installed. Secondary air quality impacts would remain less than significant. District staff determined that dry cleaners would not be eligible for discretionary risk because of the availability of less toxic solvents; Alternative 2 would not impact this issue and the potentially significant impact of VOC emissions would remain the same as the proposed project.

Alternative 2 is expected to result in higher TAC emissions than the proposed project since the higher cancer risk level of 100 per million would continue to be allowed for sources that took all reasonable risk reductions measures. Therefore, Alternative 2 could result in permit approvals for facilities that exceed the CEQA significance threshold level of 10 per million and would result in potentially significant impacts associated with exposure to TACs.

4.4.1.3 Alternative 3 – Alternate Health Risk Thresholds

Alternative 3 is expected to result in more dry cleaners being converted to non-perc alternatives as compared to the proposed project and more air pollution control equipment installed due to reduce acceptable threshold levels. Therefore, the potentially significant impacts of VOC emissions associated with the conversion of perc dry cleaning machines to alternative technologies would remain significant. Other secondary air quality impacts are expected to remain less than significant.

Alternative 3 is expected to result in less TAC emissions than the proposed project since the cancer risk level would be limited to 1 per million and the hazard index would be limited to 0.2. Therefore, Alternative 3 is expected to result in higher emission reductions of TACs than the proposed project and greater public health benefits.

4.4.2 HAZARDS AND HAZARDOUS MATERIALS

The proposed project impacts on hazards and hazardous materials due to the use of alternatives to perc were considered to be less than significant. No significant hazards associated with transportation of hazardous materials were identified.

4.4.2.1 Alternative 1 - No Project Alternative

Under the No Project Alternative, the existing Air Toxic Policy would remain in place. Therefore, there would be no increase in hazards associated with the use of hazardous chemicals or the transport of chemicals. Hazard impacts would remain less than significant.

4.4.2.2 Alternative 2 – Retain the Discretion of the APCO

Alternative 2 is expected to result in fewer sources being converted to less toxic alternatives as compared to the proposed project and less air pollution control equipment installed. The hazard impacts associated with converting to less toxic alternatives are expected to be less than significant. Therefore, the hazard impacts associated with Alternative 2 are potentially greater than proposed project but likely less than significant. Other hazard impacts are expected to remain less than significant.

4.4.2.3 Alternative 3 – Alternate Health Risk Thresholds

Alternative 3 is expected to result in more dry cleaners being converted to non-perc alternatives as compared to the proposed project. The hazard impacts associated with converting to non-perc alternatives are expected to less than significant. Therefore, the hazard impacts associated with Alternative 3 are also expected to be less than significant. Other hazard impacts are expected to remain less than significant.

4.4.3 UTILITIES AND SERVICE SYSTEMS

The proposed project impacts on wastewater, water demand, storm water, solid and hazardous waste and energy impacts were considered to be less than significant.

4.4.3.1 Alternative 1 - No Project Alternative

Under the No Project Alternative, the existing Air Toxic Policy would remain in place. There would be no increase in water demand, wastewater generation, storm water generation, solid/hazardous waste generation, or energy use because there would be no change in the current requirements. The impacts on utilities and service systems would remain less than significant.

4.4.3.2 Alternative 2 – Retain the Discretion of the APCO

Alternative 2 would be expected to require less energy as it is expected that less air pollution control equipment would be installed. Impacts on storm water generation, and solid/hazardous waste generation are expected to remain less than significant. The impacts of Alternative 2 on water usage, utilities and service systems are expected to remain less than significant.

4.4.3.3 Alternative 3 – Alternate Health Risk Thresholds

Alternative 3 is expected to result in more dry cleaners being converted to non-perc alternatives as compared to the proposed project. The potential for wastewater to be contaminated with perc is expected to decrease under this alternative because fewer dry cleaners are expected to use perc. This alternative would require more energy than the proposed project as it is expected that more air pollution control equipment would be installed. The energy impacts are expected to remain less than significant as the energy impacts associated with additional equipment is still expected to be a small fraction of the total energy use in the District. Impacts on storm water generation, and solid/hazardous waste generation are expected to remain less than significant. The impacts of Alternative 3 on utilities and service systems are expected to remain less than significant.

4.5 COMPARISON

Pursuant to CEQA Guidelines §15126.6(d), an EIR should include sufficient information about each alternative to allow meaningful comparison with the proposed project. Section 15126.6(d) also recommends the use of a matrix to summarize the comparison. Table 4.5-1 provides this matrix comparison. The No Project Alternative would ultimately achieve less of the long-term benefits of reduced TAC emissions and reduced exposure to TACs than the proposed project would achieve. The No Project Alternative (Alternative 1) would reduce the potentially significant impacts of increased VOC emissions associated with the proposed project to less than significant but would provide no benefit associated with TAC emission reductions.

Alternative 3 results in potentially significant impacts due to increased VOC emissions associated with converting perc dry cleaning equipment to alternative technologies. Alternative 3 would also provide greater TAC emission reductions and greater health benefits.

TABLE 4.5-1

COMPARISON OF ALTERNATIVES

ENVIRONMENTAL RESOURCE	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Air Quality:				
Increase in VOC Emissions	PS	NS	PS	PS(+)
Other Secondary Air Impacts	NS	NS(-)	NS(-)	NS(+)
TAC Emissions	B	PS	PS	B
Hazards:				
Alternatives to Perc	NS	NS	NS	NS
Transportation Hazards	NS	NS	NS	NS
Utilities and Service Systems:				
Wastewater	NS	NS(-)	NS	NS(-)
Water Demand	NS	NS(-)	NS(-)	NS(+)
Storm Water	NS	NS(-)	NS(-)	NS(+)
Solid/Hazardous Waste	NS	NS(-)	NS(-)	NS(+)
Energy Demand	NS	NS(-)	NS(-)	NS(+)

B = Beneficial
NS = Not Significant Impact
MNS = Mitigated to Not Significant Impact
PS = Potentially Significant Impact
(+) = Impacts are greater than the proposed project
(-) = Impacts are less than the proposed project
(=) = Impacts are equal to the proposed project

M:\DBS\2373:BAAQMD NSR Rule\Final EIR\NSR FEIR 4-rev.doc

CHAPTER 5

OTHER CEQA TOPICS

5.0 OTHER CEQA TOPICS

5.1 REGULATION BETWEEN SHORT-TERM AND LONG-TERM PRODUCTIVITY

An important consideration when analyzing the effects of a proposed project is whether it will result in short-term environmental benefits to the detriment of achieving long-term goals or maximizing productivity of these resources. Implementing the Air Toxic NSR rules are not expected to achieve short-term goals at the expense of long-term environmental productivity or goal achievement. The purpose of the Air Toxic NSR rules is to reduce TAC emissions and exposure to TACs, providing public health benefits. By reducing TAC emissions, human exposure to TACs is also reduced, providing long-term health benefits.

Implementing the Air Toxic NSR rules would not narrow the range of beneficial uses of the environment. Of the potential environmental impacts discussed in Chapter 3, those related to air quality are considered potentially significant due to the potential increase in VOC emissions associated with hydrocarbon dry cleaning machines versus perc dry cleaning machines. Implementation of ozone control measures in the 2000 CAP are expected to reduce the cumulative VOC emissions to less than significant.

Because no short-term environmental benefits are expected at the expense of long-term environmental goals being achieved, there is no justification for delaying the proposed action. The proposed project should be implemented now in order to update and enhance the existing District Air Toxics NSR Program. Most of the changes that are proposed are intended to increase conformity with updated State health risk assessment and risk management guidelines. Therefore, no short-term benefits at the expense of long-term impacts have been identified. In fact, the proposed project is expected to result in long-term TAC emission reductions and long-term public health benefits.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires an EIR to discuss significant irreversible environmental changes which would result from a proposed action should it be implemented. Irreversible changes include a large commitment of nonrenewable resources, committing future generations to specific uses of the environment (e.g., converting undeveloped land to urban uses), or enduring environmental damage due to an accident.

Implementation of the Air Toxic NSR rules are not expected to result in significant irreversible adverse environmental changes. The proposed project could result in significant air quality impacts since the conversion of perc dry cleaning machines to other solvents could result in VOC emissions that exceed the BAAQMD significance thresholds. However, cumulative air quality impacts are expected to be less than significant as other ozone control measures associated with the 2000 CAP and 2001

Ozone Attainment Plan will result in overall emission reductions of NOx and VOCs. In addition, a new ozone strategy is expected to be available this summer. The rules would place only an incremental demand on nonrenewable and limited resources, such as energy and water supplies, relative to the accelerated rate of use of these resources due to population growth and increased consumer demand. The largely irretrievable conversion of undeveloped/agricultural land to urban uses is a function of the growing population and local land use authority, not the proposed project.

The Air Toxic NSR rules are expected to result in long-term benefits associated with improved air quality even though the population of the Bay Area is expected to increase. The project would result in reduced emissions of TACs, thereby improving air quality and related public health.

5.3 GROWTH-INDUCING IMPACTS

A growth-inducing impact is defined as the "ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth-inducing impacts can generally be characterized in three ways. In the first instance, a project is located in an isolated area and brings with it sufficient urban infrastructure to result in development pressure being placed on the intervening and surrounding land. This type of induced growth leads to conversion of adjacent acreage to higher intensity uses because the adjacent land becomes more conducive to development and, therefore, more valuable because of the availability of the extended infrastructure.

A second type of growth-inducing impact is produced when a large project, relative to the surrounding community or area, affects the surrounding community by facilitating and indirectly promoting further community growth. The additional growth is not necessarily adjacent to the site or of the same land use type as the project itself. A project of sufficient magnitude can initiate a growth cycle in the community that could alter a community's size and character significantly.

A third and more subtle type of growth-inducing impact occurs when a new type of development is allowed in an area, which then subsequently establishes a precedent for additional development of a similar character (e.g., a new university is developed which leads to additional educational facilities, research facilities and companies, housing, commercial centers, etc.)

None of the above scenarios characterize the project in question. The Air Toxic NSR rules will control TAC emissions from stationary sources and were developed, in part to accommodate the projected growth for the region – they are not the cause of residential, commercial, industrial, and infrastructure development. The proposed project would not change jurisdictional authority or responsibility concerning land use or property issues (Section 40716 of the California Health and Safety Code) and, therefore, is not considered to be growth-inducing.

CHAPTER 6

REFERENCES

6.1 REFERENCES

BAAQMD, 2001. Revised 2001 San Francisco Bay Area Ozone Attainment Plan for the 1-hour National Ozone Standard, adopted October 24, 2001.

BAAQMD, 2002. 2002 BAAQMD Ambient Air Quality Data.

BAAQMD, 2004. Toxic Air Contaminant Control Program Annual Report 2002 Volume I. June 2004.

CARB, 1993. Risk Management Guidelines for New and Modified Sources of Toxic Air Pollutants, California Air Resources Board, July 1993.

CARB, 2000. Risk Management Guidance for the Permitting of New Stationary Diesel Fueled-Engines, California Air Resources Board, October 2000.

CARB, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. Stationary Source Division, Mobil Source Control Division, October 2000.

CARB (California Air Resources Board), 2002. Proposed Clean Air Plan. Volume I – Basis and Impacts.

California Energy Commission (CEC), 2001 California 2001 Electric Utility Retail Deliveries. http://www.energy.ca.gov/electricity/utility_sales.html

CEC (California Energy Commission), December, 2002. California Gross System Electricity Production for 2001. http://www.energy.ca.gov/electricity/gross_system_power.html

California Integrated Waste Management Board, 2002

California Integrated Waste Management Board, Solid Waste Information System (SWIS), July 2004. http://www.ciwmb.ca.gov/SWIS

CEC, 2002 California Utility Electricity Deliveries by County for 2002. http://www.energy.ca.gov/electricity/electricity_by_county_2000.html

CEC, 2002a. Major Sources of Energy. December, 2003. http://www.energy.ca.gov/html/energysources.html

CEC, 2003. Electricity and Natural Gas Assessment Report. http://www.energy.ca.gov/reports/100-03-014F.PDF

CEC, 2004. http://www.energy.ca.gov/electricity/wecc proposed generation.xls.

Department of Water Resources (DWR), 1998. California Water Plan Update Bulletin 160-98, November 1998.

DWR, 2005. California Draft Water Plan Update 2004, Assumptions and Estimates, April 2005, www.waterplan.water.ca.gov/AandE/ .

East Bay MUD, 2005. www.ebmud.com

Governor's Office of Emergency Services (OES), 2001. Hazardous Materials Spill Reports.

Metropolitan Transportation Commission (MTC). (2001). 2001 Regional Transportation Plan Environmental Impact Report, State Clearinghouse (No. 2001032141).

Napa Sanitation District Collection System Department (NSDCSD), 2005. www.napasanitationdistrict.com

Norfleet Consultants, 1998. Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, prepared for The Friends of the San Francisco Estuary, June 15, 1998.

NTS (National Technical System), 1999. The Preliminary Test Data/Project Status Report #3, NTS, April 5, 1999.

Oakland, City of, 2002. *200-228 Broadway Mixed-Use Project, Draft EIR*, February 2002.

OEHHA (Environmental Health Hazards Assessment), 1999. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Determination of Acute Reference Exposure Levels for Airborne Toxicants, California Environmental Protection Agency Office of Environmental Health Hazard Assessment, March 1999.

OEHHA, 2002. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, California Environmental Protection Agency Office of Environmental Health Hazard Assessment , Public Review Draft, June 2002.

Pollution Prevention Education and Research Center, 2000. An Assessment of Factors Influencing a Switch from Dry Cleaning to Professional Wet Cleaning" (February 29, 2000).

Regional Water Quality Control Board (RWQCB), 1995. Water Quality Control Plan, San Francisco Bay Basin (Region 2), California Regional Water Quality Control Board, San Francisco Bay Region, June 21, 1995.

San Francisco, County of, 2004. County web site. http://temp.sfgov.org/sfenvironment/aboutus/school/fact_sheets/c1.pdf

San Francisco Estuary Institute (SFEI), 2004. Pulse of the Estuary 2004.

San Francisco Estuary Project (SFEP), 2004. San Francisco Estuary Project web page, reports and publications. www.abag.gov/bayarea/sfep/reports/fact/pollute.html.

SFPUC, 2005. San Francisco Public Utilities Commission, *Report on Sewer and Water Rates Fiscal Years 2006 and 2007*, March 8, 2005.

San Francisco Public Utilities Commission.   www.sfwater.org

San Jose, 2005.   www.sanjoseca.gov/transportation

San Mateo, 2005. www.cityofsanmateo.org/dept/pubwks

South Coast Air Quality Management District (SCAQMD), 2002. Final Environmental Assessment for Proposed Amended Rule 1421 - Control of Perchloroethylene Emissions from Dry Cleaning Systems, October 18, 2002.

SCAQMD, 2003. Final Draft Program Environmental Impact Report for 2003 AQMP, State Clearinghouse No. 2002081137, August 2003.

University of California, Los Angeles (UCLA)/Occidental College, 2000.   An Assessment of Factors Influencing a Switch from Dry Cleaning to Professional Wet Cleaning, Pollution Prevention Education and Research Center, February 29, 2000.

U.S. Geological Survey (USGS), 2004. California Earthquake History 1769 – Present. http://pasadena.wr.usgs.gov/info/cahist_eqs.html

U.S. Census Bureau, 2004. Population Data Estimates. www.census.gov.

Union Sanitary District (USD), 2005. www.unionsanitary.com

6.2 ORGANIZATIONS AND PERSONS CONSULTED

The CEQA statues and Guidelines require that organizations and persons consulted be provided in the EIR. A number of organizations, state and local agencies, and private industry have been consulted. The following organizations and persons have provided input into this document.

Organizations

California Air Resources Board
East Bay Municipal Utility District
Department of Water Resources
City of San Mateo
Napa Sanitation District Collection System Department
Marin Municipal Water District
San Francisco Public Utilities Commission
Union Sanitary District

Individuals Consulted

Terry Yarbough
Chemical Waste Management Inc.

Marianna Buoni
Safety-Kleen Inc.

List of Environmental Impact Report Preparers

Bay Area Air Quality Management District
San Francisco, California

Environmental Audit, Inc.
Placentia, California

M:WORD:DBS:2373:Final EIR:BAAQMD NSR Rule FEIR6.doc

CHAPTER 7

ACRONYMS

AAQS	Ambient Air Quality Standard
AB	Assembly Bill
ABAG	Association of Bay Area Governments
AB939	California Integrated Waste Management Act of 1989
AB1807	California Toxic Air Contaminants Program (Tanner Bill)
AB2728	Revised Tanner Bill
AB2588	Air Toxic "Hot Spots" Information and Assessment Act
AB2595	California Clean Air Act
ACE2588	Assessment of Chemical Exposure for AB2588
ADT	Average Daily Traffic
AEL	Acute Exposure Limit
AER	Annual Emission Reporting
AFV	Alternative Fuel Vehicles
AHM	Acutely Hazardous Material
APCO	Air Pollution Control Officer
API	American Petroleum Institute
ARB	Air Resources Board
ASC	Area Source Credits
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATCM	Airborne Toxic Control Measure
ATHS	Air Toxics Hot Spots Program
ATIR	Air Toxics Inventory Report
ATT	Advanced Transportation Technology
AVR	Average Vehicle Ridership
AWT	Advanced Water Treatment
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BACM	Best Available Control Measures
BARCT	Best Available Retrofit Control Technology
BCM	Best Available Control Measures for Fugitive Dust Sources
BMPs	Best Management Practices
BPTCP	Bay Protection and Toxic Clean Up Plan
BTU	British Thermal Units
BTU/hr	British Thermal Units per hour
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
Caltrans	California Department of Transportation
CalOSHA	California Occupational Safety and Health Administration
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game

CDWR	California Department of Water Resources
CEC	California Energy Commission
CEMS	Continuous Emissions Monitoring System
CEQA	California Environmental Quality Act
CFCs	Chloroflorocarbons
CFR	Code of Federal Regulations
CH4	Methane
CHMIRS	California Hazardous Materials Incident Reporting System
CHP	California Highway Patrol
CH&SC	California Health & Safety Code
CIWMB	California Integrated Waste Management Board
CMAQ	Community Multi-scale Air Quality
CNEL	community noise equivalent level
CNG	Compressed Natural Gas
CNS	Central nervous system
CO	Carbon monoxide
CO_2	Carbon dioxide
COLA	Cost of Living Adjustment
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
CPFs	cancer potency factors
CUP	Conditional Use Permit
CWA	Clean Water Act
CWAP	Clean Water Action Plan
CWP	California Water Plan
CWMI	Chemical Waste Management Inc.
dBA	decibel
DHS	Department of Health Services
DMV	Department of Motor Vehicles
DOC	Diesel Oxidation Catalyst
DOE	Department of Energy
DOT	U.S. Department of Transportation
DPR	Department of Pesticide Regulation
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
DWR	California Department of Water Resources
ERC	Emission Reduction Credit
EGR	Exhaust Gas Re-circulation
EHS	Extremely Hazardous Substance
EIP	Economic Incentive Program
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERPG	Emergency Response Planning Guideline
^{o}F	Degrees Fahrenheit
FC&WCD	Flood Control & Water Conservation District
Fed/OSHA	Federal Occupational Safety and Health Administration

FGR	flue gas recirculation
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FR	Federal Register
FTEs	full time equivalents
GDFs	gasoline dispensing facilities
GWRS	Groundwater Replenishment System
H_2	Hydrogen
HAP	Hazardous Air Pollutants
HARP	Hotspots Analysis and Reporting Program
HAZOP	hazards and operation process
HCFs	Hydrochlorofluorcarbons
HDV	Heavy Duty Vehicles
HEPA	High-Efficiency Particulate Air
HEV	Hybrid Electric Vehicles
HFP	high flashpoint petroleum
HHV	Higher Heating Value
HI	Hazard Index
HMBP	Hazardous Materials Business Plan
HNO_3	Nitric Acid
HOV	High Occupancy Vehicle
HRA	Health Risk Assessment
HRSA	Health Risk Screening Analysis
HSWA	Hazardous and Solid Waste Act
HMTA	Hazardous Materials Transportation Act
HWCL	Hazardous Waste Control Law
IARC	International Agency for Research on Cancer
ICE	Internal Combustion Engine
IM	Industrial Maintenance
ISO	Independent System Operator
kWh	Kilowatt Hour
^oK	degrees Kelvin
LAER	lowest achievable emission reduction
lbs	pounds
lbs/hr	pounds per hour
LEL	lower explosive limit
LEV	Low Emission Vehicle
LOS	Level of Service
LPG	liquefied petroleum gas
Lpk	Peak sound level
MACT	maximum achievable control technology
maf	million acre-feet
m/s	meters per second
MCLs	Maximum Contaminant Levels
MECA	Manufacturer’s of Emission Controls Association
MEI	maximum exposed individual

MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker
MICR	Maximum Increased Cancer Risk
MMBD	Million Barrels Per Day
MMcfd	Million Cubic Feet per Day
MOP	Manual of Procedures
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSDS	Material Safety Data Sheet
MSW	Municipal Solid Waste
MTC	Metropolitan Transportation Commission
MUD	municipal utility district
MW	megawatts
MWD	Municipal Water District
N_2	Nitrogen
NAAQS	National Ambient Air Quality Standards
nanograms/m^3	nanograms per cubic meter
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
NFC	National Fire Codes
NFPA	National Fire Protection Agency
NH_3	Ammonia
NIOSH	National Institute of Occupational Safety and Health
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NOP	Notice of Preparation
NOP/IS	Notice of Preparation/Initial Study
NOV	Notice of Violation
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NS	No significant impacts
NSDCSD	Napa Sanitation District Collection System Department
NSPS	New Source Performance Standards
NSR	New Source Review
O_3	Ozone
OADP	Ozone Attainment Demonstration Plan
OEHHA	Environmental Health Hazards Assessment
OEM	Original Equipment Manufacturer
OES	Office of Emergency Services
OSHA	Occupational Safety and Health Administration
PAHs	Polynuclear Aromatic Hydrocarbons
PCBF	Perchlorobenzotrifluoride
PCBTF	p-chlorobenzotriflouride
PCE	passenger car equivalents

Perc	Perchloroethylene
PG&E	Pacific Gas and Electric Company
pH	potential hydrogen ion concentration
PM2.5	particulate matter less than 2.5 microns equivalent aerodynamic diameter
PM10	particulate matter less than 10 microns equivalent aerodynamic diameter
POTW	Publicly Owned Treatment Works
PUC	Public Utilities Commission
ppbv	parts per billion by volume
ppm	parts per million
ppmv	parts per million by volume
PRC	Process Related Emissions
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
psia	pounds per square inch absolute
psig	pounds per square inch (gauge)
PSM	Process Safety Management Program
PTFE	Polytetrafluoroethylene
RACM	Reasonably Available Control Measure
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act
REL	Reference exposure level
REP	Risk Evaluation Process
RFG	reformulated fuels gasoline
RMP	Risk Management Plan
RMPP	Risk Management and Prevention Program
ROC	Reactive Organic Compound
ROG	Reactive Organic Gases
ROP	rate of progress
RRP	Risk Reduction Plan
RSF	Risk Screening Fee
RTIP	Regional Transportation Implementation Plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RVP	Reid Vapor Pressure
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Revitalization
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCR	Selective Catalytic Reduction
SCS	Soil Conservation Service
SFEI	San Francisco Estuary Institute
SFR	Specific Findings Report
SIP	State Implementation Plan
SMCLs	Secondary Maximum Contaminant Levels

SNCR	Selective Non-Catalytic Reduction
SO_2	sulfur dioxide
SO_3	Sulfur Trioxide
SOFC	Solid Oxide Fuel Cell
SOx	sulfur oxide
SPCC	Spill Prevention, Control and Countermeasure
SWP	State Water Project
SWMPS	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
Taf	thousand acre feet
TBACT	Best Available Control Technology for Toxics
TCM	Transportation Control Measure
TCE	Trichloroethylene
Tcf	trillion cubic feet
TDM	transportation demand management
TDS	total dissolved solids
TEA	Transportation Equity Act
TIMP	Transportation Improvement and Mitigation Program
TMA	Transportation Management Association
TMDL	Total Maximum Daily Loads
TOG	Total Organic Gases
TPA	Transportation Planning Agency
TPD	Tons per Day
TPH	total petroleum hydrocarbons
TPY	Tons per Year
TSF	Toxic Surcharge Fee
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
UFC	Uniform Fire Code
ULF	Ultra Low Flush
URF	unit risk factor
U.S.	United States
USBR	United States Bureau of Reclamation
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USPS	U.S. Postal Service
USC	United States Code
USCG	United States Coast Guard
ug/l	micrograms per liter
ug/m^3	micrograms per cubic meter
UV	Ultra Violet
UWA	Unified Watershed Assessment
V/C	volume to capacity ratio
VMS	volatile methylated siloxanes

VMT	Vehicle Miles Traveled
VOC	volatile organic compounds
volatiles	purgeable organics
WA	Water Agency
WD	Water District
WRCB	Water Resources Control Board

M:WORD:DBS:2373:Final EIR:BAAQMD NSR Rule FEIR7.doc

APPENDIX A

NOTICE OF PREPARATION

CEQA

NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT FOR ADOPTION OF DISTRICT REGULATION 2, RULE 5: NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

Interested Agencies, Organizations and Individuals:

Subject: Notice is hereby given that the Bay Area Air Quality Management District (BAAQMD) will be the lead agency and will prepare an Environmental Impact Report (EIR) in connection with the project described in this notice. This Notice of Preparation is being prepared pursuant to California Public Resources Code § 21080.4 and CEQA Guidelines Section 15082.

Project Title: BAAQMD Regulation 2: Permits, Rule 5: New Source Review of Toxic Air Contaminants

Project Location: The rule will apply within the BAAQMD, which includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, and the southern portions of Solano and Sonoma counties.

Project Description: The District is proposing to codify the policies and procedures that make up the existing Air Toxics New Source Review (NSR) Program by adopting a new District rule, Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, and a new part to its Manual of Procedures. Amendments to several other District rules are also proposed in order to maintain consistency with Regulation 2, Rule 5. The goal of the District Air Toxics NSR Program is to prevent significant increases in health risks resulting from new and modified sources of toxic air contaminants (TACs) based on preconstruction permit review. The program is also intended to reduce existing health risks by requiring updated control requirements when older, more highly polluting, sources are modified or replaced. District staff completes a site-specific health risk screening analysis (HRSA) as part of the permit evaluation process for any proposed project with TAC emissions that exceed specified de minimis toxic trigger levels. Depending on the results of an HRSA, new and modified sources may be required to control emissions of TACs using the Best Available Control Technology for Toxics, or TBACT. The residual emissions remaining after the use of TBACT are also evaluated to make sure that the health risks for any exposed individual in the surrounding community will not be significantly increased by the proposed project. The existing program also allows the District's Air Pollution Control Officer discretion to consider the degree of uncertainty in the HRSA, along with a number of other factors, in making a risk management decision to issue or deny a permit. The most significant changes in the Air Toxics NSR Program included in the proposed rule are: (1) adding the consideration of acute health risks in HRSAs, (2) requiring TBACT for chronic non-cancer health risks, (3) using updated toxicity values and exposure assessment procedures, and (4) removing "special" project risk limits for dry cleaners.

Probable Environmental Impacts: Codification of the Air Toxics NSR program and the proposed changes to the program is intended to and expected to benefit public health and the environment. However, even though the project is not expected to result in significant environmental impacts, the District has chosen to prepare an EIR to ensure a comprehensive exploration of any potential for impacts.

Response: This notice provides information on the above project and provides you an opportunity to submit comments on potential environmental effects that should be considered in the EIR. If the proposed project has no bearing on you or your agency, no action on your part is necessary. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but ***not later than 30 days*** after receipt of this notice. If you or your agency wishes to submit comments, they may be sent to Scott Lutz, via the contact information below.

Scott Lutz, Air Quality Engineering Manager
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Phone: (415) 749-4676 Fax: (415) 749-4949
Email: slutz@baaqmd.gov
Date: January 26, 2005

APPENDIX B

COMMENTS AND RESPONSES TO COMMENTS RECEIVED ON THE DRAFT EIR

APPENDIX B

FINAL ENVIRONMENTAL IMPACT REPORT

Bay Area Air Quality Management District's
Air Toxics NSR Rule

RESPONSE TO COMMENTS

INTRODUCTION

This Appendix, together with other portions of the Draft Environmental Impact Report (Draft EIR) constitutes the Final EIR for the Bay Area Air Quality Management District's Air Toxic New Source Review Rule, Regulation 2, Rule 5.

The Draft EIR was circulated for a 30-day public review and comment period that ended on May 23, 2005. The Draft EIR is available at the Bay Area Air Quality Management District (BAAQMD), 939 Ellis Street, San Francisco, CA 94109 or by phone at (415) 749-4650. The Draft EIR can also be downloaded by contacting the BAAQMD's web pages at http://www.baaqmd.gov/pln/ruledev/12-12/1212_drEIR_0527.pdf.

The Draft EIR contained a detailed project description, the environmental setting for each environmental resource where the NOP/IS determined there was a potential significant adverse impact, an analysis of the potentially significant environmental impacts including cumulative impacts, project alternatives, and other areas of discussion as required by CEQA. The discussion of environmental impacts included a detailed analysis of air quality, and hazards and hazardous materials.

The BAAQMD received one comment letter on the Draft EIR during the public comment period. The comment letter and responses to the comments raised in that letter is provided in this appendix. The comments are bracketed and numbered. The related responses are identified with the corresponding number and are included following the comment letter.

GOLDEN GATE UNIVERSITY School of Law

Environmental Law and Justice Clinic

May 20, 2005

Scott Lutz
Manager, Toxics Evaluation, Permit Services Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109
FAX: 415.749.4949

Re: BAAQMD Air Toxics New Source Review—Comments on Draft EIR

Dear Mr. Lutz:

On behalf of the Environmental Justice Air Quality Coalition ("EJAQC"), Bayview Hunters Point Community Advocates ("Bayview Advocates"), and Our Children's Earth Foundation ("OCE") (collectively "Commenters"), the Environmental Law and Justice Clinic ("ELJC") submits these comments on the "Draft Environmental Impact Report for the Bay Area Air Quality Management District's Air Toxics NSR Rule," prepared by Environmental Audit, Inc. for BAAQMD, dated April 20, 2005 ("DEIR").

I. Introduction

In 2003, Commenters reviewed the District's initial draft rulemaking for Air Toxics NSR and submitted comments on the proposal, including the District's Initial Study and Proposed Negative Declaration. See Letter to Brian Bateman from ELJC, July 15, 2003 ("2003 Comments"). We hereby incorporate the relevant sections of our 2003 Comments addressing issues under the California Environmental Quality Act, Cal. Pub. Res. Code §21000 *et seq.* ("CEQA") (2003 Comments at 16-24). At that time, we said the District must prepare an EIR due to the potentially significant and adverse environmental impacts of the proposed rules.

The purpose of an EIR is to inform the public and agencies of detailed information about the potential significant impacts that may result from a project and to identify ways to avoid or substantially reduce potential harm. Cal. Code Regs. Tit. 14, §15000 *et seq.* ("Guidelines") §15002(a). An EIR must be "prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." Guidelines §15151.

We are pleased that BAAQMD has prepared this DEIR. However, we believe the DEIR is deficient as it fails to sufficiently analyze potential significant adverse effects including cumulative impacts, it relies on a flawed baseline, and fails to evaluate mitigation and analyze reasonable alternatives that might avoid these impacts.

Mailing Address:
536 Mission Street
San Francisco, CA
94105-2968

Offices:
62 First Street
Suite 240
San Francisco, CA
tel: (415) 442-6647
fax: (415) 896-2450
www.ggu.edu/law/eljc

We believe the DEIR therefore should be revised and re-circulated to correct these deficiencies.

As a preliminary matter, the "notice of completion" of the DEIR (dated April 18, 2005) states that "all supporting documentation" for the DEIR is available from the District. The public notice for the June 15 hearing states that the final regulatory text and final staff report will be available to the public 30 days prior to the hearing. Commenters note the final proposed regulatory text was unavailable to the public until May 13, 2005 (10 days prior to the DEIR public comment deadline). As of May 20, 2005, the District still had not made available to the public a final staff report on the project (just 3 days prior to the public comment deadline). As a result, Commenters were unable to review the full record for the proposed project.

Comment 1

II. DEIR Summary Ignores Known Areas of Controversy

The EIR must contain a summary identifying any "areas of controversy" known to the District, including those raised by the public. Guidelines §15123(b)(2). The DEIR states that no such "areas of controversy" are known to BAAQMD as no comments were received in response to the Notice of Preparation ("NOP") of the DEIR. DEIR at 1-3. However, known "areas of controversy" are not limited to issues identified in response to a NOP. Rather, issues raised by the public in response to the District's Initial Study and Proposed Negative Declaration are in fact "known" to the District. In our 2003 Comments, we identified several potential issues that would qualify as "areas of controversy." For instance, we stated that implementation of the project could result in significant adverse impacts as accumulated "incremental" health risks may be "cumulatively considerable." 2003 Comments at 17-21. In addition, on several occasions between December 2003 and April 2005, representatives met with District officials to discuss issues raised in our 2003 Comments. Further, in March 2004, Commenters presented a list of recommendations related to these issues to the District. Therefore, the DEIR Summary should have identified the main issues raised as "areas of controversy" known to the District.

Comment 2

III. Environmental Setting for Air Quality Impacts Is Inadequate

To properly determine and evaluate the potential impacts of a proposed project, the DEIR must define the "environmental setting," which is a description of the physical environmental conditions in the project area existing at the time the DEIR is prepared. Guidelines §15125(a). Because this setting is normally considered the "baseline" from which anticipated impacts are evaluated and measured for significance, establishing the setting in the DEIR is critical.

The DEIR's description of "health effects" of toxic air contaminants ("TACs") in the "environmental setting" for air quality (Section 3.4.1) is insufficient. First, it fails to discuss existing health effects in a way that would enable potential impacts to be evaluated for significance. See DEIR at 3-17. The project includes issuance of permits for new and modified TAC sources. Human health could be significantly adversely affected by additional TAC emissions in the environment. In addition to the risk of cancer, there are numerous non-cancer risks posed by exposure to TACs. The "environmental setting" includes estimated ambient "cancer risk" for 2000. DEIR at 3-17. For "non-cancer risks" of TACs, the DEIR merely states that a "hazard index" represents the estimated exposure level at which health effects are not expected. DEIR at 3-17. There is no effort to characterize either the *type* or *extent* of existing

Comment 3

"non-cancer risks," however. As a result, it is impossible to consider potentially significant effects, particularly those that might be cumulatively considerable as a result of accumulated TAC exposures. In other words, the DEIR contains no effective baseline for existing health conditions from which the significance of the proposed project's impacts can be evaluated.

Second, while the "environmental setting" for air quality generally describes the types of emission sources in the region, there is no specific information about stationary sources and their associated health risk levels. The DEIR includes no information about the amount of toxic chemicals emitted by existing point and area sources, or about the locations of any of these sources. DEIR at 3-13-14. Consequently, the "environmental setting" includes no discussion about locations of potential toxic "hot-spots"—areas affected by multiple pollution sources—or about particularly vulnerable communities or sub-populations in the area. There is no discussion of areas known to be heavily impacted by stationary and mobile source pollution, such as Richmond, Bayview-Hunters Point or West Oakland, for instance.[1] There is no consideration of how the project may contribute to such disproportionate impacts. Indeed, CEQA Guidelines recognize that "the significance of an activity may vary with the setting," Guidelines §15064(d), *i.e.,* what might be appropriate in one setting might not be appropriate in another. As a result, it is impossible to evaluate the potential significant adverse impacts of the proposed project.

Comment 3 cont.

IV. The DEIR Fails To Properly Evaluate Potentially Significant Air Quality Impacts

The DEIR's analysis of potential significant adverse impacts is deficient because it uses an improper baseline, it fails to define appropriate "significance criteria" and its illegal "piecemeal" approach ignores cumulative impacts.

A. Determination of Significance—Generally

An EIR must identify and focus on the "significant" effects of a project. See *e.g.,* Guidelines §15162.2(a). The agency's determination of significance must be based on substantial evidence "in light of the whole record." CEQA §21082.2(a); Guidelines §15064(a)(1). A project may have a "significant" impact if the record before the agency contains "substantial evidence" that supports a "fair argument" that the project may have a significant environmental effect. See *e.g, No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68, 75; *Gentry v. City of Murrieta* (1995) 36 Cal. App. 4th 1359, 1399-1400. "Substantial evidence" includes "facts, reasonable assumptions predicated on facts, and expert opinion supported by facts." CEQA §21080(e)(1); Guidelines §15064(f)(5). In making this determination, the agency must consider "direct" and "reasonably foreseeable indirect" changes that could be caused by the project, "giving due consideration to both the short-term and long-term effects." Guidelines §§15064(d); 15126.2(a). This includes evaluation of "health and safety problems caused by the physical changes," as well as "irreversible damage." Guidelines §15126.2(a) & (c).

---

[1] In discussing the "project location," the DEIR states that due to climate and topology, there is a "reduced potential" for accumulated build-up of air pollutants "along the coast." DEIR at 2-5-6. But this statement is unsupported and the "environmental setting" does not address the issue.

B. The DEIR Fails to Define Proper Significance Criteria for Air Quality Impacts & The Illegal Piecemeal Approach Ignores Cumulative Risks

The EIR must evaluate the significance of the full range of a proposed project's impacts, including all phases of project implementation. Guidelines §15063(a)(1). Because the project is a rulemaking for the District's Air Toxics NSR program, it includes permit decisions under the proposed rules. The DEIR attempts to define "significance criteria" for evaluating the air quality impacts of the project (Section 3.4.2). However, the DEIR defines "significance criteria" only for "project operations"—*i.e.,* the proposed risk limits for *individual* permits. There are no criteria for evaluating the project *as a whole*. See DEIR at 3-22, Table 3.4-8.

Limiting the significance criteria in this way constrains the scope of analysis to individual elements of the proposed project and avoids analysis of the cumulative impact of permit decisions made over the life of the project. The stated criteria are inappropriate for the purpose of analyzing the proposed project's impacts, as they provide no means to measure the significance of the full impact of project approval. As a result, there are no criteria to guide the determination of significance even where such a finding is required by law. Specifically, the "significance criteria" fail to include criteria for measuring impacts that may be "individually limited but cumulatively considerable" or impacts that will cause substantial harm to human health, either directly or indirectly. See Guidelines §15065(a)(3) & (4).

Comment 4

Second, the absence of appropriate "significance criteria" creates a further problem in the DEIR's discussion of project alternatives that were rejected as "infeasible" (Section 4.2). According to the DEIR, one reason for rejecting an alternative that would include "cumulative risk assessment" is that "[n]ew thresholds would need to be developed that would encompass total risk levels rather than project-specific risk levels." DEIR at 4-1. Perhaps this explains why District made no effort to evaluate the cumulative impacts of the project with regard to TACs. As discussed further below, however, the DEIR can not avoid analyzing the severity of the problem by ignoring effects which, in isolation, may appear insignificant, but collectively may be quite significant. Rather, the DEIR must sufficiently analyze the "collective effect" or cumulative impact of the project. See *e.g., Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 721 ("*Kings County*").

The District's definition of "significance criteria" results in an illegal "piecemeal" approach to project review under CEQA. This prevents a thorough evaluation of cumulative project impacts. A focus on "incremental" effects of future related projects or activities isolates and "piecemeals" individual effects, and "runs counter to the combined approach that CEQA cumulative impact law requires." *Communities for a Better Environment v. Cal. Res. Agency* (2002), 103 Cal. App. 4th 98, 121 ("*Cal. Res. Agency*").

C. The DEIR Fails to Use the Appropriate Baseline to Determine Significance

In evaluating potential significant "environmental impacts" for air quality, the DEIR improperly relies on the wrong "baseline." In particular, the DEIR confuses the "baseline" (*i.e.,* the existing conditions at the time of preparation) with the "no project" alternative (*i.e.,* the impacts that would continue under the existing toxics policy). See DEIR Section 3.4.3.

Comment 5

As discussed above, the "environmental setting" should be considered the "baseline" from which potential impacts may be evaluated and measured for significance. California law is clear that the EIR must report on the proposed project's impacts on the existing environment. *Environmental Planning and Information Council v. County of El Dorado* (1982) 131 Cal. App. 3d 350, 352 ("*EPIC*"); Guidelines §§15125(a); 15126.2(a). The EIR should not analyze impacts to an existing *plan or policy*, but rather must analyze impacts to existing *environmental conditions*. The *EPIC* Court's ruling was codified in CEQA Regulations section 15125. Additional amendments have further clarified that impacts are to be assessed against the "existing physical conditions in the affected area" at the time the NOP is published. Guidelines §15126.2(a). "These amendments reflect and clarify a central concept of CEQA, widely accepted by the courts, that the significance of a project's impacts cannot be measured unless the EIR first establishes the actual physical conditions on the property." *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal. App. 4th 99, 125 (citing *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 953 ("*Amador*"); *EPIC*, 131 Cal. App. 3d at 354; *City of Carmel-by-the-Sea v. Bd. of Supervisors* (1986) 183 Cal. App. 3d 229. "In assessing the impact of the [project], the local agency must examine the potential impact of the [project] on the existing physical environment; a comparison between the proposed [project] and the existing general plan is insufficient." *Christward Ministry v. Sup. Ct.* (1986), 184 Cal. App. 3d 180, 187 (citing *EPIC,* 131 Cal. App. 3d at 358).

Comment 5 cont.

The CEQA Guidelines properly maintain the distinction between the "baseline" and the "no project" alternative. The DEIR must evaluate the "no project" alternative to compare the impacts of approving or not approving the project. But "[t]he no project alternative is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125)." Guidelines §15126.6(e)(1). Here, the "no project" alternative is *not* identical to the "baseline" because the "no project" alternative assumes that permits will continue to be issued under the existing policy, while the "baseline" establishes current conditions that are presumed to remain in existence, with no added pollution. Furthermore, where the existing policy ("no project" alternative) has never been subject to final CEQA review before adoption, it is inappropriate to use this as the "baseline." *Benton v. Bd. of Supervisors* (1991) 226 Cal. App. 3d 1467, 1477 n.10 (distinguishing *EPIC* as the proposed project was merely a modification of a prior project that had undergone final CEQA review).

Here, the District's Air Toxics NSR policy has never undergone CEQA review—*i.e.,* its effects have never been fully evaluated or measured for potential significance to human health or the environment, nor have any significant effects been mitigated or alternatives analyzed. Therefore, the District can not use the existing policy as the baseline for the purpose of determining significance of the new proposed rules.

To evaluate potential significant effects, the DEIR should therefore analyze impacts to existing environmental conditions as of January 31, 2005 (date the NOP was published). Instead, the DEIR relies on an improper "baseline" as it compares the impacts of the proposed rules to impacts that would continue under the existing policy ("no project" alternative). See DEIR Section 3.4.3. For instance, the DEIR's analysis of "project-specific" impacts for "non-criteria pollutants" (or TACs) is flawed as it considers only the potential benefits that may result from the proposed rules, as compared to the impacts of the existing policy. The DEIR concludes that "[t]he proposed project will provide beneficial impacts to public health by reducing exposure to TAC emissions." DEIR at 3-29. This presumes either that (1) permits for new and modified TAC sources issued under the new rules should only be compared to the existing policy, or (2) there will be no additional TAC emissions from new or modified sources and no new exposures, so benefits will occur through TAC reductions in ambient air. Since the second presumption is inconsistent with the project, the DEIR's conclusion must be based on the first. There is no discussion or analysis of the potential impacts of *newly added* TAC emissions to the existing environment, however, either in specific areas or the region as a whole.

Comment 5 concluded

Indeed, there is evidence that levels of at least certain TACs actually increased between 2000-2002, the last two years for which the District has analyzed TAC data. See Memo from Dr. Ken Kloc, Ph.D., to ELJC (May 20, 2005) (*attached*).

The DEIR provides limited historical data on the number of risk screening analyses conducted by the District between 1987-2004. DEIR at 3-15. For instance, the District conducted 403 risk screenings for TAC permit applications in 2004, and 432 in 2003. *Id.* Yet the discussion of air quality impacts for TACs includes no data or analysis regarding how many applications were for *new* sources or to *increase throughput* at existing sources (which add new pollution to the environment)—as opposed to applications for upgrades or modifications (which might reduce existing levels of TACs). DEIR at 3-29. There is no data or analysis regarding the number of applications that will result in *increased* TAC emissions in an affected area. Further, there is no data or analysis regarding the *types* and *locations* of these sources such that potential impacts could be measured for significance. Indeed, CEQA recognizes that the measure of significance may vary with the setting. Guidelines §15064(d); *Los Angeles Unified School District v. City of Los Angeles* (1997) 58 Cal. App. 4th 1019, 1026. Therefore, the DEIR's conclusion that the proposal is not expected to result in significant adverse impacts but rather will provide air quality benefits is unfounded, not supported by the record, and is clearly based on a comparison to an improper baseline (the "no-project" alternative).

Similarly, as discussed further below, the discussion of cumulative impacts for TACs is also inadequate. Based on the presumption that "beneficial impacts" will result, the DEIR merely concludes that there will be no significant adverse cumulative impacts. DEIR at 3-30. The DEIR provides no evidence or analysis to support this conclusion.

D. The Analysis of Cumulative Impacts is Deficient

A project has "significant" impacts if its effects are "individually limited but cumulatively considerable"—*i.e.,* if its "incremental effects" are "considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effect of probable future projects." Guidelines §§15065(a)(3); 15064(h)(1); 15355; CEQA §21083(b). An EIR must discuss the cumulative impacts of a proposed project when its "incremental" effects are "cumulatively considerable." Guidelines §15130(a). All phases of project implementation must be considered. Guidelines §15063(a)(1). "It is vitally important that an EIR avoid minimizing the cumulative impacts. Rather, it must reflect a conscientious effort to provide public agencies

Comment 6

and the general public with adequate and relevant detailed information about them." *Kings County,* 221 Cal. App. 3d at 723 (citations omitted). Where the agency limits the scope of cumulative impacts analysis and its record is incomplete regarding other developments in the area to make a determination, the EIR is inadequate. *Id.* at 724; see also *Amador*, 76 Cal. App. 4th at 946 (final EIR that "omits material necessary to informed decisionmaking and informed public participation" subverts CEQA and the "error is prejudicial") (citations omitted).

As discussed above, the DEIR concludes the proposed project is not expected to result in significant adverse impacts, but rather will provide air quality benefits. DEIR at 3-29. Consequently, the DEIR concludes the project will not result in significant adverse cumulative impacts, but rather will provide a "public health benefit due to reduced exposure to TACs." DEIR at 3-30. The DEIR's discussion of "cumulative impacts" for air quality (Section 3.4.5) is merely conclusory and contains no analysis or evidence to support its conclusion.

The conclusory nature of the cumulative impacts analysis, not supported by evidence or analysis, contravenes CEQA's requirements. See *Kings County,* 221 Cal. App. 3d 692 (a conclusion that impacts will be insignificant must be supported by rigorous analysis and concrete substantial evidence). "Conclusory comments in support of environmental conclusions are generally inappropriate." See *Laurel Heights Improvement Assoc. of San Francisco, Inc. v. Regents of the University of California* (1988) 47 Cal. 3d. 376, 404. In *Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Assoc.* (1986) 42 Cal. 3d 929, the court held that "the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." In a final EIR, "conclusory statements, unsupported by factual information, will not suffice." *Amador*, 76 Cal. App. 4th at 945 (citations omitted). Comment 6 cont.

In *Citizens to Preserve the Ojai v. Board of Supervisors*, the court said that the cumulative impact analysis must be interpreted "so as to afford the fullest possible protection of the environment within the reasonable scope of the statutory and regulatory language." 176 Cal. App. 3d 421, 431-432 (1985) (citing *Friends of Mammoth v. Bd. of Supervisors* (1972) 8 Cal.3d. 247, 259; see also *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal. App. 3d 61 ("*San Franciscans*") (EIR deficient because cumulative impact analysis did not "afford the fullest possible protection to the environment").

In *Whitman v. Board of Supervisors*, the Court found three elements necessary for an adequate cumulative impacts discussion: "(1) a list of projects producing related or cumulative impacts; (2) a brief but understandable summary of the expected environmental impacts to be produced by those projects with specific reference to additional impact information where such information is available; and (3) a reasonable analysis of the combined or cumulative impacts of all the projects." 88 Cal. App. 3d 397, 408 (1979) ("*Whitman*") (EIR was clearly deficient as cumulative impacts discussion was just one sentence) (citations omitted). The burden of producing the relevant data for an adequate cumulative impact analysis in the DEIR is on the District, not the public. *Kings County*, 221 Cal. App. 3d at 724.

Here, the DEIR's "cumulative impacts" analysis is deficient in a number of ways. The DEIR's cursory conclusion that the project will not result in significant adverse cumulative impacts from TAC exposure but rather will provide "beneficial impacts" is not supported. First, there is no analysis of the impact of new TAC emissions to the existing environment. Second, the DEIR fails to consider the potential for localized concentrated impacts due to exposure to multiple sources. Third, the DEIR ignores the District's cumulative risk modeling analysis indicating potentially significant cumulative impacts. Fourth, the DEIR ignores potential significant cumulative impacts that could result when considering TAC emissions together with criteria pollutants and other emissions. Finally, the DEIR fails to state the basis for concluding that additional "incremental" effects are not "cumulatively considerable." Guidelines §15130(a).

Comment 6 concluded

1. The DEIR Ignores Impact of Additional Pollution to Existing Environment

As described in the DEIR's "environmental setting" for air quality (Section 3.4.1), current types of emissions sources include stationary and mobile sources. DEIR at 3-13-14. For stationary sources, the District maintains a database for "roughly 20,000 different [point] sources" at "nearly 4,000 facilities" throughout the Bay Area. DEIR at 3-13. There are thousands of small but highly toxic "area sources" diesel generators, gasoline stations and dry cleaners in close proximity to Bay Area residents and workers. "Area sources are stationary sources that are individually very small, but that collectively make a large contribution to the inventory." DEIR at 3-13. For instance, there are about 635 dry cleaning facilities with 675 machines that emit an estimated 214 tons per year of perchloroethylene (or perc) per year. DEIR at 3-21. Existing dry cleaning facilities are permitted to operate with health risks of up to 100 per million for cancer, and may continue to do so unless and until a source is modified.

Additionally, District records indicate that as of February 2005, there are 4,367 stationary diesel engines (not including those that are exempt from District regulations), and 2,635 gasoline service stations permitted in the Bay Area.[2] These area sources are currently the two most common types of sources evaluated for air toxics risks. BAAQMD Draft Staff Report at 11.

Comment 7

Although the scope of the project covers stationary sources, the DEIR should also analyze the impacts of other sources. Mobile source emissions also contribute to existing health risks, particularly for those in close proximity to traffic from roads and facilities. While the DEIR notes a reduction in calculated inhalation cancer risk in the ambient air between 1995 and 2002, this figure does not include cancer risks from diesel exhaust. DEIR at 3-19. In addition, the DEIR notes the majority of this decline is "largely" attributable to reductions achieved in 1996 through CARB measures. DEIR at 3-17. CARB estimated that diesel particulate matter (PM-10) was responsible for 71.2% of ambient cancer risk in 2000.

Additionally, as noted above, there is evidence that levels of at least certain TACs actually increased between 2000-2002, the latest years for which the District has analyzed TAC data. See Memo from Dr. Ken Kloc, Ph. D., to ELJC, May 20, 2005. In fact, the District's Annual TAC

[2] District area source databases provided by Scott Lutz, BAAQMD, to Ken Kloc, ELJC, on Feb. 8, 2005 (Gasoline Dispensing Facilities) and Feb. 22, 2005 (Stationary Diesel Engines). It appears that these sources are not included in the District's inventory.

Reports indicate increased emissions of total TACs reported between 2001 and 2002.[3] Commenters are unable to determine whether total TAC emissions from stationary sources are in fact increasing, or whether these figures are attributable to a greater number of TACs being measured, or a greater number of reporting facilities.

Under the project, any permits for new or modified TAC sources issued by the District may add to the overall existing risk. According to recent permitting history, the District conducted risk screening analyses for 403 TAC permit applications in 2004, and 432 in 2003. DEIR at 3-15. However the DEIR fails to evaluate the impacts of *additional* TAC emissions to human health or the existing environment. While the District posits that the "incremental" effects of such permits will not be cumulatively significant because individually they are not significant, this line of reasoning directly contradicts the intent and mandate of CEQA.

The District's focus on "incremental" effects, see *e.g.,* DEIR at 3-22, Table 3.4-8,[4] results in a "piecemeal" approach that would "contravene the very concept of cumulative impacts" as its application "would turn cumulative impact analysis on its head by diminishing the need to do a cumulative impact analysis" as a problem worsens. *Cal. Res. Agency,* 103 Cal. App. 4th 98 at 117. "Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum." *Cal. Res. Agency*, 103 Cal. App. 4th 98, 114; see also *Whitman,* 88 Cal. App. 3d 397, 408. The District's approach attempts to gauge potential impacts of TAC emissions in a "vacuum."

Comment 7 cont.

In evaluating whether there may be "cumulatively considerable" impacts, CEQA requires consideration of all potential individual effects, as "environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact." *Cal. Res. Agency,* 103 Cal. App. 4th at 114 (citing *Kings County*). Air pollution may be the best example of the problem of "incremental degradation," where thousands of sources together may "cause a serious environmental health problem." See *Kings County,* 221 Cal. App. 3d at 720. "Because of the critical nature of this concern, courts have been receptive to claims that environmental documents paid insufficient attention to cumulative impacts." *Id.*

The relevant question is *not* whether a potentially incremental effect is significant compared to a pre-existing problem, but rather whether any *additional adverse* effects should be considered significant in light of the serious nature of a pre-existing problem. *Cal. Res. Agency*, 103 Cal. App. 4th at 118, 120 (citing *Kings County*, where EIR improperly used magnitude of pre-existing ozone problem in air basin to trivialize project impact). "In the end, the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant." *Id.* Therefore, the DEIR must evaluate whether the impact of new emissions may be significant considering existing levels of pollution.

[3] Total pounds of reported TACs per year: 2000: 6,810,013 lbs (70 pollutants); 2001: 6,766,000 lbs. (75 pollutants); 2002: 6,975,000 lbs (77 pollutants). BAAQMD Annual TAC Reports, Appendix B-3 (2001); Appendix B-4 (2003, 2004).

[4] Table 3.4-8 lists "Air Quality Significance Thresholds for Project Operations" (for individual activities).

In addition, the DEIR fails to state the basis for concluding that additional "incremental" effects are not "cumulatively considerable." Guidelines §15130(a).

Comment 7 concluded

2. The DEIR Ignores Localized Concentrations of Pollution

The DEIR's conclusion that no significant adverse cumulative impacts will result is not supported by fact or analysis. The DEIR claims the project will result in "beneficial impacts" due to decreased TAC exposures because dry cleaners will be regulated more stringently, additional TACs will be regulated, and certain assumptions used in risk assessments will be more protective. DEIR at 3-30. But no data or analysis is provided to support the assertion that regulating new TACs will lead to additional controls on existing sources. In fact, existing sources will only be subject to the new rules by applying for a permit to modify or expand. In addition to ignoring the potential impacts of added pollution from new or expanded sources, the DEIR ignores the localized adverse impacts that may result from even higher pollutant concentrations in certain areas.

However, even if the proposed project includes measures that will reduce exposures to specific TACs, the DEIR fails to evaluate the potential for localized cumulative impacts that some communities could face as a result of the project. For instance, while the average "ambient" cancer risk in the region may in fact be decreasing, the DEIR ignores the potential for significant impacts from accumulated risks due to exposures to multiple sources. Under the proposed rules, TAC emission sources could become more geographically concentrated in some neighborhoods, resulting in significant *localized* pollution *increases* at the same time that *average* pollution levels in the region may be decreasing. Geographic concentration could arise from systematic causes or could also happen randomly. In either case, the proposed project does not contain any measures that would prevent the concentration of sources or the creation of toxic "hot-spots." Therefore, the proposed project could result in significant adverse health impacts.

Comment 8

We recently discovered an example of this problem in Southeast San Francisco. Using data obtained from the District, we identified a single building in the Bayview community where seven communications or technology companies are located at the same street address, along with their substantial diesel backup generator systems. See Table below & Memo from Ken Kloc, Ph.D., to ELJC, May 20, 2005. Each of these companies was likely permitted by the District as a single isolated source of pollution, which means that each facility was allowed to apply for a permit to emit diesel particulate matter up the regulatory cancer risk level of 10 in one million. The cumulative impact of the combined pollution of these seven companies was not considered in the District's permitting process. As a result, the health risk emanating from this single building could be *several times* higher than the proposed level of "significance." While this example represents permit proceedings under the District's current toxics policy, it is reasonable to assume that cumulative exposure problems such as this will continue to occur under the proposed project because the rules do not contain any provisions that would mitigate environmental impacts under similar circumstances. The Table below provides information about the location and operational limits on these diesel backup generators.

Co-located Diesel Backup Generators in Southeast San Francisco[5]				
Facility	Facility Address	Location Coordinate (UTM E)	Location Coordinate (UTM N)	Yearly Operation (Hp-hours)
San Francisco Wave Exchange	200 Paul Avenue & 400 Bldg F, Mezz	553106	4175226	1102100
Qwest Communications Corporation	200 Paul Avenue	553106	4175226	148096
RCN Telecom Services, Inc.	200 Paul Avenue	553106	4175226	185000
XO Communications, Inc.	200 Paul Avenue	553106	4175226	45864
Cingular Wireless	200 Paul Avenue, Bldg D, Suite 100	553068	4175220	37388
Verizon Global Networks	200 Paul Avenue	553112	4175209	29650
Wiltel Communications	200 Paul Avenue	553112	4175209	587000

Comment 8 concluded

Our 2003 Comments indicated that the proposed rules may not protect the health of the most sensitive and over-exposed individuals, communities and sub-populations. The example above is indicative of the potential for this problem. Even the District's "Initial Study" under CEQA acknowledged that the project may "expose sensitive receptors to substantial pollutant concentrations" but then concluded that potential impacts are "less than significant" without any discussion. BAAQMD Initial Study at D-5. The DEIR fails to explain how individuals' aggregate exposures to "substantial pollutant concentrations" will have "less than significant" effects. Lacking comprehensive assessment and consideration of cumulative health risks, the DEIR fails to evaluate whether the project may result in significant and adverse human health impacts due to accumulated exposures to "substantial pollutant concentrations."

[5] Information is based upon the District's electronic database of Stationary Diesel Engines, provided by Scott Lutz, BAAQMD, to Ken Kloc, ELJC (Feb. 22, 2005). See Memo from Ken Kloc, Ph.D., to ELJC, May 20, 2005.

3. Cumulative Risk Modeling Indicates Potentially Significant Impacts

The DEIR should have included the District's recent cumulative risk modeling analysis[6] discussed in the Draft Staff Report to provide a more complete discussion of the project's potential for significant cumulative impacts. District staff conducted limited air dispersion modeling of TAC emissions in several localized cumulative exposure scenarios, including: (i) four gas stations at a single intersection, (ii) multiple diesel back-up generators at a location, and (iii) a gas station-dry cleaner-furniture stripper-diesel BUG combination. Cumulative exposures were elevated above individual source exposures at the neighborhood level in these multiple-source scenarios, and were more than twice as high for one of the configurations. The cumulative risk posed by these common source scenarios ranged from 1.4 to 2.2 times higher than the maximum allowable individual risk levels. BAAQMD Draft Staff Report at 42.

Given that many sources under the proposed project will be permitted to emit pollution up to the significance "threshold" of 10 in one million cancer risk or a hazard index of 1.0,[7] it is reasonable to assume the project could result in significant cumulative impacts. However, the DEIR fails to present or discuss this study. It includes no analysis or evaluation of potentially significant impacts that are known to the District. Further, there is no discussion of potential mitigation or alternatives to avoid or substantially lessen any significant impacts.

Comment 9

4. The DEIR Ignores Potential Impacts of Other Types of Air Pollution

Finally, the cumulative impacts analysis is deficient because it fails to evaluate potentially significant impacts that could arise from the cumulative effects of TAC emissions from a permitted source, when considered together with criteria pollutant emissions from the same source, or in combination with TACs or criteria pollutants from other sources. For example, regional ozone pollution in some areas may come close to the health-based ozone standard. Likewise, particulate matter concentrations in the Bay Area rise close to and above the health-based standards during certain times of the year, and some neighborhoods in the immediate vicinity of freeways have elevated levels of mobile source pollutants such as diesel particulate matter, butadiene, and carbon monoxide. Under the proposed project, the District will ignore this fact when reviewing TAC permit applications. Thus, the proposed project could allow situations where toxic emissions from the permitted source, considered alone, are below regulatory thresholds, but exceed the thresholds when these emissions are considered in combination with pollution from other sources. Such considerations indicate the proposed rule could produce significant adverse impacts. See Memo from Ken Kloc, Ph.D., to ELJC, May 20, 2005. The DEIR fails to address the potential for such possibility of such impacts.

Comment 10

---

[6] See "Scenario-Based Cumulative Impact Assessment," Toxics Evaluation Section, BAAQMD, March 2003. Risks were calculated for the following scenarios: (i) four gas stations at a single intersection, (ii) multiple diesel back-up generators ("BUGs") at a location, and (iii) a gas station-dry cleaner-furniture stripper-diesel BUG combination. See also BAAQMD Draft Staff Report (April 2003) at 42.

[7] Table 3.4-8 of the DEIR defines the following "significance thresholds" for toxic air contaminants: a cancer risk of 10 in 1 million, and a hazard index greater than or equal to 1.0, for a maximally exposed individual. These are also the maximum acceptable risk levels proposed for the Air Toxics NSR rule.

V. The DEIR Fails to Sufficiently Discuss Mitigation Measures

CEQA requires agencies to adopt all feasible mitigation measures or alternatives to avoid or substantially lessen significant adverse impacts of projects. CEQA §§21002; 21081(a); Guidelines §§15002(a)(3); 15021(a)(2); 15091(a)(1). The EIR must describe all feasible measures which could minimize significant impacts. Guidelines §15126.4(a)(1). The DEIR's discussion of mitigation measures is deficient in at least two ways.

First, failure to analyze mitigation measures is inappropriate as the project may result in significant or cumulatively significant adverse impacts. See CEQA §§21001 & 21081(a); Guidelines §§15002(a)(3) & 15021. As discussed above, the DEIR's discussion of cumulative impacts merely concludes without analysis that there will be no significant adverse effects from TAC exposures. A proper cumulative impacts analysis would have indicated that significant adverse impacts may result, particularly in certain settings. Therefore, the EIR should have discussed feasible mitigation measures to avoid or substantially lessen any significant adverse impacts from TAC exposure. In addition, if these particular potentially significant impacts are not mitigated to insignificance, the DEIR should have made findings regarding a statement of overriding considerations. See Guidelines §15093. No such findings or statement is provided.

Comment 11

Specific measures have been previously suggested by Commenters, including a cumulative risk "cap" to assure there will be no cumulative health risks exceeding a particular significance "threshold." Other potential measures include consideration of the additive toxic effects of criteria pollutants when evaluating risk, or requiring contemporaneous facility-wide risk reductions, such as offsets. See Recommendations to BAAQMD APCO, March 2004 (*attached*).

Second, the DEIR suggests that "secondary impacts from construction activities" could be significant without project-specific mitigation measures, which are "expected" to be implemented. DEIR at 3-21-22. However, mitigation measures must be fully enforceable, for instance, through permit conditions or some legally-binding instrument. Guidelines §15126.4(a)(2). The DEIR's recommendation that such measures "should" be implemented is not enforceable. Consequently, the DEIR's conclusion that there will be no cumulative impacts associated with increased construction activities due to mitigation, DEIR at 3-30, relies on the flawed presumption that any impacts will be reduced through enforceable mitigation measures. While in some cases, feasible mitigation measures may involve the adoption of measures outside the scope of the project, such measures still must be made enforceable by ordinance or regulation. Guidelines §15130(c).

VI. The DEIR Fails to Analyze a Full Range of Reasonable Alternatives

CEQA requires agencies to adopt all feasible mitigation measures or alternatives to avoid or substantially lessen significant adverse impacts. CEQA §§21002; 21081(a); Guidelines §§15002(a)(3); 15021(a)(2); 15091(a)(1). The EIR must describe and evaluate a "range of reasonable alternatives" to the project that would "feasibly attain most of the basic objectives" but would "avoid or substantially lessen" any significant adverse impacts. Guidelines §15126.6(a); CEQA §21100(b)(4).

Comment 12

The analysis of alternatives is a critical element of an EIR. The court in *Citizens of Goleta Valley v. Bd. of Supervisors* said that "the core of an EIR is the mitigation and alternatives sections." 52 Cal.3d 553, 564 (1990). The EIR must discuss a sufficient range of alternatives "that will foster informed decision-making and public participation." Guidelines §15126.6(a) & (f). The reasons for selecting alternatives for analysis must be stated, and the EIR must "evaluate the comparative merits" of each alternative. Guidelines §15126.6(a). The EIR must include "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." Guidelines §15126.6(d). Thus, the EIR must provide information sufficient to understand the impacts and to permit an informed choice among alternatives. See *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d. 376 ("*Laurel Heights*"). "Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process." *Laurel Heights,* 47 Cal.3d. at 404.

Comment 12 concluded

Just as the DEIR fails to adequately analyze the project's potentially significant cumulative impacts, so too it fails to properly assess a full "range of reasonable alternatives" that would mitigate such impacts. First, the EIR rejects outright consideration of two broad alternatives, without considering whether certain discrete elements might be appropriate alternatives to mitigate significant adverse impacts. Second, in its consideration of alternatives, the DEIR ignores the project's potential for any adverse impacts to human health.

A. The DEIR Rejects Alternatives Without Considering Whether Discrete Elements are Reasonable and Feasible

The EIR must identify alternatives the agency rejects as "infeasible" and its analysis must explain in "meaningful detail" the relevant reasons and facts supporting the determination. Guidelines §15126.6(c); *Marin Mun. Water Dist. v. KG Land Cal. Corp.* (1991) 235 Cal. App. 3d 1652, 1664.

The DEIR rejects as "infeasible" two alternative approaches to the project (Section 4.2). One alternative is to use "cumulative risk assessment" and the other is to incorporate the "precautionary principle." DEIR at 4-1-2. The first alternative is rejected as infeasible due to complexity, cost, and the lack of guidance for implementation. DEIR at 4-1. Additional cost, however, is not necessarily an appropriate reason for rejecting an alternative. See Guidelines §15126.6(b) & (c). Because the purpose is to avoid or substantially lessen potentially significant impacts, alternatives that would be more costly must be considered. Guidelines §15126.6(b). "Environmentally superior alternatives must be examined whether or not they would impede to some degree the attainment of project objectives." *Kings County,* 221 Cal. App. 3d at 736-37.

Comment 13

The "rule of reason" requires the EIR to consider alternatives that would avoid or substantially lessen any significant impacts and to analyze in detail those that "could feasibly attain most of the basic objectives of the project." Guidelines §15126.6(f). While "economic viability" may be a factor, this alone may not limit the scope of alternatives. Guidelines §15126.6(f); *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553; see also *Save Our Residential Environment v. City of West Hollywood* (1992) 9 Cal. App. 4th 1745, 1753, fn.1.

Moreover, the DEIR fails to analyze whether specific, discrete, reasonable elements of these broad approaches would be appropriate and feasible to avoid or lessen significant impacts. As the DEIR states, CEQA alternatives typically "are developed by breaking down the project into distinct components…and varying the specifics of one or more components." DEIR at 4-1. Yet the DEIR ignores this methodology when discussing alternatives that could mitigate potentially significant cumulative impacts. By rejecting the first alternative approach, which combines several distinct components, the DEIR rejects numerous potential alternatives, including cumulative risk assessment of "all sources within the entire facility, adjacent facilities within the community and includ[ing] mobile sources in the vicinity of the community." DEIR at 4-1. The DEIR dismisses these three elements in a single stroke, without analyzing the feasibility of any one, or without "varying the specifics of one or more components."

For example, the DEIR could have discussed an alternative that considered the cumulative impact of all sources within the permit applicant's facility (*i.e.,* not considering adjacent facilities or mobile source pollution). These limits may already be evaluated for certain facilities under AB2588, the Air Toxics Hot Spots Act. Another single and more modest change would be to consider risks from operations of multiple companies that are located at the same address (see Section IV.D.2 above). Yet another alternative could be developed that considered cumulative point source risk within a small buffer zone around a new source. Since the District's own cumulative risk modeling analysis indicates the radius of potential cumulative impact around many point sources is quite limited, any one permitting decision would typically require evaluation of a limited set of sources in the immediate vicinity of the applicant's facility.

Comment
13 cont.

In addition, the DEIR should have considered other reasonable measures as feasible alternatives to mitigate any additional health risks, such as contemporaneous facility-wide risk offsets, for instance. Several such recommendations were provided by Commenters in 2003 and 2004. See Recommendations to BAAQMD APCO, March 3, 2004. Commenters further note that some of these methods are already utilized by the District. For instance, area-wide assessments for specific pollutants are commonly prepared for planning purposes under the federal Clean Air Act. Moreover, as indicated by its cumulative risk modeling analysis, the District is capable of conducting at least some form of cumulative risk evaluation.

By ignoring the potential feasibility of lesser measures that could address some aspects of the cumulative impacts problem, the DEIR inhibits informed decision-making and public participation. Without sufficient analysis of reasonable and feasible alternatives that could mitigate potential significant cumulative impacts and attain the project objectives, "meaningful evaluation" of the DEIR is not possible. Guidelines §15126.6(a) & (d). Therefore we request that the DEIR be revised and re-circulated to correct these deficiencies.

B. The DEIR Alternatives Analysis Ignores Potential Adverse Impacts to Human Health

As with the "significance" determination for air quality discussed above, the DEIR's "alternatives analysis" (Section 4.4) is flawed as it operates on the presumption that only "beneficial impacts" to human health will result from the project. DEIR at 4-5. So too is the "comparison" of alternatives (Section 4.5). DEIR at 4-9. The DEIR plainly ignores the potential for *any* adverse impacts to human health from the project, which includes issuance of permits for new and modified TAC sources.

The alternatives analysis is distorted by an improper baseline and inadequate cumulative impacts analysis. As discussed above, proper analysis would have indicated that potentially significant and adverse impacts could result from the project. Absent this, the alternatives analysis is complete and misleading. For instance, while alternative #3, lower risk thresholds, is "expected to result in higher emissions reductions of TACs" and "greater public health benefits" than the proposed project, DEIR at 4-6, the comparison to the proposed project is faulty. When viewed against the proper baseline, the project may actually result in greater exposures and adverse impacts in some areas. As a result, the superior benefits of alternative #3 are compared to an incomplete picture of the proposed project. Because the DEIR ignores potential significant adverse impacts of the project, the alternatives analysis and comparison are flawed.

Comment 13 concluded

VII. Compliance with "Thresholds of Significance" Is Not Conclusive Evidence of No Significance

Through the Air Toxics NSR rulemaking and in the DEIR, the District seeks to establish "significance criteria" for "project operations" (Section 3.4.2). The purpose is "[t]o determine whether or not air quality impacts from the proposed project are significant." DEIR at 3-22. As discussed above, the criteria are not defined in an attempt to measure the significance of the project as a whole, however. Rather the criteria seek to establish "thresholds of significance" for individual project activities. See Section IV.B above. Yet the District proposes to classify these individual activities—issuance of permits for TAC sources—as "ministerial" to systematically exempt such projects from CEQA review. See Proposed BAAQMD Reg. 2-1-428; BAAQMD Regs. 2-1-311; 2-1-427. This is inconsistent with the intent and purpose of CEQA.

Although agencies are encouraged to formally establish "thresholds of significance" to assist with determining whether there may be significant effects, see Guidelines §15064.7, compliance with such "thresholds" is *not* conclusive evidence that there are no potentially significant impacts. *Cal. Res. Agency*, 103 Cal. App. 4th 98 at 112-114. Compliance with a "threshold of significance" merely means that a project's potential effects "normally will be determined to be less than significant." Guidelines §15064.7. However, "*any* substantial evidence supporting a fair argument that a project may have a significant environmental effect would trigger the preparation of an EIR." *Cal. Res. Agency*, 103 Cal. App. 4th at 113 (emphasis in original). Therefore, future "project operations" that meet these "thresholds" should not be automatically precluded from a potential finding of significance.

Comment 14

First, as discussed above, the risk levels proposed as "thresholds of significance" for future projects fail to take into account substantial evidence that significant and adverse effects may result to human health and the environment. Second, classification of projects that meet these limits as "ministerial" allows the District to avoid determining whether potential effects of multiple projects may be "cumulatively considerable." Finally, establishing these risk levels as "thresholds of significance" for the purpose of automatically exempting projects from CEQA review improperly precludes evidence of potential significance from consideration. Again, compliance with these limits is *not* conclusive evidence of no significance. *Cal. Res. Agency*, 103 Cal. App. 4th at 112-114.

The District's classification and reliance on such "thresholds" to avoid CEQA review for potential significance and cumulative impacts—particularly when no such analysis has been included in the DEIR—is therefore inconsistent with CEQA. The District can not have it both ways. The District can not avoid analyzing the cumulative impact of the proposed project in the DEIR and also seek to avoid analyzing the cumulative impacts of project activities under the proposed rules. CEQA requires otherwise. Accordingly, future projects that meet the proposed risk limits should not be automatically exempted from CEQA review, and would expose the District to a legal challenge for each permit contributing to cumulative impacts. Commenters note, however, that an exemption for future projects that comply with appropriate cumulative risk limits may be acceptable.

Comment 14 concluded

VIII. Conclusion

The DEIR's failure to utilize a proper baseline, adequately evaluate potential significance and analyze mitigation and alternatives to avoid or substantially lessen these impacts violates CEQA. Further, the District's "piecemeal" approach to permitting TAC sources violates CEQA. For the reasons stated above, Commenters suggest that BAAQMD redraft and recirculate its DEIR for its failure to properly evaluate potential significance and analyze a full range of reasonable alternatives. We believe a proper definition of baseline and a thorough review of potential significant cumulative impacts and alternatives will result in a more appropriate environmental analysis of this project.

Sincerely,

Amy S. Co

Amy S. Cohen
Staff Attorney

Environmental Law and Justice Clinic
Golden Gate University School of Law

Attorneys for:
Environmental Justice Air Quality Coalition
Bayview Hunters Point Community Advocates
Our Children's Earth Foundation

Attachments:

Memo from Dr. Ken Kloc, Ph.D., Chemistry, MPH, to ELJC, May 20, 2005

- "Some Suggestions for Addressing Cumulative Health Impacts & the Precautionary Principle in Toxics New Source Review," March 3, 2004 (Prepared by ELJC for Commenters)

Environmental Law and Justice Clinic
Memorandum

From: Ken Kloc, Ph.D. (Chemistry), MPH Ken Kloc
To: Amy Cohen, Staff Attorney
Date: May 20, 2005
Subject: Environmental Impact Report for BAAQMD's Proposed Air Toxics New Source Review Regulation

I have reviewed the Draft Environmental Impact Report ("EIR") for the San Francisco Bay Area Air Quality Management District's proposed project of promulgating New Source Review Regulations for stationary sources of toxic air contaminants (TACs). The EIR was prepared by the District in order to evaluate the possible environmental impacts of adopting the proposed rules. Based upon my assessment of the EIR sections that are relevant to air quality, I have concluded that the proposed project may produce significant adverse air quality impacts. My reasons are provided in the following paragraphs.

As a preliminary matter, I have assumed that the baseline environmental setting for evaluating impacts of the proposed rule is defined by the existing physical conditions in the affected area at the time that the Notice of Preparation was published. The baseline for the purposes of the air quality analysis includes current Bay Area air quality conditions and the pollutant emission inventory from stationary sources that have been permitted under the current air toxics permit policy. It also consists of the current patterns of land use and levels of industrial development.

Since the project is a set of regulations that will permit new stationary sources of TACs, the main issue to address is whether these regulations will add significantly to existing levels of air pollution and the related ambient (i.e., cumulative) health risk. Since the proposed project would allow any single project activity[1] to emit TACs up to regulatory significance levels regardless of the surrounding ambient air quality, it may produce significant impacts when used to permit new sources that have not been offset either by a regional reduction of ambient risk levels, or by the contemporaneous reductions from existing toxic sources in the locality of the new source.

Significant impacts could occur in two ways. First, the combination of ambient risk with risk due to the project activity may rise above 10 in one million cancer risk or a hazard index of one.[2] Second, the activity may add to an ambient risk that is already above the

[1] A project activity is the issuance of a permit for individual "projects" as defined in the proposed rule. The proposed rule defines a "project" as "any source or group of sources, at a facility," that fulfills certain conditions.

[2] Hazard indices are used to characterize the possibility of toxic effects from non-carcinogenic substances. When exposure to a chemical or chemicals results in a hazard index less than or equal to one, toxic effects are deemed to be unlikely, even for sensitive individuals. Hazard indices that rise above one indicate an increased potential for toxic effects, and a risk that is generally considered unacceptable.

significance criterion. In this latter case, I would argue that any additional risk due to the activity should be considered significant and subject to some form of mitigation.[3]

Regarding the offsetting of risks, the discussion presented in Section 3.1.4 of the EIR suggests that existing regulatory programs will continue to reduce the ambient risk from current air pollution sources on a regional basis. However, the EIR provides no demonstration that these programs will sufficiently offset the risk of each new source in every neighborhood, or that they will reach a level of exposure that is below the 10 in one million significance level. Information contained in the District's three most recent annual TAC reports[4] suggests that the total emissions of at least some TACs may be increasing as a result of an increase in the number of toxic sources permitted. For example, the following table shows increases in emissions of four TACs between the inventory years 2000 to 2002, and a corresponding increase in the number of plants emitting these chemicals.

Chemical	Number of Plants Emitting			Emissions (lb/year)		
	2000	*2001*	*2002*	*2000*	*2001*	*2002*
Butyl Cellosolve	459	445	462	290,000	300,000	370,000
Dichlorobenzene	34	34	35	1,500	1,400	3,400
Formaldehyde	460	502	770	200,000	210,000	210,000
Nickel	209	233	473	590	730	730

These data suggest that reductions in ambient risk due to other regulatory programs or due to the retirement of existing sources, may not completely offset the added risks of some new sources of pollution. Because the proposed project does not require that existing regulations achieve these reductions, nor does it prohibit any source being permitted which would not be offset by a corresponding reduction, the project may cause a significant risk to Bay Area communities.

Even in the case that other regulatory programs achieve substantial pollution offsets, significant impacts could still occur in particular communities. Under the proposed rules, TAC emission sources could become geographically concentrated in some neighborhoods, resulting in significant local pollution increases at the same time that average TAC levels in the District are decreasing. Geographic concentration could arise

[3] According to the District's 2004 Annual Toxics Report, the average ambient risk from air pollution in the Bay Area in 2002 was 162 per million (not including diesel particulate matter). The toxics reports do not apportion this risk into its mobile and stationary source contributions. Nonetheless, the ambient air pollution data suggests that the cancer risk due to stationary sources alone is greater than 10 in one million.

[4] See the District's most recent Annual Toxics Reports, years 2004, 2003, and 2002, (reporting on the emission inventory for years 2002, 2001, and 2000, respectively) available on the web at: (http://www.baaqmd.gov/pmt/air_toxics/annual_reports/index.asp).

from systematic causes or could also happen randomly. In either case, the proposed rule does not contain any measures that would prevent such concentration. Therefore, the proposed project could result in significant adverse health impacts even in the presence of offsets.

District inventory data for recently permitted diesel backup generators provides an example of this problem. A single building located at 200 Paul Avenue in the Bayview community of Southeast San Francisco hosts seven communications/technology companies along with their diesel backup generator systems. The following table lists the companies, their location, and the level at which their generators operate.

Co-located Diesel Backup Generators in Southeast San Francisco[5]

Facility	Facility Address	Location Coordinate (UTM E)	Location Coordinate (UTM N)	Yearly Operation (Hp-hours)
San Francisco Wave Exchange	200 Paul Ave, &400 Bldg F, Mezz	553106	4175226	1,102,100
Qwest Communications Corporation	200 Paul Avenue	553106	4175226	148,096
RCN Telecom Services Inc	200 Paul Avenue	553106	4175226	185,000
XO Communications Inc	200 Paul Avenue	553106	4175226	45,864
Cingular Wireless	200 Paul Ave, Bldg D, Suite 100	553068	4175220	37,388
Verizon Global Networks	200 Paul Avenue	553112	4175209	29,650
Wiltel Communications	200 Paul Avenue	553112	4175209	587,000

In situations such as this, the risk emanating from a single location could be several times higher than the significance criterion of 10 in one million cancer risk (or a hazard index of one), because each company would be subject to limitations based only upon its own emissions. The proposed project will not guard against this problem because it does not contain any provisions that would prevent or mitigate such localized cumulative exposures that could occur in the future.

[5] The information presented in this table is based on the Distict's electronic database of stationary diesel engines (February 22, 2005 version).

Additional evidence of the potential for localized cumulative impacts is provided by the District's cumulative risk modeling analysis.[6] District staff recently carried out air dispersion modeling of TAC emissions for several cumulative exposure scenarios, including: (i) four gas stations at a single intersection, (ii) multiple diesel back-up generators at a location, and (iii) a gas station-dry cleaner-furniture stripper-diesel backup generator combination. The results of this modeling study indicated that cumulative exposures would be elevated above individual-source exposures at the neighborhood level for the scenarios tested. For one of the multiple-source configurations, cumulative risks were more than two times higher than single-source risks. Given that many activities under the proposed project will be permitted to emit pollution up to the significance threshold of 10 in one million cancer risk or a hazard index of one, the District's air dispersion study indicates that the proposed project could result in significant cumulative impacts by allowing multiple sources of TAC pollution to become overly concentrated in a single locality.

Finally, under the proposed project, significant cumulative impacts could arise from a permitted activity, when its TAC emissions are considered together with criteria pollutant emissions from the activity, or in combination with TACs and criteria pollutants from other sources. For example, in some regions of the District, regional ozone pollution may come close to the health-based ozone standard. Likewise, particulate matter concentrations in the Bay Area rise close to and above the health-based standards during certain times of the year, and some neighborhoods in the immediate vicinity of freeways have elevated levels of mobile source pollutants such as diesel particulate matter, butadiene, and carbon monoxide. Under the proposed rules, the District will ignore these circumstances when considering a permit for a facility. Thus, the proposed rules could allow situations where toxic emissions from the permitted activity, considered alone, are below regulatory thresholds, but exceed the thresholds when these emissions are considered in combination with pollution from other sources. Such considerations indicate that the proposed rule could result in significant adverse impacts.

In my opinion, the impacts of the proposed project could be mitigated by following the various recommendations on cumulative risk assessment and risk-reduction, previously submitted by ELJC's clients. As the District has shown, local-scale cumulative risks can be estimated for various common permit scenarios, and risks for multiple facilities at a single location (i.e., single address) can be characterized using data that is readily available to the District. Without taking these steps, increases in air pollution due to the proposed project may pose significant cancer and non-cancer health impacts to Bay Area communities, and especially to sensitive individuals and subpopulations.

[6] *See* "Scenario-Based Cumulative Impact Assessment," Toxics Evaluation Section, BAAQMD, March 2003.

BAAQMD Staff & APCO Meeting—March 3, 2004

Some Suggestions for Addressing Cumulative Health Impacts & the Precautionary Principle in Toxics New Source Review (prepared by ELJC)

Precautionary Principle

1 Lower overall risk levels as a precautionary measure to address cumulative health risks from multiple sources.
   a. Lower "acceptable" cancer risks at least ten-fold.
   b. Acute & chronic hazard indices ("HIs") should not exceed 1.0; HIs greater than 1.0 erode the margin of safety that is intended to protect sensitive sub-populations.
   c. If exercising discretionary permitting authority, specifically define factors to ensure that precaution is applied in favor of health protection.

2 Use both the chronic & acute HIs as a trigger for the best available control technology (TBACT) requirement. (Note: the draft proposed Toxics NSR rules use only the chronic HI as a TBACT trigger.)

3 Calculate and consider total community air pollution risks when permitting new sources; require mitigation or risk reduction measures such as facility-wide offsets for existing facility sources (e.g., 2-for-1 risk offsets).

4 Consider the additive toxic effects of priority pollutants when considering the risks due to TACs at a facility, i.e., calculate total health risk from the facility.

5 Explore options for requiring use of less toxic compounds and technologies, particularly for common high-risk sources (e.g., diesel backup generators); consider creating incentives for transitions to less-toxic alternatives.

6. Resolve scientific uncertainty in favor of health protection rather than in favor of permit applicant.

7. Facilitate public's right to know about TAC emissions and related health risks by making emissions data and health risk maps web-accessible; identify non-cancer health risks evaluated in acute & chronic HIs.

8. Provide for meaningful public participation in rulemaking and permitting procedures.

9 Eliminate the proposed CEQA exemption from Toxics NSR evaluation and permitting.

Cumulative Health Risks

Collaborate with CARB to collect and analyze data regarding cumulative health risks; identify options for evaluating and limiting cumulative risks from multiple sources of air pollution.

2 Conduct comprehensive pilot programs to evaluate cumulative health impacts in two Bay Area neighborhoods; site areas should be selected and programs implemented with extensive community input

3 Conduct case-by-case cumulative health risk assessment for each proposed project; include risk from all TAC emissions in affected area.

4 Use the South Coast AQMD approach to locate and identify cumulative air risk "hotspots"—i.e., modeling cumulative air exposure and risk in 1 square kilometer parcels.

5. Conduct more extensive modeling of hypothetical but realistic cumulative exposure situations. (The District's limited studies indicate that multiple source scenarios may present risks twice as high as single-source risks.)

6. Consider the aggregate air risk due to TACs and criteria pollutants, from both point & mobile sources.
   a. For example, particulate matter (PM), NOx, SOx, and ozone should be considered together with other TACs when evaluating the risk of asthma in exposed populations.
   b. Require permit applicants to pay for monitoring if none exists.

7. Convert gasoline-dispensing facilities (GDFs) from area source to point source category for District emissions inventory; collect throughput data to estimate risk from these and other common high-risk sources.

8. Develop and implement new programs, goals and rules to address and limit cumulative health impacts; develop more stringent criteria for permitting in areas with disproportionately high health risks.

9. Raise and/or allocate funds to conduct cumulative health risk program; increase permit fees to conduct cumulative risk assessment; increase penalties for violations to help support program.

RESPONSE TO COMMENT
ENVIRONMENT LAW AND JUSTICE CLINIC
May 20, 1005

General Response

The “project” to be analyzed pursuant to CEQA is the adoption of a District rule that would apply to the construction or modification of a source of toxic air contaminants (TACs) and would limit emissions of TACs. The proposed rule would replace existing rules and policy and procedure documents that govern the District’s toxics new source review (NSR) program, which has been in place since 1987. The existing regulatory structure would be consolidated in, and made more stringent by, the proposed rule.

Though the District has legal authority to control TAC emissions, it has no legal obligation under federal or state law to maintain a toxics NSR program. Using as a model the criteria pollutants NSR program required under both federal and state law, the District adopted the toxics NSR program on its own initiative in order to better control TAC emissions from new and modified sources.

Stationary sources subject to the proposed rule include a vast array of facilities, from large industrial plants such as oil refineries and power plants to ubiquitous smaller facilities such as gas stations, auto repair shops, dry cleaners, and painting operations. The location and nature of future modifications to existing facilities and future construction of new facilities cannot be known. Unlike a general plan, the rule does not direct development in any way. The modification and construction activities subject to the rule are, with few exceptions, carried out by private entities subject to the local land use authority of cities and counties. The District has no land use authority whatsoever, and the District is rarely the lead agency under CEQA for these future activities. (*See* CEQA Guidelines § 15051.)

The ELJC comments fundamentally mischaracterize this project by redefining it to include the rule *and all future construction and modification activities subject to the rule*. According to ELJC, “[t]he project includes issuance of permits for new and modified TAC sources.” (Comment Letter p. 2.). In discussing CEQA thresholds, ELJC states that the District “avoids analysis of the cumulative impact of permit decisions made over the life of the project.” (Comment Letter p. 3.) In discussing significance criteria, ELJC states that “[b]ecause the project is a rulemaking for the District’s Air Toxics NSR program, it includes permit decisions under the proposed rules.” (Comment Letter p. 4.) Through this redefinition of the project, ELJC ascribes to the District’s rule effects that the rule does not cause and that the rule, instead, would mitigate. Only by redefinition of the project in this manner can ELJC claim the proposed rule has adverse impacts.

The project definition used by ELJC is improper under CEQA. The project that will come before the Air District Board of Directors and for which the DEIR has been prepared is the adoption of a rule pursuant to the District’s powers under Health and

Safety Code sections 40000, 40001, and 40702. No action on any permit issuance of facility modification or construction is proposed or associated with rule adoption.

It may be that ELJC is not suggesting that future construction or modification activities are part of the project, despite ELJC's language to the contrary, but is suggesting, instead, that these activities are reasonably foreseeable consequences of the rule project. But these activities are not caused by, or consequences of, rule adoption. These activities arise from the independent actions of economic actors who open businesses or install or modify equipment or operations. These activities will occur regardless of whether the District has a toxics NSR program or adopts a rule for the program. The District project does not dictate the nature or location of economic activity in any way and is quite different from the projects in the CEQA cases cited by ELJC, which involve decisions by cities and counties that direct economic activity and directly or indirectly cause foreseeable impacts. In contrast, the toxics NSR program acts as a restriction on construction and modification activities rather than as an impetus to them. There is simply no causal link between the proposed rule and effects attributable to the independent activities regulated by the rule. Rather than cause the effects, the District rule will ameliorate them.

The proposed toxics NSR rule imposes restrictions on TAC emissions through the mechanism of a permit that acts as a rule applicable only to a specific source or facility for which the permit is issued. Without the proposed toxics NSR rule or the existing toxics NSR program, air district permits would not be issued for these sources. Issuance of *some* permits is therefore a reasonably foreseeable consequence of the rule. However, permit issuance does not cause activities that have environmental impacts; it limits them through the imposition of TAC control requirements. In the absence of the existing toxics NSR program or the proposed rule, the impacts would occur, unrestricted by limits on risk imposed through the toxics NSR program.

Even if we assume that ELJC is suggesting, despite the lack of logical support, that a toxics NSR permit somehow causes the activities that produce impacts, these impacts are not foreseeable. This is because the District has no way to determine where or when or how construction or modification activities will take place and therefore no way to know which permits of what type will be issued. So, although it may be foreseeable that permits will be issued, the impacts associated with any future construction or modification are not foreseeable. Assessing the likely impacts would be an exercise in pure speculation. The District's project therefore differs from actions by cities and counties to adopt or modify general plans or zoning requirements or issue authorizations for future development. For such activities, the location and nature of impacts are foreseeable and can be analyzed in connection with the planning or zoning action rather than later in connection with the issuance of individual building permits.

The impacts related to construction or modification subject to the toxics NSR program can only be determined at the time the activity is proposed, and the location and nature of a project is known. Issuance of a District permit for this construction or modification would be, for purposes of CEQA analysis, a separate project, distinct from the adoption of a rule that authorizes such permits. Once construction or modification is proposed, analysis of impacts from a project involves no speculation. The design of the facility, the types of equipment, and the manner of operation can be known with great specificity, and impacts from TAC emissions can be fully analyzed. None of this analysis can happen in connection with rule adoption.

Even if we assume that it is possible to foresee the impacts of future construction and modification activities at the time of rule adoption, despite the lack of any logical support for such a notion, ELJC has provided no evidence to show that the impacts would be a significant increase in TAC emissions or risk, either regionally or locally. Through the imposition of controls on new sources, the toxics NSR program is designed to prevent significant increases in risk. At the same time, other mechanisms, briefly mentioned in the DEIR (pp. 1-4 and 2-2), act to reduce overall risk. One mechanism is that many new sources displace economic activity occurring elsewhere. For example, a new facility will often take business from an older facility, producing a net reduction in TAC emissions attributable to the less-polluting equipment operated by the new facility. Another mechanism is the reduction in TAC emissions that occurs at existing facilities when older sources are modified or replaced, and requirements for updated control equipment are imposed. It is difficult to quantify the emission reductions attributable to these mechanisms because a variety of other programs, operating in concert with the toxics NSR program, also produce emission reductions. The clearest evidence that overall TAC emission reductions are occurring is found in the data presented each year in the District's Toxic Air Contaminant Control Program Annual Report. The DEIR notes that the latest report shows that 2002 average inhalation cancer risk in the Bay Area was 162 in one million, based on measurements of TACs thought to be the primary contributors to risk and excluding risk from diesel particulate, which currently cannot be measured. This risk is 46% percent lower than it was in 1995. (DEIR p. 3-19.) The table below illustrates this general decline in the risk from measured TACs.

Cancer Risk Due to Average Ambient Concentrations of Toxic Air Contaminants Measured in the Bay Area

Year	Cancer Risk[1]
2003	143
2002	162
2001	173
2000	167
1999	186
1998	199
1997	194
1996	212
1995	303

[1] From Table 4 of Toxic Air Contaminant Program Annual Report for each year except 2003. For 2003, the Annual Report has not been prepared, and risk was calculated using the methodology used in the Annual Reports. Cancer risk is the risk associated with exposure to average ambient (outdoor) toxic air contaminant (TAC) levels measured at a number of sites in the Bay Area, assuming 70-year continuous exposure. For further description of assumptions and methodology for each year other than 2003, see Table 4 and footnotes to Table 4 in the Annual Report for each year.

With the addition of diesel particulate risks, average 2002 Bay Area inhalation cancer lifetime risk is approximately 600 in one million. (*See Toxic Air Contaminant Control Program Annual Report 2002*, Vol. 1, pp. 3, 13, 25.) The lifetime risk of cancer is approximately 450,000 in one million for men and 380,000 in one million for women. (*See* National Cancer Institute, *SEER Cancer Statistics Review, 1975-2002* (based on November 2004 SEER data submission, posted to the SEER web site 2005) <http://seer.cancer.gov/csr/1975_2002/>, Table I-14.)

ELJC claims that the rule may produce significant environmental effects through a geographic concentration of risk, either when multiple new sources are located in the same area or a new source is located in an area where there are existing sources of TACs. Assuming that the toxics NSR rule somehow causes this concentration, ELJC presents no substantial evidence of a significant effect. The risk criteria for the rule are project-based, extremely conservative, and set at a level that allows co-location of new sources or location of a new source near existing sources. The project risk criteria are not measures of significance for multiple aggregated sources. As a result, the risk from multiple projects taken together may not be said to be a significant effect simply because the risk exceeds the risk of 10 in one million allowed for a single project. The District has modeled a number of worst-case scenarios involving geographic concentration of sources, and, though the highest risk scenario (involving gas stations located on all four corners of an intersection) was found to slightly exceed 20 in one million, such a level of risk is not much above the 10 in one million single project risk and is a small fraction of the current average Bay Area inhalation risk of 600 in one million. (*See Scenario-Based Cumulative Impact Assessment*, BAAQMD Toxics Evaluation Section, March 2003; *see also* BAAQMD Draft Staff Report (April 2003) at 42.) In addition, any incremental localized risk increases of this magnitude are likely to be outweighed by the documented general decline in ambient risk noted above.

In a more general way, ELJC's repeated assertions that the rule will not benefit public health simply defy common sense. All of the situations that, according to ELJC, involve adverse impacts of the rule would occur in the absence of the rule. Without the rule, construction or modification activity would legally occur unrestricted by the limitations on risk imposed through the toxics NSR program.

Response 1

While it is true that the final regulatory text was not available on the District website until 10 days prior to the DEIR public comment deadline of May 23, 2005, the final regulatory text made only minor clarifying changes to draft text. The draft text was made available on the District website on March 16, 2005 and was continuously available for over two months prior to the close of the 30-day DEIR public comment period. Notices posted on the District website directed those interested in the DEIR and the project to the draft text. The final regulatory text (1) clarified rule applicability by removing applicability language from the definitions of "new source" and "modified source" and adding it to new Section 2-5-112, (2) clarified the definition of "worker receptor," (3) modified

Section 2-5-501 to say that monitoring imposed by the APCO would have to be "reasonable" monitoring, and (4) clarified that the decision to grant or deny an authority to construct is to be based on consideration of all rules in effect. The minor changes made between draft and final regulatory text do not affect in any way any aspect of the environmental analysis contained in the DEIR.

In addition to making the text available well before the DEIR comment period began, the District conducted significant outreach to explain the project. On April 8, 2005, the District conducted a public workshop to discuss the project and the draft regulatory text. On March 17, 2005, the District e-mailed notice of the workshop to ELJC. The e-mail indicated that the draft regulatory language was available on the District website and provided a link to the site. The draft regulatory text was also made available at the workshop, which was attended by ELJC. In addition, on April 12, 2005, District staff visited the ELJC office to discuss the regulatory language.

ELJC complains that the District's staff report for the project was not available during the DEIR comment period. District staff reports for rule development projects are generally not completed until about a week before a public hearing, although draft reports are often made available earlier. The staff report for the project was not completed by the time the DEIR comment period ended on May 23, 2005. However, an April 2003 draft staff report for the project has been continuously available on the District website since May 2003. The final staff report for the current proposal will be a revision of the April 2003 staff report. ELJC cites the April 2003 staff report in its comments (*see* Comment Letter p. 12). While the April 2003 staff report does not address the changes that have been incorporated into the current version of the project for which the DEIR was prepared, regulatory language showing these changes was made available at the April 8, 2005 workshop and has been continuously available on the District website since March 16, 2005.

Response 2

This section of the DEIR has been modified to include a brief discussion of issues raised by ELJC.

Response 3

ELJC asserts that the DEIR is inadequate because it fails to characterize the nature or extent of existing non-cancer risks. However, there is insufficient data presently available to the District that would allow it to characterize "non-cancer risks" from exposure to TACs in the existing environment.

ELJC asserts that the DEIR is inadequate because it fails to include specific information about stationary sources and their associated health risk levels. The health risk associated with any particular source is unique to that source and is determined through a risk analysis that takes into account the type and quantity of emissions, the location of emission points relative to receptors, prevailing winds, and a host of other factors. These health risks cannot be described specifically except with regard to a particular project. Description of risks in the DEIR for rule adoption would involve pure speculation about the nature and location of future activities. Estimates of annual emissions of TACs for hundreds of existing facilities throughout the Bay Area are included in the Toxic Air Contaminant Annual Report cited on p. 3-17 of the DEIR and by ELJC in its comments. However, this annual emissions information alone is insufficient to characterize facility risks.

ELJC asserts that the DEIR is inadequate because it fails to include information about alleged toxic “hot spots.” There is limited data presently available to the District regarding the spatial distribution of risks attributable to TACs in ambient air. The available data from District monitors is presented in the DEIR on p. 3-18. The data from the Richmond, San Francisco (Arkansas Street), and West Oakland monitors show ambient concentrations for the measured TACs that are similar to those for other monitoring stations in the Bay Area. Thus the available data do not suggest the existence of particular “hot spots.” Through a new Community Air Risk Evaluation program, the District has undertaken an effort that may help determine whether there are toxic “hot spots” in the Bay Area, but that effort is just beginning.

Even if more of the information that ELJC asserts should be included in the setting description were available, this information would not contribute to the analysis of the impacts of future construction and modification that ELJC says are part of the project because the impacts of future activities are unknown and are unavailable for comparison with data regarding current environmental conditions.

Response 4

ELJC claims that in not establishing significance criteria for evaluating the project – defined by ELJC as all permit decisions made over the life of the project (i.e., all future unknown projects taken together) – the District avoids analysis of cumulative impacts and engages in piecemealing. ELJC’s improper redefinition of the project is discussed in the District's General Response to the ELJC comments. Even if the ELJC project description were proper, establishing cumulative impact significance criteria would amount to determining what level of overall risk from TACs in ambient air is acceptable. Not enough is known about overall risk to begin this project nor is there any accepted methodology to apply. Even if such criteria could be established, the impacts of future projects cannot be known, and as a consequence, cumulative impacts cannot be determined for comparison against cumulative impact significance criteria. The ELJC comment appears to assume that impacts are additive and that future projects inevitably increase overall risk. This is not the case. Impacts are not additive, and, in general, risk is reduced over time by construction and modification because, newer, cleaner sources replace older, dirtier sources (see General Response). The approach embodied in both the proposed rule and the existing program is to ensure that new sources pose as little risk as is possible, thereby achieving the greatest reductions in risk over time.

Response 5

ELJC claims that the DEIR relies on the wrong baseline for its analysis of environmental impacts. ELJC states that the baseline must be the environment as it stands at the time that environmental analysis commences and, further, that the baseline may not include the existing toxics NSR program. As a result, ELJC would have the District analyze the impacts of the proposed project, defined by ELJC to include all future construction and modification subject to the rule, against the existing environment. But this cannot be done because the nature and location of these future activities are not foreseeable, as discussed in the District's General Response.

Based on its conclusions about how the analysis should be done, ELJC questions the DEIR's conclusion that the project will produce benefits to public health. According to ELJC, the project could only have benefits if (1) the comparison is to the existing policy, which ELJC argues is an incorrect comparison, or (2) there are no new TAC emissions and no new TAC exposures, which ELJC says is inconsistent with its expansive view of the project. But even if the project were to include all future construction and modification, ELJC fails to recognize that overall TAC emissions can decline even as new sources are added. Declines occur because cleaner new and modified sources replace dirtier, older sources and because any new exposures to TACs are limited to insignificance through the restrictions on risk imposed by the toxics NSR program. The available evidence suggests that such declines are exactly what is happening in the Bay Area.

ELJC cites several CEQA cases involving land use decisions for a general proposition that the baseline for comparison must be the existing environment rather than a future degraded environment that might result under existing land use designations. It is unclear whether these land use cases are apposite. The existing land use policies in the cases provided for future degradation of an existing environment, and the proposed revisions of those policies provided for different or less, but nevertheless some, degradation of an existing environment. In all of the cases, the land use policy was a prerequisite to the development that would degrade the environment. However, the toxics NSR rule, or any environmentally protective rule, generally provides for a less-degraded future environment than the one that would result if the rule did not exist. In the absence of the toxics NSR rule, construction and modification can occur unrestricted by the rule.

Assuming, however, that the planning and land use cases apply, ELJC fails to note a First District case, *Black Property Owners Association v. City of Berkeley* (1st. Dist. 1994) 22 Cal.App.4th 974, in which the court held that, when a city adopts an updated housing element, the project for CEQA purposes does not include preexisting policies that are adopted without change, even where the prior policies were not subjected to CEQA review. Consistent with the holding in this case, the District analyzed the impacts of proposed changes to the existing toxics NSR program embodied in the proposed new rules. The existing program, which has been in place for 18 years, is partially found in rules and partially in guidance. The rules mandating the program have been repeatedly reviewed under CEQA, though the program has never been analyzed in an EIR.

A fundamental purpose of CEQA is to inform responsible officials and the public about the environmental impacts of proposed actions. The analysis suggested by ELJC would not serve that purpose. Unlike land use policies that provide for a less-pristine future environment, the existing toxics NSR program provides for a better future environment than the one that would otherwise exist. To assume away the existing program would simply overstate future benefits of the proposed project.

Response 6

As discussed in the District's General Response, ELJC improperly redefines the rule project to include all future construction or modification activities that will be subject to the rule. It can then claim that all emissions associated with these activities are cumulative impacts of the toxics NSR rule. Because the District did not analyze all of these impacts, which neither ELJC nor the District can possibly identify, ELJC deems the District's analysis of cumulative air quality impacts inadequate. ELJC cites *Whitman v. Board of Supervisors* (2d Dist. 1979) 88 Cal.App.3d 397, for the proposition that a cumulative impacts analysis must include a list of related projects, a summary of the impacts of those projects, and a reasonable analysis of the cumulative impacts of the projects. As discussed in the General Response, such analysis would be an exercise in pure speculation. What is clear, however, is that, in the absence of the proposed rule, impacts would be worse because construction and modification would not be subject to restrictions on TAC emissions. In addition, substantial evidence supports a conclusion that, over the years in which the toxics NSR program has been in effect, ambient risks from TACs have declined.

ELJC objects to the DEIR's conclusion that there will be no significant adverse cumulative air quality impacts on the grounds that the analysis fails to address adverse impacts that ELJC attributes to the project: new TAC emissions, localized concentrations of toxics, the possibility of extreme-case scenarios like those modeled by the District, and impacts of TACs together with criteria pollutants. None of these "impacts" is a consequence of rule adoption as discussed in the District's General Response. Even if the purported impacts are somehow caused by the rule, ELJC provides no evidence showing that the impacts are significant. It is clear, however, that all involve issues that ELJC appears to believe should be addressed by the rule. But the failure of a rule to reach some desired level of stringency does not turn such a “shortfall” into an adverse impact for CEQA purposes.

Response 7

ELJC asserts that the cumulative impact of emissions from new sources of TACs must be considered in the DEIR and that the failure to address them is an improper "piecemeal" approach. In support of this argument, ELJC shows that there are many sources of TACs in the District and suggests that new sources may add to risk. While this is undoubtedly true, this impact, if it is significant, is not an impact of the rule, as discussed in the General Response. An increase in the emissions of a particular TAC or of all TACs taken together is also not an impact of the rule. Because these are impacts of activities regulated by the rule rather than impacts of the rule, it would be improper and misleading for the DEIR to address them as cumulative impacts. Even if these emissions are somehow properly attributable to the proposed rule, ELJC has not provided substantial evidence of significant impacts, as discussed in the General Response.

Response 8

ELJC claims that the DEIR analysis of cumulative air quality impacts must address localized concentrations of TACs that result from the rule. As evidence that there are such localized concentrations, ELJC cites the opinion of Dr. Ken Kloc, an ELJC staff member, that the issuance of permits to seven companies, each operating one or more diesel backup engines at the same street address on Paul Avenue in San Francisco, results in a significant cumulative impact. Again, as discussed in the General Response, this purported impact is not the result of the toxics NSR program. In the absence of the program, this activity would still occur. It may be true that the program does not prohibit such co-location, but it does not cause it. In any case, Dr. Kloc's analysis improperly uses the 10 in one million single project risk limit as a measure of significant cumulative impacts from multiple projects. The engines cannot be said to cause a significant impact based on total risk exceeding the threshold for a single project. The project risk limits are set at stringent levels that allow co-location without causing significant impacts. The risk for 22 engines subject to toxics NSR review at the San Francisco location, taken together, has been calculated by the District to be 6 in one million for the maximally-exposed residential receptor and 20 in one million for the maximally-exposed worker receptor. (*Risk from Diesel Engines Subject to Toxics NSR at 200 Paul Avenue*, BAAQMD Toxic Evaluation Section, June 3, 2005.) Though this risk exceeds the single project risk limit of 10 in one million, it is well below the 2002 average ambient risk of 600 in one million, and is likely, as noted in the General Response, to be outweighed by general declines in risk from ambient air. In addition, the City of San Francisco, the lead agency for activities at Paul Avenue, conducted a cumulative risk review of engines at this location, concluded that there would be no significant adverse impacts, and adopted a CEQA negative declaration for the project.

Response 9

As further evidence that localized concentrations are a significant impact of the rule, ELJC cites the extreme-case scenarios developed by the District. However, as noted in the General Response, the impacts attributable to these hypothetical situations are not rule impacts and, even if they were, are not considered significant.

Response 10

TAC emissions and criteria pollutant emissions are not caused by this project, as discussed in the General Response. Even if these emissions are somehow properly attributable to the proposed rule, ELJC has not provided substantial evidence of significant impacts, as discussed in the General Response.

Response 11

Based on its argument that the project has significant impacts not discussed in the DEIR, ELJC argues that the failure to discuss mitigation measures for these alleged impacts violates CEQA. As discussed in the General Response and throughout the District responses, the impacts ELJC attributes to the project are not project impacts. As a result, no discussion of mitigation measures, beyond that included in the DEIR, is necessary.

Response 12

CEQA requires a discussion of *feasible* alternatives. The District has identified and discussed feasible alternatives.

The DEIR rejects "cumulative risk assessment" as infeasible, noting that no methodology exists to establish cumulative risk thresholds or to perform cumulative risk analysis. The DEIR then notes that cumulative risk assessment, were it possible, could increase permit costs. ELJC argues that the District has rejected cumulative risk assessment because of cost. This utterly mischaracterizes the statements in the DEIR. Cumulative risk assessment was rejected because it is, at present, not feasible, not because it is costly. No analytical tools exist and the extensive databases that would be necessary do not exist. No element of such an approach, such as analyzing the cumulative impacts of all sources at a single facility, can be carried out without thresholds of significance for cumulative risk.

The DEIR rejects the "precautionary principle" as the basis for risk analysis because it is a very general statement of principle. It provides no trigger for action, and there are no tools available that would allow its use in assessing risk and implementing a toxics NSR program.

Response 13

The alternatives analysis in the DEIR properly analyzes alternatives that might reduce identified impacts. ELJC claims that the DEIR has not addressed impacts that it believes are caused by the project and therefore argues that the alternatives analysis is inadequate in failing to discuss how alternatives could reduce these impacts. As discussed in the General Response and throughout the District responses, the impacts that ELJC attributes to the project are not project impacts. As a result, no analysis of alternatives to reduce these impacts is necessary. As noted in Response 12, none of the ELJC-favored alternatives is feasible.

ELJC also argues that the alternatives analysis relies upon an improper baseline and therefore understates the benefits of alternatives. As discussed in Response 5, the baseline used in the DEIR is proper.

Response 14

ELJC argues that, because compliance with thresholds of significance does not conclusively establish that impacts are not significant, compliance of a future project with project-based thresholds (e.g., 10 in one million) does not rule out significant effects from the project. ELJC then argues that, because the District rule would treat projects that meet the risk limits as ministerial projects, the rule would avoid consideration of evidence of significant cumulative impacts.

If the baseline for this project is, as ELJC argues, the environment without any existing toxics NSR program and, therefore, without any requirement for a toxics NSR permit, then imposing a requirement for a permit through which TAC emissions are restricted would represent an environmental benefit, regardless of whether the action is deemed ministerial. If the baseline for the rule making project is the existing toxics NSR program, which treats projects that comply with project risk limits as ministerial, the proposed rule is more stringent and would also produce benefits. In either case, this treatment of projects that comply with project risk limits as ministerial does not represent an adverse impact of the proposed project, but a policy choice.

Because the project risk limit is also the CEQA threshold of significance, a project meeting the project risk limit cannot be said to cause significant effects. The project risk limits are extremely conservative and are intended to allow for siting in urban areas with existing sources.

In the future, with the development of cumulative impact thresholds and methodologies, a project meeting current project-based risk criteria might be found to exceed cumulative risk criteria. With these developments, it would make sense for the District to adopt thresholds of significance based on cumulative risk. Until the tools are available, however, it cannot be fairly said that the District's proposed use of ministerial exemptions is intended to avoid analysis of cumulative impacts.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Townsend and Members of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 8, 2005

Re: Public Hearing to Consider Adoption of Proposed Amendments to Regulation 3: Fees and Approval of the Filing of a CEQA Notice of Exemption

RECOMMENDED ACTION:

Staff recommends that the Board take the following actions:

A) Adopt Proposed Amendments to Regulation 3: Fees; and
B) Approve the filing of a CEQA Notice of Exemption.

BACKGROUND

The District collects fees to pay for the costs of implementing and enforcing regulatory programs to reduce air pollution from stationary sources. A study of fee revenue, and regulatory program activity costs, was recently completed for the District by the accounting firm Stonefield Josephson, Inc. (*Bay Area Air Quality Management District Cost Recovery Study, Final Report; March 30, 2005*). The 2005 Cost Recovery Study concluded that, on an overall basis, existing fee revenue is far less than regulatory program activity costs. For example, for FY 2003-04, the deficit between costs and revenue, after allocation of direct and indirect expenses, was approximately $13 million. The Study recommended that, if this revenue gap is to be reduced, fees should be increased by more than annual cost of living adjustments over a period of time.

Staff has proposed amendments to the District's fee regulation for the upcoming FY 2005-06 that are consistent with the results and recommendations of the 2005 Cost Recovery Study. The proposed amendments would enable the District to address increasing regulatory program activity costs, and reduce the cost recovery gap.

DETAILS OF PROPOSED FEE AMENDMENTS

The proposed fee amendments would increase projected revenue for FY 2005-06 by approximately $1.4 million relative to the current fiscal year, representing an increase in overall fee revenue of about 7 percent. (For reference, there was a 1.4 percent increase in the annual Consumer Price Index for the California Bay Area from calendar year 2003 to 2004, as reported by the California Department of Industrial Relations, Division on Labor Statistics and Research).

Individual Fee Schedules would be amended based on the magnitude of the cost recovery gap identified in the 2005 Cost Recovery Study. Fee Schedules with the largest cost recovery gaps would be increased by 15 percent; Schedules with less significant gaps, and most administrative fees, would be increased by five percent; Schedules with no cost recovery gaps would not be increased. The proposed changes in each Fee Schedule are listed as follows.

Fee Schedule	Title	Fee Change
Schedule A	Hearing Board	15% increase
Schedule B	Combustion of Fuels	5% increase
Schedule C	Stationary Containers for the Storage of Organic Liquids	No change
Schedule D	Gasoline Transfer at Gasoline Dispensing Facilities, Bulk Plants and Terminals	15% increase
Schedule E	Solvent Evaporating Sources	15% increase
Schedule F	Miscellaneous Sources	15% increase
Schedule G1	Miscellaneous Sources	15% increase
Schedule G2	Miscellaneous Sources	5% increase
Schedule G3	Miscellaneous Sources	No change
Schedule G4	Miscellaneous Sources	No change
Schedule H	Semiconductor and Related Operations	15% increase
Schedule I	Dry Cleaners	15% increase
Schedule K	Solid Waste Disposal Sites	15% increase
Schedule L	Asbestos Operations	No change
Schedule M	Major Stationary Source Fees	15% increase
Schedule N	Toxic Inventory Fees	5% increase
Schedule P	Major Facility Review Fees	15% increase
Schedule Q	Excavation of Contaminated Soil and Removal of Underground Storage Tanks	No change

The District is proposing further increases in fees for refinery flares, and health risk screening analyses, due to increases in program activity costs related to regulatory changes in these areas. In addition, new fees are proposed for renewals of Authorities to Construct, and Potential to Emit demonstrations, which are currently not covered by fees. The definition of a Small Business would also be amended to adjust the gross annual income criterion for inflation. Finally, a number of changes in terminology and language are proposed in order to improve the clarity and efficacy of the fee regulation, and to maintain consistency with the proposed Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, which is also scheduled to be considered for adoption at the June 15, 2005 Board meeting.

Staff requests that the proposed fee amendments be made effective on July 1, 2005.

IMPACTS ON PERMIT RENEWAL FEES FOR FACILITIES

Approximately three quarters of the District's overall fee revenue is derived from annual permit renewal fees. Staff has estimated the increase in annual permit renewal fees for various facilities. In dollar terms, the annual permit renewal fees for the five Bay Area petroleum refineries would increase the most, with estimated fee increases ranging from $45,400 to $127,800. The next 10 highest fee-paying facilities would see their annual renewal fees increase from between $2,200 to $23,000. The annual renewal fees for a typical auto body shop, Perc dry cleaner, and gas station would increase by approximately $23, $36, and $117, respectively.

BUDGET CONSIDERATION/FINANCIAL IMPACTS

The proposed fee amendments would increase projected revenue for FY 2005-06 by approximately $1.4 million relative to the current fiscal year. Even with these increased revenues, the District has projected a shortfall of revenue relative to expenditures for FY 2005-06, which will be covered by a transfer from the Undesignated Reserve Fund.

Respectfully submitted,

Jack P. Broadbent

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Brian Bateman
Reviewed by: Peter Hess

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

STAFF REPORT
JUNE 2005

PROPOSED AMENDMENTS TO BAAQMD REGULATION 3: FEES

Engineering Division
Bay Area Air Quality Management District

1. EXECUTIVE SUMMARY

The Bay Area Air Quality Management District ("the District") is continuing an annual process of realigning fees to more fully recover the District's costs of regulatory programs. A recently completed Cost Recovery Study indicates that a significant cost recovery gap still exists. For example, for fiscal year (FY) 2003-04, permit fee revenue covered only about 60 percent of direct and indirect costs of air quality programs related to permitted sources, leaving a gap of approximately $13 million to be filled with property tax revenue.

For the upcoming FY 2005-06, the Staff is proposing amendments to the fee regulation that would increase revenue to enable the District to address increasing regulatory program activity costs, and reduce the cost recovery gap. The District also will continue to seek measures to improve efficiency and contain costs. On an overall basis, the proposed fee amendments would increase fee revenue by approximately $1.4 million from projected revenue levels in the current fiscal year, representing an increase of about 7 percent.

The District is proposing to amend individual Fee Schedules based on the magnitude of the cost recovery gap identified in the Cost Recovery Study. Fee Schedules with the largest cost recovery gaps would be increased by 15 percent; schedules with less significant gaps, along with most administrative fees, would be increased by five percent; schedules with no cost recovery gaps would not be increased.

The District is proposing further increases in fees for refinery flares, and health risk screening analyses, due to increases in program activity costs related to regulatory changes in these areas. In addition, new fees are proposed for renewals of Authorities to Construct, and Potential to Emit demonstrations, which are not currently covered by fees. The definition of a Small Business would also be amended to adjust the gross annual income criterion for inflation.

The proposed effective date of the amendments to the District's fee regulation is July 1, 2005.

2. BACKGROUND

State law authorizes the District to assess fees to generate revenue to cover regulatory program activity costs (i.e., the District's direct and indirect expenditures for personnel, services and supplies, and capital outlay, related to implementing and enforcing air quality programs affecting stationary sources of air pollution). The largest portion of fees is collected under provisions that allow the District to impose permit fees sufficient to cover the full costs of programs related to permitted sources. (Health and Safety Code Section 42311(a) and (f).) The District has established, and regularly updates, a fee regulation (District Regulation 3: Fees) under these authorities. Currently, approximately one-third of the District's general fund operating budget is derived from fees imposed in accordance with this regulation.

From time to time, the District has considered whether these fees result in the collection of a sufficient and appropriate amount of revenue in comparison to the cost of related program activities. In 1999, a comprehensive review of the District's fee structure and revenues was completed by the firm KPMG Peat Marwick LLP (*Bay Area Air Quality Management District Cost Recovery Study, Final Report: Phase One – Evaluation of Fee Revenues and Activity Costs; February 16, 1999*). The 1999 Cost Recovery Study indicated that fee revenue did not nearly offset the full costs of program activities associated with sources subject to fees as authorized by State law. Property tax revenue (and in some years, fund balances) had consistently been used to close this cost recovery gap.

The District approved an across-the-board fee increase of 15 percent – the maximum allowed by law – for fiscal year 1999-00 as a step toward more complete cost recovery. In each of the next five years, the District adjusted fees only to account for inflation. For the current FY 2004-05, the District also approved further increases in Title V fees, and a new processing fee for renewals of permits to operate.

In 2004, the District's Board of Directors approved funding for an updated Cost Recovery Study. The accounting firm Stonefield Josephson, Inc. completed this study in March 2005 (*Bay Area Air Quality Management District Cost Recovery Study, Final Report; March 30, 2005*). The 2005 Cost Recovery Study indicates that a significant cost recovery gap still exists. In fact, the study showed that for FY 2003-04, fee revenue covered only about 60 percent of direct and indirect program activity costs, leaving a gap of approximately $13 million to be filled with property tax revenue.

For the upcoming FY 2005-06, District staff is proposing amendments to Regulation 3 that would increase fee revenue to enable the District to address increasing regulatory program activity costs, and to reduce the cost recovery gap. The District also recognizes the need to continually seek measures to improve efficiency and contain costs, and has included a number of such measures in the proposed FY 2005-06 budget. On an overall basis, the proposed fee amendments would increase fee revenue by approximately $1.4 million from projected revenue levels in the current fiscal year, representing an increase of about 7 percent. Projected fee revenue for FY 2005-06 is provided in Table 1. These figures are approximations, as accurate projections of fee revenues are very difficult because of many factors including fluctuations in industrial activities.

Table 1. Projected Fee Revenue for FY 2005-06

Permit Fees	
Operating/New & Modified Permit Fees	$17,011,700
Title V Fees	$2,014,700

Other Fees	
AB 2588 Fees (including State pass through)	$626,600
Asbestos Fees	$1,574,300
Soil Excavation and Landfill Fees	$43,000
Hearing Board Fees	$69,800
Total	$21,340,100

2. PROPOSED FEE AMENDMENTS FOR FY 2004-2005

2.1 OVERVIEW OF PROPOSED AMENDMENTS

The District's fee proposal is based largely on the results and recommendations of the 2005 Cost Recovery Study. The details are summarized as follows.

1. The following Fee Schedules, which the Cost Recovery Study indicates have the largest revenue gaps (i.e., costs exceeding revenue by more than 50 percent for the period July 1, 2001 – June 30, 2004), would be increased by 15 percent:

   Schedule A: Hearing Board
   Schedule D: Gasoline Transfer at Gasoline Dispensing Facilities, Bulk Plants and Terminals
   Schedule E: Solvent Evaporating Sources
   Schedule F: Miscellaneous Sources
   Schedule G1: Miscellaneous Sources
   Schedule H: Semiconductor and Related Operations
   Schedule I: Dry Cleaners
   Schedule K: Solid Waste Disposal Sites (except for fees for Evaluation of Reports and Questionnaires, which would not be increased)
   Schedule P: Major Facility Review Fees

2. The following Fee Schedules, which the Cost Recovery Study indicates have less significant revenue gaps (i.e., costs exceeding revenue by between 15 and 50 percent for the period July 1, 2001 – June 30, 2004), would be increased by 5 percent:

   Schedule B: Combustion of Fuels
   Schedule G2: Miscellaneous Sources
   Schedule N: Toxic Inventory Fees

3. The following Fee Schedules, which the Cost Recovery Study indicates have no revenue gaps (for the period July 1, 2001 – June 30, 2004), would not be increased:

Schedule C:	Stationary Containers for the Storage of Organic Liquids
Schedule G3:	Miscellaneous Sources
Schedule G4:	Miscellaneous Sources
Schedule L:	Asbestos Operations
Schedule Q:	Excavation of Contaminated Soil and Removal of Underground Storage Tanks

4. The fees in Schedule M: Major Stationary Source Fees, would be increased by 15 percent. This will partially compensate for emissions inventory reductions at affected facilities that do not necessarily manifest themselves in less costly programs, but which have resulted in decreasing fee revenue from this emissions-based Fee Schedule.

5. The following administrative fees would be increased by 5 percent:

Section 3-302:	New and modified source filing fee
Section 3-309:	Duplicate permit fee
Section 3-311:	Banking filing fee and withdrawal fee
Section 3-312:	Regulation 2, Rule 9 Alternative Compliance Plan fee
Section 3-327:	Permit to Operate renewal processing fee

6. The following fees would be created or amended:

   (a) A new fee would be created for an application to renew an Authority to Construct. This activity requires a Best Available Control Technology (BACT) and offset review by District staff, but there is currently no fee for this activity. The proposed fee would be equal to one half of the initial fee for each new and modified source.

   (b) A new fee would be added for a Potential to Emit (PTE) demonstration requested by a facility. This activity requires detailed emissions calculations to be made, or reviewed, by District staff for each source at a facility, but there is currently no fee for this activity. The proposed fee for a PTE demonstration would be $50 per source evaluated, not to exceed a total of $5000 per facility.

   (c) The fee for a Health Risk Screening Analysis would be increased. The District has separately proposed to update and enhance its Air Toxics New Source Review (NSR) program, which will require more complex Health Risk Screening Analyses to be prepared by District staff. The proposed fee would represent a $272 increase for permit applications for new and modified sources that require a Health Risk Screening Analysis. The risk-screening fee would also be applicable to other provisions in District regulations (e.g., a request for demonstration of permit exemption under Regulation 2-1-316) under which the District prepares a Health Risk Screening Analysis for a facility upon request.

   (d) The permit fees for refinery flares would be increased. In recent years, the District has significantly increased its regulatory activities for refinery flares with the adoption of a refinery flare monitoring rule, and the proposal of a refinery flare control rule. The proposed fee amendments would move refinery flares subject to Regulation 12, Rule 11: Flare Monitoring at Petroleum Refineries, from Schedule G-1 to the higher-cost Schedule G-3.

7. Additional changes in the definitions, standards, administrative requirements, and Fee Schedules of the fee regulation are proposed in order to improve the clarity and efficacy of the regulation. Many of these are related to the separate District proposal to codify the policies and procedures of the Air Toxics NSR program into Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. The District's Board of Directors will consider adoption of Regulation 2, Rule 5, and the proposed amendments to Regulation 3, on June 15, 2005.

2.2 PROPOSED RULE AMENDMENTS

The complete text of the proposed changes to District Regulation 3: Fees, has been prepared in strikethrough (deletion of existing text) and underline (new text) format, and is included in Appendix A. A description of the proposed amendments follows.

- Section 3-209: Small Business

Small businesses are provided with a discount for certain District fees (e.g., fees for permit applications for new and modified sources, and fees for Hearing Board proceedings). The 2005 Cost Recovery Study included a recommendation that the District re-examine its definition for small business, and make adjustments accordingly to reflect revenue as well as equity issues. As an initial step in this effort, the District is proposing to increase the gross annual income criterion in the definition of small business from $500,000 to $600,000. This increase is an inflation adjustment (rounded to the nearest $100,000), based on the increase in the Consumer Price Index that has occurred for the California Bay Area, as reported by the California Department of Industrial Relations, from the year 2000 when this definition for Small Business was originally established. This change is expected to have a minor impact on overall fee revenue.

- Section 3-227: Toxic Air Pollutant

Section 222 of proposed Regulation 2, Rule 5 defines the term "Toxic Air Contaminant, or TAC". To maintain consistency in terminology between rules, the same definition is proposed to be included in Section 3-227. The term Toxic Air Contaminant refers to the list of TACs that are included in Table 2-5-1 of proposed Regulation 2, Rule 5. This table has been updated based on the most recent health risk assessment guidelines adopted by Cal/EPA's Office of Environmental Health Hazard Assessment.

- Section 3-238: Risk Screening Fee, and Section 3-239: Toxic Surcharge

Two new terms are being defined to improve clarity in the regulation: "Risk Screening Fee" in Section 3-238, and "Toxic Surcharge" in Section 3-239. These terms will replace the term "Toxic Surcharge Fee" which is currently used in most Fee Schedules to establish initial fees for new and modified sources, and permit to operate renewal fees, for sources with TAC emissions above specified trigger levels. These changes in terminology also necessitate some rewording in other parts of Regulation 3, such as Section 3-302: Fees for New and Modified Sources, Section 3-303: Back Fees, Section 3-306: Change in Conditions, Section 3-310: Fee for Constructing Without a Permit, Section 3-327: Permit to Operate, Renewal Fees, and Fee Schedules B through K.

The Risk Screening Fee is similar to the existing Toxic Surcharge Fee for new and modified sources. The Risk Screening Fee would be applicable to those new and modified sources of TACs for which a Health Risk Screening Analysis (HRSA) is required under the proposed Regulation 2, Rule 5. The Risk Screening Fee would also be applicable where the owner/operator of a facility requests that the District prepare or review an HRSA to comply with other provisions in District rules. For example, the owner/operator of a facility may request that the District prepare an HRSA to demonstrate under Regulation 2-1-316 that a source with emissions above a TAC trigger level is exempt from permit requirements. Regulation 8, Rule 47: Air Stripping and Soil Vapor Extraction Operations Regulation, also has an exemption that may apply based on the results of an HRSA.

The Toxic Surcharge is an additional fee for sources of TACs that is assessed on permit renewals. The Toxic Surcharge would apply to sources with annual emissions that exceed one or more chronic TAC trigger level in Table 2-5-1. As is the case under the exiting fee regulation, the Toxic Surcharge would be equal to 10 percent of the permit to operate fee established under the applicable Fee Schedule for the source under consideration.

- Section 3-302: Fees for New and Modified Sources

The primary proposed amendment for Section 3-302 is a 5 percent increase in the filing fee for permit applications (rounded to the nearest whole dollar), which would be increased from \$259 to \$272. A number of other changes to the language in Section 3-302 are also being proposed to improve the clarity of the requirements and maintain consistency with the change in terminology for Risk Screening Fee and Toxic Surcharge.

- Section 3-303: Back Fees

Language has been added to Section 3-303 to indicate that back fees include any applicable toxic inventory fees. This provision is being added to address equity issues because owners/operators of sources that apply for permits on a timely basis as required by District regulations are also required to pay these fees. The other proposed language changes in Section 3-303 are intended to improve the clarity of the requirements and maintain consistency with the change in terminology for Toxic Surcharge.

- Section 3-308: Change of Location

The changes to the language in Section 3-308 are being proposed to improve the clarity of the requirements.

- Section 3-309: Duplicate Permit

The proposed amendment for Section 3-309 is a 5 percent increase in the fee for a duplicate permit to operate (rounded to the nearest whole dollar), which would be increased from $52 to $55 per permit.

- Section 3-310: Fee for Constructing Without a Permit

The proposed amendments for Section 3-310 are to improve clarity and to maintain consistency with the change in terminology for Risk Screening Fee and Toxic Surcharge.

- Section 3-311: Banking

The proposed amendment for Section 3-311 is a 5 percent increase in the filing fee for banking applications (rounded to the nearest whole dollar), which would be increased from $259 to $272.

- Section 3-312: Emission Caps and Alternative Compliance Plans

The proposed amendment for Section 3-312 is a 5 percent increase in the annual fee for a facility that elects to use an alternative compliance plan or "bubble" permit to comply with Regulation 8, or Regulation 2, Rule 9.

- Section 3-327: Permit to Operate, Renewal Fees

The proposed amendment for Section 3-327 is a 5 percent increase in the processing fee (rounded to the nearest whole dollar) for a facility for renewal of permits to operate. Additional language changes are proposed to improve clarity and to maintain consistency with the change in terminology for Toxic Surcharge.

- Section 3-329: Fee for Risk Screening

The proposed amendments would add a new Section 3-329, which is intended to improve clarity and maintain consistency with the change in terminology for the Risk Screening Fee. The Risk Screening Fee would be applicable to those new and modified sources of TACs for which an HRSA is required under the proposed Regulation 2, Rule 5. In addition, the Risk Screening Fee would apply if the owner/operator of a facility requests that the District prepare or review an HRSA to comply with other provisions in District rules.

The amount of the Risk Screening Fee is determined in the applicable Fee Schedules for the sources included in the HRSA. The proposed amendments include changes in these Fee Schedules as described in Section 2.1 of this report. In addition, this fee would be increased for each application requiring an HRSA by $272 ($136 for applications at facilities that qualify for a small business discount). The Risk Screening Fee for many applications would be the minimum fee of $481 ($241 with the small business discount), which comes closer to recovering the full cost of District staff resources required to complete a simplified HRSA. The proposed increase in fees is expected to provide adequate revenue to cover the District costs of the proposed enhancements in the Air Toxics NSR Program included in Regulation 2, Rule 5.

- Section 3-330: Fee for Renewing an Authority to Construct

The proposed amendments would add a new Section 3-330, creating a new fee for an application to renew an Authority to Construct under Regulation 2-1-407. This activity requires a review of BACT and emission offsets requirements by District staff, but there is currently no fee for this activity. The proposed fee would be equal to one half of the initial fee for each new and modified source in the application, which is believed to be a reasonable fee for this activity. If the District determines that the requirements for renewal of an Authority to Construct are not met, any fees paid under Section 3-330 will be credited toward an application submitted for equipment performing the same function within six months of the date that the original Authority to Construct expires.

- Section 3-405: Fees Not Paid

The proposed amendments to Section 3-405 are intended to clarify that, when applicable, the amount of late fees or reinstatement fees will be based on the total fees specified on the invoice.

- Section 3-415: Failure to Pay – Further Actions

The proposed amendment to Section 3-415 is intended to correct a typographical error. The word "delinquent" was inadvertently left out of the current language.

- Fee Schedules

The fees contained in each Fee Schedule in Regulation 3 would be increased by either 5 percent or 15 percent (generally rounded to the nearest whole dollar) as summarized in Section 2.1 of this report, with the exception of the following fee schedules, which would have no increase in fees: Schedule C: Stationary Containers for the Storage of Organic Liquids, Schedule G3: Miscellaneous Sources, Schedule G4: Miscellaneous Sources, Schedule L: Asbestos Operations, and Schedule Q: Excavation of Contaminated Soil and Removal of Underground Storage Tanks.

The District portion of variable F_T, the total amount of fees to be collected, used to calculate fees for Schedule N: Toxic Inventory Fees, is proposed to be increased by 5 percent. This change does not require any modifications to the language of Schedule N. (The smaller State portion of F_T established by the California Air Resources Board is expected to be unchanged in FY 2005-06).

As was previously indicated, the fees for risk screening indicated in the applicable Fee Schedules would also be increased for each application requiring an HRSA by $272 ($136 for applications at facilities that qualify for a small business discount). This increase in fees will bring the minimum risk screening fee closer to the cost of District staff resources required to complete a simplified HRSA. The proposed increase in fees is also expected to provide adequate revenue to cover the District costs of the proposed enhancements in the Air Toxics NSR Program included in Regulation 2, Rule 5.

Additional changes in the wording and structure of Fee Schedules B through K, and Schedule N are proposed in order to improve the clarity of the regulation. Most of these language changes are related to the proposed changes in terminology for Risk Screening Fee and Toxics Surcharge, and to maintain consistency with the proposed Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants (e.g., the toxic trigger level table is being moved from Regulation 2-1-316 to Table 2-5-1).

Fee Schedules G-1, G-3, and P have additional proposed amendments as follows.

- Fee Schedules G-1 and G-3: Miscellaneous Sources

The proposed amendments would move refinery flares subject to Regulation 12, Rule 11: Flare Monitoring at Petroleum Refineries, from Schedule G-1 to the higher-cost Schedule G-3. This change is being made because the District has significantly increased its regulatory activities for refinery flares with the adoption of a refinery flare monitoring rule, and the proposal of a refinery flare control rule. This change will result in an increase in the annual permit renewal fees for each affected flare of $7733. Based on an estimated 23 affected refinery flares in the Bay Area, an increase in total revenue of approximately $178,000 is projected. The District's increased costs of implementing and enforcing the new regulatory requirements for refinery flares on an ongoing basis are expected to be at least this high.

- Fee Schedule P: Major Facility Review Fees

A new fee has been added to Schedule P for PTE demonstrations requested by a facility under Regulation 2-6-312 in order to avoid the requirement for a Major Facility Review (Title V) permit. This activity requires detailed emissions calculations to be made, or reviewed, by District staff for each source at a facility, but there is currently no fee for this activity. The proposed fee for a PTE demonstration would be $50 per source evaluated, not to exceed a total of $5000 per facility. This is believed to be an appropriate fee based on the

District staff resources needed to conduct this activity.

3. PROJECTED FEE REVENUE AND COSTS OF PROGRAM ACTIVITIES

With the proposed fee amendments, the District's total projected fee revenue for FY 2005-06 is $21.34 million. The 2005 Cost Recovery Study indicated that, for the last complete fiscal year (FY 2003-04), the District's total regulatory program activity costs were approximately $32.54 million ($21.85 million in direct costs, and $10.69 million in indirect costs). The regulatory program activity costs for FY 2005-06, are expected to exceed the FY 2003-04 costs by more than 3 percent.

4. STATUTORY AUTHORITY FOR PROPOSED FEE INCREASES

State law provides authorities for air districts to adopt fee schedules to cover the costs of various air pollution programs. Health & Safety Code Section 42311(a) provides authority for an air district to collect permit fees to cover the costs of district programs related to permitted stationary sources. These fees may not exceed the actual cost of permit programs in the preceding year with an adjustment for an increase in the Consumer Price Index (CPI). Subject to similar limitations, Health & Safety Code Section 42311(f) further authorizes the District to assess additional permit fees to cover the costs of programs related to toxic air contaminants. Health & Safety Code Section 41512.7 limits the allowable percentage increase in fees for authorities to construct and permits to operate (i.e., operating/new and modified permit fees) to 15 percent per year.

Health & Safety Code Section 42311(g) authorizes air districts to adopt a schedule of fees to be assessed on areawide or indirect sources of emissions, which are regulated but for which permits are not issued by the district, to recover the costs of district programs related to these sources. This Section provides the authority for the District to collect asbestos, soil excavation and landfill fees.

Health & Safety Code Section 44380(a) authorizes the air district to adopt a fee schedule, which recovers the costs to the district and the State of the Air Toxics Hot Spots Program (AB 2588).

Health & Safety Code Section 42311(h) authorizes air districts to adopt a schedule of fees to cover the reasonable costs of the Hearing Board incurred as a result of appeals from district decisions on the issuance of permits. Section 42364(a) provides similar authority to collect fees for the filing of applications for variances or to revoke or modify variances.

The proposed fee amendments are in accordance with all applicable authorities provided in the California Health and Safety Code. Based on the results of the 2005 Cost Recovery Study, permit fee revenue following the proposed amendments would still be far below the District's direct and indirect program activity costs associated with regulatory programs covering permitted sources. Similarly, Hearing Board fee revenue will still be far below the District's program activity costs associated with Hearing Board activities related to variances and permit appeals. No increases in fees are proposed for those asbestos, soil excavation and landfill regulatory activities that are non-permit related.

5. ASSOCIATED IMPACTS AND OTHER RULE DEVELOPMENT REQUIRMENTS

5.1 EMISSIONS IMPACTS

There will be no direct air emission increases or decreases as a result of the proposed fee amendments.

5.2 ECONOMIC IMPACTS

The District must, in some cases, consider the socioeconomic impacts and incremental costs of proposed rules or amendments. Section 40728.5(a) of the California Health and Safety Code requires that socioeconomic impacts be analyzed whenever a district proposes the adoption, amendment, or repeal of a rule or regulation that will significantly affect air quality or emissions limitations. The proposed fee amendments will not significantly affect air quality or emissions limitations, and so a socioeconomic impact analysis is not required.

Section 40920.6 of the California Health and Safety Code specifies that a district is required to perform an incremental cost analysis for a proposed rule, if the purpose of the rule is to meet the requirement for best available retrofit control technology or for a feasible measure. The proposed fee amendments are not not best available retrofit control technology requirements, nor a feasible measure required under the California Clean Air Act. Therefore, an incremental cost analysis is not required.

The impact of the proposed fee amendments on small businesses is expected to be minimal. Many small businesses operate only one or two sources, and generally pay only the minimum permit renewal fees. A summary of typical expected increases in annual permit renewals fees is given in Table 2 for various size dry cleaners, auto body shops, and gasoline stations.

Table 2. Typical Increases in Annual Permit Renewal Fees for FY 2005-06

Permit Fees	Small	Medium	Large
Dry Cleaner	$25	$36	$108
Auto Body Shop	$23	$23	$45
Gasoline Station	$60	$117	$173

5.3 ENVIRONMENTAL IMPACTS

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the CEQA Guidelines, 14 CCR 15000 et seq., require a government agency that undertakes or approves a discretionary project to prepare documentation addressing the potential impacts of that project on all environmental media. Certain types of agency actions are, however, exempt from CEQA requirements. The proposed fee amendments are exempt from the requirements of the CEQA under Section 15273 of the CEQA Guidelines, which state: "CEQA does not apply to the establishment, modification, structuring, restructuring, or approval of rates, tolls, fares, and other charges by public agencies...." (See also Public Resources Code Section 21080(b)(8)).

Section 40727.2 of the Health and Safety Code imposes requirements on the adoption, amendment, or repeal of air district regulations. It requires a district to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. This fee proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent administrative requirements. Therefore, Section 40727.2 does not apply.

5.4 STATUTORY FINDINGS

Pursuant to Health and Safety Code, Section 40727, regulatory amendments must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. The proposed amendments to Regulation 3 are:

- Necessary to fund the District's efforts to attain federal and state air quality standards, and to reduce public exposure to toxic air contaminants;
- Authorized by Health and Safety Code Sections 42311, 42311.2, 41512.7, 42364, 44380 and 40 CFR Part 70.9;
- Clear, in that the amendments are written so that the meaning can be understood by the affected parties;
- Consistent with other District rules, and not in conflict with any state or federal law;
- Not duplicative of other statutes, rules or regulation; and
- Implements and references Health and Safety Code Sections 42311, 42311.2, 41512.7, 42364, 44380 and 40 CFR Part 70.9.

6. RULE DEVELOPMENT PROCESS

On April 21, 2005, the District issued a notice for a public workshop to discuss with interested parties an initial proposal to increase District fees. Distribution of this notice included all District-permitted facilities.

The workshop was held on May 6, 2005. Six individuals attended. On May 13, 2005, the District issued a Public Hearing Notice, which was mailed to the same address list used for the workshop notice. The Public Hearing to consider adoption of the regulation amendments is scheduled for June 15, 2005.

Under State law, amendments to fees for non-permitted sources require two public hearings that are held at least 30 days apart from one another. This provision applies to Schedule L: Asbestos Operations, and Schedule Q: Excavation of Contaminated Soil and Removal of Underground Storage Tanks. Because the District is not proposing to amend these Fee Schedules, adoption of the proposed amendments can occur following the Public Hearing on June 15, 2005.

7. PUBLIC COMMENTS

No written comments have been received regarding the proposed fee amendments as of the date of this report. The only oral comments received were from two owners of gasoline stations that attended the public workshop. These individuals indicated that they were opposed to any fee increases. The increase in fees for both of these facilities was determined to be less than $100.

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

STAFF REPORT
JUNE 2005

PROPOSED AMENDMENTS TO BAAQMD REGULATION 3: FEES

APPENDIX A
PROPOSED REGULATORY LANGUAGE

REGULATION 3
FEES

INDEX

3-300 STANDARDS

3-400 ADMINISTRATIVE REQUIREMENTS

3-500 MONITORING AND RECORDS (None Included)

3-600 MANUAL OF PROCEDURES (None Included)

FEE SCHEDULES

SCHEDULE A	HEARING BOARD FEES
SCHEDULE B	COMBUSTION OF FUEL
SCHEDULE C	STATIONARY CONTAINERS FOR THE STORAGE OF ORGANIC LIQUIDS
SCHEDULE D	GASOLINE TRANSFER AT GASOLINE DISPENSING FACILITIES, BULK PLANTS AND TERMINALS
SCHEDULE E	SOLVENT EVAPORATING SOURCES
SCHEDULE F	MISCELLANEOUS SOURCES
SCHEDULE H	SEMICONDUCTOR AND RELATED OPERATIONS
SCHEDULE I	DRY CLEANERS
SCHEDULE J	DELETED February 19, 1992
SCHEDULE K	SOLID WASTE DISPOSAL SITES
SCHEDULE L	ASBESTOS OPERATIONS
SCHEDULE M	MAJOR STATIONARY SOURCE FEES
SCHEDULE N	TOXIC INVENTORY FEES
SCHEDULE O	DELETED May 19, 1999
SCHEDULE P	MAJOR FACILITY REVIEW FEES
SCHEDULE Q	EXCAVATION OF CONTAMINATED SOIL AND REMOVAL OF UNDERGROUND STORAGE TANKS

REGULATION 3
FEES

(Adopted June 18, 1980)

3-100 GENERAL

3-101 **Description:** This regulation establishes fees to be charged for Hearing Board filings, for permits, banking, experimental exemptions, renewal of permits, costs of environmental documentation, asbestos operations, air toxics inventories, and soil excavation and underground tank removals.

(Amended 7/6/83; 11/2/83; 2/21/90; 12/16/92; 8/2/95; 12/2/98; 5/21/03)

3-102 **Deleted July 12, 1989**

3-103 **Exemption, Abatement Devices:** Installation, modification, or replacement of abatement devices on existing sources are subject to fees pursuant to Section 3-302.3. All abatement devices are exempt from annual permit renewal fees. However, emissions from abatement devices, including any secondary emissions, shall be included in facility-wide emissions calculations when determining the applicability of and the fees associated with Schedules M, N, and P.

(Amended 6/4/86; 7/1/98; 6/7/00)

3-104 **Deleted August 2, 1995**

3-105 **Exemption, Excavation of Contaminated Soil and Removal of Underground Storage Tank Operation Fees:** Fees shall not be required, pursuant to Section 3-322, for operations associated with the excavation of contaminated soil and the removal of underground storage tanks if one of the following is met:

105.1 The tank removal operation is being conducted within a jurisdiction where the APCO has determined that a public authority has a program equivalent to the District program and persons conducting the operations have met all the requirements of the public authority.

105.2 Persons submitting a written notification for a given site have obtained an Authority to Construct or Permit to Operate in accordance with Regulation 2, Rule 1, Section 301 or 302. Evidence of the Authority to Construct or the Permit to Operate must be provided with any notification required by Regulation 8, Rule 40.

(Adopted 1/5/94; Amended 5/21/03)

3-106 **Deleted December 2, 1998**

3-107 **Exemption, Sources Exempt from Permit Requirements:** Any source that is exempt from permit requirements pursuant to Regulation 2, Rule 1, Sections 103 through 128 is exempt from permit fees. However, emissions from exempt sources shall be included in facility-wide emissions calculations when determining the applicability of and the fees associated with Schedules M, N, and P.

(Adopted June 7, 2000)

3-200 DEFINITIONS

3-201 **Cancelled Application:** Any application which has been withdrawn by the applicant or cancelled by the APCO for failure to pay fees or to provide the information requested to make an application complete.

(Amended 6/4/86; 4/6/88)

3-202 **Gasoline Dispensing Facility:** Any stationary facility which dispenses gasoline directly into the fuel tanks of vehicles, such as motor vehicles, aircraft or boats. The facility shall be treated as a single source which includes all necessary equipment for the exclusive use of the facility, such as nozzles, dispensers, pumps, vapor return lines, plumbing and storage tanks.

(Amended February 20, 1985)

3-203 **Filing Fee:** A fixed fee for each source in an authority to construct.

(Amended June 4, 1986)

3-204 **Initial Fee:** The fee required for each new or modified source based on the type and size of the source. The fee is applicable to new and modified sources seeking to obtain an authority to construct. Operation of a new or modified source is not allowed until the permit to operate fee is paid.

(Amended June 4, 1986)

3-205 Authority to Construct: Written authorization from the APCO, pursuant to Section 2-1-301, for a source to be constructed or modified or for a source whose emissions will be reduced by the construction or modification of an abatement device.

(Amended June 4, 1986)

3-206 Modification: See Section 1-217 of Regulation 1.

3-207 Permit to Operate Fee: The fee required for the annual renewal of a permit to operate or for the first year of operation (or prorated portion thereof) of a new or modified source which received an authority to construct.

(Amended 6/4/86; 7/15/87; 12/2/98; 6/7/00)

3-208 Deleted June 4, 1986

3-209 Small Business: A business with no more than 10 employees and gross annual income of no more than $~~500,000~~600,000 that is not an affiliate of a non-small business.

(Amended 6/4/86; 6/6/90; 6/7/00)

3-210 Solvent Evaporating Source: Any source utilizing organic solvent, as part of a process in which evaporation of the solvent is a necessary step. Such processes include, but are not limited to, solvent cleaning operations, painting and surface coating, rotogravure coating and printing, flexographic printing, adhesive laminating, etc. Manufacture or mixing of solvents or surface coatings is not included.

(Amended July 3, 1991)

3-211 Source: See Section 1-227 of Regulation 1.

3-212 Deleted August 2, 1995

3-213 Major Stationary Source: For the purpose of Schedule M, a major stationary source shall be any District permitted plant, building, structure, stationary facility or group of facilities under the same ownership, leasehold, or operator which, in the base calendar year, emitted to the atmosphere organic compounds, oxides of nitrogen (expressed as nitrogen dioxide), oxides of sulfur (expressed as sulfur dioxide), or PM_{10} in an amount calculated by the APCO equal to or exceeding 50 tons per year.

(Adopted 11/2/83; Amended 2/21/90; 6/6/90; 8/2/95; 6/7/00)

3-214 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-215 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-216 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-217 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-218 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-219 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-220 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-221 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-222 Deleted effective March 1, 2000 *(Amended 10/20/99)*

3-223 Start-up Date: Date when new or modified equipment under an authority to construct begins operating. The holder of an authority to construct is required to notify the APCO of this date at least 3 days in advance. For new sources, or modified sources whose authorities to construct have expired, operating fees are charged from the startup date.

(Adopted 6/4/86; Amended 6/6/90)

3-224 Permit to Operate: Written authorization from the APCO pursuant to Section 2-1-302.

(Adopted 6/4/86; Amended 6/7/00)

3-225 Minor Modification: Any physical change or alteration to a source listed on Schedules G-3 or G-4 that will not increase emissions of any air contaminant. Such modifications may include alterations to improve energy and operational efficiency and those that reduce emissions. Alterations to increase actual or maximum production capacity shall not be considered minor modifications. Final determination of the applicability of this section shall be made by the APCO.

(Adopted June 6, 1990)

3-226 Air Toxics "Hot Spots" Information and Assessment Act of 1987: The Air Toxics "Hot Spots" Information and Assessment Act of 1987 directs the California Air

Resources Board and the Air Quality Management Districts to collect information from industry on emissions of potentially toxic air ~~pollutants~~contaminants and to inform the public about such emissions and their impact on public health. It also directs the Air Quality Management District to collect fees sufficient to cover the necessary state and District costs of implementing the program.

(Adopted October 21, 1992)

3-227 Toxic Air~~ Pollutant:~~ ~~For the purpose of this fee regulation, a "toxic air pollutant" is any air pollutant that is included in the District's list of Toxic Air Pollutants and Emission Weighting Factors (Schedule N).~~ **Contaminant, or TAC:** An air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a present or potential hazard to human health. For the purposes of this rule, TACs consist of the substances listed in Table 2-5-1 of Regulation 2, Rule 5.

(Adopted October 21, 1992)

3-228 Deleted December 2, 1998

3-229 Deleted December 2, 1998

3-230 Deleted December 2, 1998

3-231 Deleted December 2, 1998

3-232 Deleted December 2, 1998

3-233 Deleted December 2, 1998

3-234 Deleted December 2, 1998

3-235 Deleted December 2, 1998

3-236 Deleted December 2, 1998

3-237 PM_{10}: See Section 2-1-229 of Regulation 2, Rule 1.

(Adopted June 7, 2000)

3-238 Risk Screening Fee: Fee for a new or modified source of toxic air contaminants for which a health risk screening analysis (HRSA) is required under Regulation 2-5-401, or for an HRSA prepared for other purposes (e.g., for determination of permit exemption in accordance with Regulations 2-1-316, 2-5-301 and 2-5-302; or for determination of exemption from emission control requirements pursuant to Regulation 8-47-113 and 8-47-402).

3-239 Toxic Surcharge: Fee paid in addition to the permit to operate fee for a source that emits one or more toxic air contaminants at a rate which exceeds a chronic trigger level listed in Table 2-5-1.

3-300 STANDARDS

3-301 Hearing Board Fees: Applicants for variances or appeals or those seeking to revoke or modify variances or abatement orders or to rehear a Hearing Board decision shall pay the applicable fees, including excess emission fees, set forth in Schedule A.

(Amended June 7, 2000)

3-302 Fees for New and Modified Sources: Applicants for authorities to construct and permits to operate new sources shall pay for each new source: a filing fee of $~~259~~ 272 ~~per source plus the initial fee and the~~, the initial fee, the risk screening fee, the permit to operate fee, and toxic surcharge (given in Schedules B, C, D, E, F, H, I or K). Applicants for authorities to construct and permits to operate modified sources shall pay for each modified source, a filing fee of $~~259~~ 272, ~~per source plus~~ the initial fee, the risk screening fee, and any incremental increase in permit to operate ~~fees given in Schedules B, C, D, E, F, H, I or K.~~and toxic surcharge fees. Where more than one of the schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. Except for ~~sources covered by~~ gasoline dispensing facilities (Schedules D)~~.1A.5.~~ and semiconductor facilities (Schedule H), the size to be used for a source when applying the schedules shall be the maximum size the source will have after the construction or modification. Where applicable, fees for new or modified sources shall be based on maximum permitted usage levels or maximum potential to emit including any secondary emissions from abatement equipment.

302.1 Small Business Discount: If ~~A~~an applicant ~~who~~ qualifies as a small business~~shall pay one half of the filing fee~~ and~~, if~~ the source falls under schedules B, C, D (excluding gasoline dispensing facilities) ~~3B.~~, E, F, H, I or K, ~~one-half of the initial fee and the full permit to operate fee. If the source falls under schedule D.1, the applicant shall pay the full filing fee, the full initial fee and the permit to operate fee.~~ ~~shall have~~ the filing fee, ~~and~~ initial fee, and risk screening fee shall be reduced by 50%. All other applicable fees shall be paid in full.

302.2 Deleted July 3, 1991

302.3 Fees for Abatement Devices: Applicants for an authority to construct and permit to operate abatement devices where there is no other modification to the source shall pay a ~~$259~~ 272 filing fee and ~~an~~ initial and risk screening fees that are equivalent to 50% of the initial and risk screening fees for the source being abated. For abatement devices abating more than one source, the initial fee shall be 50% of the initial fee for the source having the highest initial fee.

302.4 Fees for Reactivated Sources: Applicants for a Permit to Operate reactivated, previously permitted equipment shall pay the full filing, initial, risk screening, ~~and~~ permit, and toxic surcharge fees.

302.5 Schedule G Fees: Applicants for minor modifications to permitted sources subject to Schedules G-3 or G-4 shall pay ~~filing fees and the initial and permit to operate~~ filing, initial, risk screening, permit to operate, and toxic surcharge fees specified under Schedule G-2. Permit renewal fees will continue to be charged under Schedules G-3 and G-4.

(Amended 5/19/82; 7/6/83; 6/4/86; 7/15/87, 6/6/90; 7/3/91; 6/15/94; 10/8/97; 7/1/98; 5/19/99; 6/7/00;6/6/01, 5/1/02; 5/21/03; 6/2/04)

3-303 Back Fees: An applicant required to obtain a permit to operate existing equipment in accordance with District regulations shall pay back fees equal to the permit to operate fees and toxic surcharges given in the appropriate Schedule (B, C, D, E, F, H, I or K) prorated from the effective date of permit requirements. Where more than one of these schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. The applicant shall also pay back fees equal to toxic inventory fees pursuant to Section 3-320 and Schedule N. The maximum back fee shall not exceed a total of five years' permit, toxic surcharge, and toxic inventory fees.

(Amended 5/19/82; 7/6/83; 6/4/86; 7/15/87, 6/6/90; 7/3/91; 10/8/97)

3-304 Alteration: An applicant to alter an existing permitted source shall pay only the filing fee, provided that the alteration does not result in an increase in emissions of any regulated air pollutant.

(Amended 6/4/86; 11/15/00; 6/2/04)

3-305 Cancellation or Withdrawal: There will be no refund of initial, risk screening, and filing fees if an application is cancelled or withdrawn. However, if an application for identical equipment is submitted within six months of the date of cancellation or withdrawal, the initial fee will be credited in full against the fee for the new application.

(Amended 7/6/83; 4/6/88; 10/8/97)

3-306 Change In Conditions: If an applicant applies to change the conditions on an existing authority to construct or permit to operate, the applicant will pay the following fees. There will be no change in anniversary date.

306.1 Administrative Condition Changes: An applicant applying for an administrative change in permit conditions shall pay a fee equal to the filing fee for a single source, provided the following criteria are met:

1.1 The condition change applies to a single source or a group of sources with shared permit conditions.

1.2 The condition change does not subject the source(s) to any District Regulations or requirements that were not previously applicable.

1.3 The condition change does not result in any increase in emissions of POC, NPOC, NO_x, CO, SO_2, or PM_{10} at any source or the emission of a toxic air contaminant above the trigger levels identified in Table 2-5-1 ~~Regulation 2, Rule 1, Table 2-1-316.~~

1.4 The condition change does not require a public notice.

306.2 Other Condition Changes: Applicant shall pay the filing, ~~and~~ initial, and risk screening fees required for new and modified equipment under Section 3-302. If the condition change will result in higher permit to operate fees, the applicant shall also pay any incremental increases in permit to operate fees and toxic surcharges.

(Amended 7/6/83; 6/4/86, 6/6/90; 10/8/97; 6/7/00)

3-307 **Transfers:** The owner/operator of record is the person to whom a permit is issued or, if no permit has yet been issued to a facility, the person who applied for a permit. Permits are valid only for the owner/operator of record. Permits are re-issued to the new owner/operator of record with no change in expiration dates.

(Amended 2/20/85; 6/4/86, 11/5/86; 4/6/88; 10/8/97, 5/1/02, 5/21/03; 6/02/04)

3-308 **Change of Location:** An applicant who wishes to move an existing source, which has a permit to operate, shall pay no fee if the move is on the same facility. ~~The applicant shall pay the filing fee, the initial fee and permit to operate fee i~~If the move is not on the same facility, the source shall be considered a new source and subject to Section 3-302. This section does not apply to portable permits meeting the requirements of Regulation 2-1-220 and 413.

(Amended 7/6/83; 6/4/86)

3-309 **Duplicate Permit:** An applicant for a duplicate permit to operate shall pay a fee of $~~52~~ 55 per permit.

(Amended 5/19/99, 5/1/02, 5/21/03; 6/02/04)

3-310 **Fee for Constructing Without a Permit:** An applicant for an authority to construct and a permit to operate a source, which has been constructed or modified without an authority to construct~~.~~, shall pay the following fees:

310.1 Sources subject to permit requirements on the date of initial operation shall pay fees for new construction pursuant to Section 3-302, any back fees pursuant to Section 3-303, ~~and~~ a late fee equal to 100% of the initial fee, plus the risk screening fee. A ~~source falling under~~ modified gasoline dispensing facility subject to Schedule D~~-1A~~. that is not required to pay an initial fee shall pay back fees, a late fee equal to 100% of the filing fee, plus the risk screening fee.

310.2 Sources previously exempt from permit requirements ~~which~~ that lose their exemption due to changes in District, state, or federal regulations shall pay a permit to operate fee and toxic surcharge for the coming year and any back fees pursuant to Section 3-303.

310.3 Sources previously exempt from permit requirements ~~which~~ that lose their exemption due to a change in the manner or mode of operation, such as an increased throughput, shall pay fees for new construction pursuant to Section 3-302. In addition, sources applying for permits after commencing operation in a non-exempt mode shall also pay a late fee equal to 100% of the initial fee plus the risk screening fee and any back fees pursuant to Section 3-303.

310.4 Sources modified without a required authority to construct shall pay fees for modification pursuant to Section 3-302 and a late fee equal to 100% of the initial fee.

(Amended 7/6/83; 4/18/84, 6/4/86, 6/6/90; 7/3/91, 8/2/95, 10/8/97; 6/02/04)

3-311 **Banking:** Any applicant who wishes to bank emissions for future use, or convert an ERC into an IERC, shall pay a filing fee of $~~259~~ 272 per source plus the initial fee given in Schedules B, C, D, E, F, H, I or K. Where more than one of these schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. Any applicant for the withdrawal of banked emissions shall pay a fee of $~~259~~ 272.

(Amended 7/6/83; 6/4/86; 7/15/87; 7/3/91; 6/15/94; 7/1/98, 5/19/99; 6/7/00; 6/6/01, 5/1/02; 5/21/03, 6/02/04)

3-312 **Emission Caps and Alternative Compliance Plans:** Any facility which elects to use an alternative compliance plan contained in:

312.1 Regulation 8 ("bubble") to comply with a District emission limitation or to use an annual or monthly emission limit to acquire a permit in accordance with the provisions of Regulation 2, Rule 2, shall pay an additional annual fee equal to fifteen percent of the total plant permit to operate fee.

312.2 Regulation 2, Rule 9 shall pay an annual fee of $~~654~~ 687 for each source included in the alternative compliance plan, not to exceed $~~6542~~ 6,869.

(Adopted 5/19/82; Amended 6/4/86; 5/19/99; 6/7/00;6/6/01; 5/1/02; 5/21/03; 6/2/04)

3-313 **Deleted May 19, 1999**

3-314 **Deleted August 2, 1995**

3-315 **Costs of Environmental Documentation:** An applicant for an Authority to Construct a project which is subject to review under the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) shall pay, in addition to the fees required under Section 3-302 and in any applicable schedule, the District's costs of performing all environmental evaluation required pursuant to the California Environmental Quality Act, the District's costs in preparing any environmental study or Environmental Impact Report (including the costs of any outside consulting assistance which the District may employ in connection with the preparation of any such study or report), as well as the District's reasonable internal costs (including overhead) of processing and reviewing the required environmental documentation.

(Adopted 12/18/85; Amended 5/1/02)

3-316 **Deleted June 6, 1990**

3-317 **Asbestos Operation Fees:** After July 1, 1988, persons submitting a written plan, as required by Regulation 11, Rule 2, Section 401, to conduct an asbestos operation shall pay the fee given in Schedule L.

(Adopted 7/6/88; Renumbered 9/7/88; Amended 8/2/95)

3-318 **Public Notice Fee, Schools:** Pursuant to Section 42301.6(b) of the Health and Safety Code, an applicant for an authority to construct or permit to operate subject to the public notice requirements of Regulation 2-1-412 shall pay, in addition to the fees required under Section 3-302 and in any applicable schedule, a fee to cover the expense of preparing and distributing the public notices to the affected persons specified in Regulation 2-1-412 as follows:

318.1 A fee of $2000 per application, and

318.2 The District's cost exceeding $2000 of preparing and distributing the public notice.

318.3 The District shall refund to the applicant the portion of any fee paid under this Section that exceeds the District's cost of preparing and distributing the public notice.

(Adopted 11/1/89; Amended 10/8/97; 7/1/98; 5/19/99; 6/7/00; 5/21/03; 6/2/04)

3-319 **Major Stationary Source Fees:** Any major stationary source emitting 50 tons per year of organic compounds, sulfur oxides, nitrogen oxides, or PM_{10} shall pay a fee based on Schedule M. This fee is in addition to permit and other fees otherwise authorized to be collected from such facilities and shall be included as part of the annual permit renewal fees.

(Adopted 6/6/90; Amended 8/2/95; 6/7/00)

3-320 **Toxic Inventory Fees:** Any ~~stationary source~~facility that emits one or more ~~potentially toxic air pollutants (listed in Schedule N) in quantities above a minimum threshold level~~ toxic air contaminants in quantities above a minimum threshold level shall pay an annual fee based on Schedule N. This fee will be in addition to permit to operate, toxic surcharge, and other fees otherwise authorized to be collected from such facilities.

320.1 An applicant who qualifies as a small business under Regulation 3-209 shall pay a Toxic Inventory Fee as set out in Schedule N up to a maximum fee of ~~$5,953~~ 6,251 per year.

(Adopted 10/21/92; Amended 5/19/99; 5/21/03; 6/2/04)

3-321 **Deleted December 2, 1998**

3-322 **Excavation of Contaminated Soil and Removal of Underground Storage Tank Operation Fees:** Persons submitting a written notification for a given site to conduct either excavation of contaminated soil or removal of underground storage tanks as required by Regulation 8, Rule 40, Section 401, 402, 403 or 405 shall pay a fee based on Schedule Q.

(Adopted 1/5/94; Amended 8/2/95; 5/21/03)

3-323 **Pre-Certification Fees:** An applicant seeking to pre-certify a source, in accordance with Regulation 2, Rule 1, Section 415, shall pay the filing fee, initial fee and permit to operate fee given in the appropriate schedule.

(Adopted June 7, 1995)

3-324 **Deleted June 7, 2000**

3-325 **Deleted December 2, 1998**

3-326 Deleted December 2, 1998

3-327 Permit to Operate, Renewal Fees: After the expiration of the initial permit to operate, the permit to operate shall be renewed on an annual basis or other time period as approved by the APCO. The fee required for the renewal of a permit to operate is the permit to operate fee and toxic surcharge listed in Schedules B, C, D, E, F, H, I, and K, prorated for the period of coverage. When more than one of the schedules is applicable to a source, the fee paid shall be the highest of the applicable schedules. This renewal fee is applicable to all sources required to obtain permits to operate in accordance with District regulations. The permit renewal invoice shall also specify any applicable major stationary source fees based on Schedule M, toxic inventory fees based on Schedule N, and major facility review fees based on Schedule P. Where applicable, renewal fees shall be based on actual usage or emission levels that have been reported to or calculated by the District. In addition to these ~~permit to operate~~ renewal fees for the sources at a facility, the facility shall also pay a processing fee at the time of renewal as follows:

327.1 $~~50~~ 53 for facilities with one permitted source, including gasoline dispensing facilities,
327.2 $~~100~~ 105 for facilities with 2 to 5 permitted sources,
327.3 $~~200~~ 210 for facilities with 6 to 10 permitted sources,
327.4 $~~300~~ 315 for facilities with 11 to 15 permitted sources,
327.5 $~~400~~ 420 for facilities with 16 to 20 permitted sources,
327.6 $~~500~~ 525 for facilities with more than 20 permitted sources.

(Adopted 6/7/00; Amended 6/2/04)

3-328 Fee for OEHHA Risk Assessment Reviews: Any facility that submits a health risk assessment to the District in accordance with Section 44361 of the California Health and Safety Code shall pay any fee requested by the State Office of Environmental Health Hazard Assessment (OEHHA) for reimbursement of that agency's costs incurred in reviewing the risk assessment.

(Adopted June 7, 2000)

3-329 Fee for Risk Screening: A health risk screening analysis (HRSA) required pursuant to Regulation 2, Rule 5 shall be subject to an appropriate Risk Screening Fee pursuant to Regulation 3-302 and Schedules B, C, D, E, F, H, I or K. In addition, any person that requests that the District prepare or review an HRSA (e.g., for determination of permit exemption in accordance with Regulations 2-1-316, 2-5-301 and 2-5-302; or for determination of exemption from emission control requirements pursuant to Regulation 8-47-113 and 8-47-402) shall pay a Risk Screening Fee.

3-330 Fee for Renewing an Authority to Construct: An applicant seeking to renew an authority to construct in accordance with Regulation 2-1-407 shall pay a fee of 50% of the initial fee in effect at the time of the renewal. If the District determines that an authority to construct cannot be renewed, any fees paid under this section shall be credited in full against the fee for a new authority to construct for functionally equivalent equipment submitted within six months of the date the original authority to construct expires.

3-400 ADMINISTRATIVE REQUIREMENTS

3-401 Permits: Definitions, standards, and conditions contained in Regulation 2, Permits, are applicable to this regulation.

3-402 Single Anniversary Date: The APCO may assign a single anniversary date to a facility on which all its renewable permits to operate expire and will require renewal. Fees will be prorated to compensate for different time periods resulting from change in anniversary date.

3-403 Change in Operating Parameters: See Section 2-1-404 of Regulation 2, Rule 1.

3-404 Deleted June 7, 2000

3-405 Fees Not Paid: If an applicant or owner/operator fails to pay the fees specified on the invoice by the due date, the following procedure(s) shall apply:

405.1 Authority to Construct: The application will be cancelled, but can be reactivated upon payment of fees.

405.2 New Permit to Operate: The Permit to Operate shall not be issued, and the facility will be notified that operation, including startup, is not authorized.

2.1 Fees received during the first 30 days following the due date must include an additional late fee equal to 50 percent of all fees specified on the invoice. ~~an annual Permit to Operate Fee.~~

2.2 Fees received more than 30 days after the due date must include an additional late fee equal to 100 percent of all fees specified on the invoice. ~~an annual Permit to Operate Fee.~~

405.3 Renewal of Permit to Operate: The facility will be notified that the permit has lapsed and that further operation is no longer authorized. Reinstatement of lapsed Permits to Operate will require the payment of reinstatement fees in addition to all fees specified on the invoice. ~~the Permit to Operate Fee. Permit to Operate~~ Fees shall be calculated using fee schedules in effect at either the time of reinstatement or at the time additional fees are assessed under subsection 3-405.2.

3.1 Fees received during the first 30 days following the due date must include all fees specified on the invoice ~~the Permit to Operate Fee for the period covered on the invoice~~ plus a reinstatement fee equal to 50 percent of all fees specified on the invoice. ~~the annual Permit to Operate Fee.~~

3.2 Fees received more than 30 days after the due date, but less than one year after the due date, must include all fees specified on the invoice ~~the Permit to Operate Fee for the period covered by the invoice~~ plus a reinstatement fee equal to 100 percent of all fees specified on the invoice. ~~the annual Permit to Operate Fee.~~

3.3 Fees received more than one year after the due date must include all fees specified on the invoice ~~the Permit to Operate Fee~~, prorated from the date the permit expired to the current permit anniversary date, plus a reinstatement fee equal to 150 percent of all fees specified on the invoice. ~~the annual Permit to Operate Fee.~~

405.4 Other Fees: Persons who have not paid the fee by the invoice due date, shall pay a late fee in addition to the original invoiced fee. Fees shall be calculated using fee schedules in effect at the time of the fees' original determination.

4.1 Fees received more than 30 days after the invoice due date must include a late fee of 10 percent of the original invoiced fee.

(Amended 7/6/83; 6/4/86; 11/5/86; 2/15/89; 6/6/90; 7/3/91; 8/2/95; 12/2/98)

3-406 Deleted June 4, 1986

3-407 Deleted August 2, 1995

3-408 Permit to Operate Valid for 12 Months: A Permit to Operate is valid for 12 months from the date of issuance or other time period as approved by the APCO.

(Amended 6/4/86, Amended 6/7/00)

3-409 Deleted June 7, 2000

3-410 Deleted August 2, 1995

3-411 Advance Deposit of Funds: The APCO may require that at the time of the filing of an application for an Authority to Construct for a project for which the District is a lead agency under the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), the applicant shall make an advance deposit of funds, in an amount to be specified by the APCO, to cover the costs which the District estimates to incur in connection with the District's performance of its environmental evaluation and the preparation of any required environmental documentation. In the event the APCO requires such an estimated advance payment to be made, the applicant will be provided with a full accounting of the costs actually incurred by the District in connection with the District's performance of its environmental evaluation and the preparation of any required environmental documentation.

(Adopted 12/18/85, Amended 8/2/95)

3-412 Deleted December 2, 1998

3-413 **Toxic "Hot Spots" Information and Assessment Act Revenues:** No later than 120 days after the adoption of this regulation, the APCO shall transmit to the California Air Resources Board, for deposit into the Air Toxics "Hot Spots" Information and Assessment Fund, the revenues determined by the ARB to be the District's share of statewide Air Toxics "Hot Spot" Information and Assessment Act expenses.

(Adopted October 21, 1992)

3-414 **Deleted December 2, 1998**

3-415 **Failure to Pay - Further Actions:** When an applicant or owner/operator fails to pay the fees specified on the invoice by the due date, the APCO may take the following actions against the applicant or owner/operator:

415.1 Issuance of a Notice to Comply.

415.2 Issuance of a Notice of Violation.

415.3 Revocation of an existing Permit to Operate. The APCO shall initiate proceedings to revoke permits to operate for any person ~~whose~~ who is delinquent for more than one month. The revocation process shall continue until payment in full is made or until permits are revoked.

415.4 The withholding of any other District services as deemed appropriate until payment in full is made.

(Adopted 8/2/95; Amended 12/2/98)

3-416 **Adjustment of Fees**: The APCO or designees may, upon finding administrative error by District staff in the calculation, imposition, noticing, invoicing, and/or collection of any fee set forth in this rule, rescind, reduce, increase, or modify the fee. A request for such relief from an administrative error, accompanied by a statement of why such relief should be granted, must be received within two years from the date of payment.

(Adopted October 8, 1997)

SCHEDULE A
HEARING BOARD FEES[1]

Established by the Board of Directors December 7, 1977 Resolution No. 1046
(Code section references are to the California Health & Safety Code, unless otherwise indicated)

		Large Companies	Small Business	Third Party
1.	For each application for variance exceeding 90 days, in accordance with §42350, including applications on behalf of a class of applicants, which meet the requirements of the Hearing Board Rules for a valid and proper class action for variance	~~$1139~~ 1,310	~~$170~~ 196	
	Plus, for each hearing in addition to the first hearing necessary to dispose of said variance application in accordance with §42350, the additional sum of	~~$570~~ 656	~~$57~~ 66	
2.	For each application for variance not exceeding 90 days, in accordance with §42350, including applications on behalf of a class of applicants, which meet the requirements of the Hearing Board Rules for a valid and proper class action for variance	~~$684~~ 787	~~$170~~ 196	
	Plus, for each hearing in addition to the first hearing necessary to dispose of said variance application, in accordance with §42350, the additional sum of	~~$341~~ 392	~~$57~~ 66	
3.	For each application to modify a variance in accordance with §42356 ...	~~$455~~ 523	~~$57~~ 66	
	Plus, for each hearing in addition to the first hearing on said application to modify a variance, in accordance with §42345, necessary to dispose of the application, the additional sum of	~~$341~~ 392	~~$57~~ 66	
4.	For each application to extend a variance, in accordance with §42357 ..	~~$455~~ 523	~~$57~~ 66	
	Plus, for each hearing in addition to the first hearing on an application to extend a variance, in accordance with §42357, necessary to dispose of the application, the additional sum of	~~$341~~ 392	~~$57~~ 66	
5.	For each application to revoke a variance	~~$684~~ 787	~~$57~~ 66	
6.	For each application for approval of a Schedule of Increments of Progress in accordance with §41703	~~$455~~ 523	~~$57~~ 66	
7.	For each application for variance in accordance with §41703, which exceeds 90 days	~~$1139~~ 1,310	~~$170~~ 196	
	Plus, for each hearing in addition to the first hearing on said application for variance in accordance with §41703, the additional sum of	~~$570~~ 656	~~$57~~ 66	
8.	For each application for variance in accordance with §41703, not to exceed 90 days	~~$684~~ 787	~~$170~~ 196	
	Plus, for each hearing in addition to the hearing on said application for a variance in accordance with §41703, the additional sum of	~~$341~~ 392	~~$57~~ 66	

		Large Companies	Small Business	Third Party
9.	For each Appeal (Permit, Banking, Title V)	~~$1139~~ 1,310 per hearing day	~~$570~~ 656 per hearing day	~~$570~~ 656 for entire appeal period
10.	For each application for intervention in accordance with Hearing Board Rules §§2.3, 3.6 & 4.6	$~~570~~ 656	$~~114~~ 131	
11.	For each application to Modify or Terminate an abatement order	~~$1139~~ 1,310 per hearing day	~~$570~~ 656 per hearing day	
12.	For each application for an interim variance in accordance with §42351	$~~570~~ 656	$~~114~~ 131	
13.	For each application for an emergency variance in accordance with §42359.5	$~~284~~ 327	$~~57~~ 66	
14.	For each application to rehear a Hearing Board decision in accordance with §40861	100% of previous fee charged	100% of previous fee charged	
15.	Excess emission fees	See Attachment I	See Attachment I	
16.	Miscellaneous filing fee for any hearing not covered above	$~~570~~ 656	$~~170~~ 196	$~~170~~ 196
17.	For each published Notice of Public Hearing	Cost of Publication	$0	$0
18.	Court Reporter Fee (to be paid only if Court Reporter required for hearing)	$~~114~~ 131 or cost per day if hearing solely dedicated to one Docket	$0	$~~114~~ 131 or cost per day if hearing solely dedicated to one Docket

NOTE 1 Any person who certifies under penalty of perjury that payment of the foregoing fees will cause an unreasonable hardship, may be excused from the payment of fees by order of the Hearing Board on that account.

(Amended 10/8/97; 5/19/99; 6/7/00; 6/6/01, 5/1/02; 5/21/03, 6/2/04)

SCHEDULE A
ATTACHMENT I
EXCESS EMISSION FEE

A. General

(1) Each applicant or petitioner for a variance from these Rules and Regulations shall pay to the Clerk or Deputy Clerk of the Hearing Board, in addition to the other filing fees required in Schedule A, an emission fee based on the total weight of emissions discharged, per source or product, other than those described in division (B) below, during the variance period in excess of that allowed by these rules in accordance with the schedule set forth in Table I.

(2) Where the total weight of emission discharged cannot be easily calculated, the petitioner shall work in concert with District staff to establish the amount of excess emissions to be paid.

(3) In the event that more than one rule limiting the discharge of the same contaminant is violated, the excess emission fee shall consist of the fee for violation which will result in the payment of the greatest sum. For the purposes of this subdivision, opacity rules and particulate mass emissions shall not be considered rules limiting the discharge of the same contaminant.

B. Excess Visible Emission Fee

Each applicant or petitioner for a variance from Regulation 6 or Health and Safety Code Section 41701 shall pay to the Clerk or Deputy Clerk of the Hearing Board, in addition to the filing fees required in Schedule A and the excess emission fees required in (A) above (if any), an emission fee based on the difference between the percent opacity allowed by Regulation 6 and the percent opacity of the emissions allowed from the source or sources operating under the variance, in accordance with the schedule set forth in Table II.

In the event that an applicant or petitioner is exempt from the provisions of Regulation 6, the applicant or petitioner shall pay a fee calculated as described herein above, but such fee shall be calculated based upon the difference between the opacity allowed under the variance and the opacity allowed under the provisions of Health and Safety Code Section 41701, in accordance with the schedule set forth in Table II.

C. Applicability

The provisions of subdivision (A) shall apply to all variances that generate excess emissions.

D. Fee Determination

(1) The excess emission fees shall be calculated by the petitioner based upon the requested number of days of operation under variance multiplied by the expected excess emissions as set forth in subdivisions (A) and (B) above. The calculations and proposed fees shall be set forth in the petition.

(2) The Hearing Board may adjust the excess emission fee required by subdivisions (A) and (B) of this rule based on evidence regarding emissions presented at the time of the hearing.

E. Small Businesses

(1) A small business shall be assessed twenty percent (20%) of the fees required by subdivisions (A) and (B), whichever is applicable. "Small business" is defined in the Fee Regulation.

(2) Request for exception as a small business shall be made by the petitioner under penalty of perjury on a declaration form provided by the Executive Officer which shall be submitted to the Clerk or Deputy Clerk of the Hearing Board at the time of filing a petition for variance.

F. Group, Class and Product Variance Fees

Each petitioner included in a petition for a group, class or product variance shall pay the filing fee specified in Schedule A, and the excess emission fees specified in subdivisions (A) and (B), whichever is applicable.

G. Adjustment of Fees

If after the term of a variance for which emission fees have been paid, petitioner can establish, to the satisfaction of the Executive Officer/APCO, that emissions were actually less than those upon which the fee was based, a pro rata refund shall be made.

H. Fee Payment/Variance Invalidation

(1) Excess emission fees required by subdivisions (A) and (B), based on an estimate provided during the variance Hearing, are due and payable within fifteen (15) days of the granting of the variance. The petitioner shall be notified in writing of any adjustment to the amount of excess emission fees due, following District staff's verification of the estimated emissions. Fee payments to be made as a result of an adjustment are due and payable within fifteen (15) days of notification of the amount due.

(2) Failure to pay the excess emission fees required by subdivisions (A) and (B) within fifteen (15) days of notification that a fee is due shall automatically invalidate the variance. Such notification may be given by personal service or by deposit, postpaid, in the United States mail and shall be due fifteen (15) days from the date of personal service or mailing. For the purpose of this rule, the fee payment shall be considered to be received by the District if it is postmarked by the United States Postal Service on or before the expiration date stated on the billing notice. If the expiration date falls on a Saturday, Sunday, or a state holiday, the fee payment may be postmarked on the next business day following the Saturday, Sunday, or the state holiday with the same effect as if it had been postmarked on the expiration date.

TABLE I
SCHEDULE OF EXCESS EMISSIONS FEES

Air Contaminants	All at $~~1.09~~ 1.25 Per Pound

Organic gases, except methane and those containing sulfur
Carbon Monoxide
Oxides of nitrogen (expressed as nitrogen dioxide)
Gaseous sulfur compounds (expressed as sulfur dioxide)
Particulate matter

Toxic Air Contaminants	All at $~~5.43~~ 6.24 Per Pound

Asbestos
Benzene
Cadmium
Carbon tetrachloride
Chlorinated dioxins and dibenzofurans (15 species)
Ethylene dibromide
Ethylene dichloride
Ethylene oxide
Formaldehyde
Hexavalent chromium
Methylene chloride
Nickel
Perchloroethylene
1,3-Butadiene
Inorganic arsenic
Beryllium
Polynuclear aromatic hydrocarbons (PAH)
Vinyl chloride
Lead
1,4-Dioxane
Trichloroethylene

TABLE II
SCHEDULE OF EXCESS VISIBLE EMISSION FEE

For each source with opacity emissions in excess of twenty percent (20%), but less than forty percent (40%) (where the source is in violation of Regulation 6, the fee is calculated as follows:

Fee = (Opacity* equivalent - 20) x number of days allowed in variance x $~~1.22~~ 1.40

For each source with opacity emissions in excess of forty percent (40%) (where the source is in violation of Regulation 6 and California Health and Safety Code Section 41701), the fee is calculated as follows:

Fee = (Opacity* equivalent - 40) x number of days allowed by variance x $~~1.22~~ 1.40

* Where "Opacity" equals maximum opacity of emissions in percent (not decimal equivalent) allowed by the variance. Where the emissions are darker than the degree of darkness equivalent to the allowed Ringelmann number, the percentage equivalent of the excess degree of darkness shall be used as "opacity."

(Adopted 6/7/00; Amended 5/1/02; 5/21/03; 6/2/04)

SCHEDULE B
COMBUSTION OF FUEL

(Adopted June 18, 1980)

For each source that burns fuel, which is not a flare~~,~~ and ~~which is~~ not exempted by Regulation 2, Rule 1, the fee shall be computed based on the maximum gross combustion capacity (expressed as higher heating value, HHV) of the source.

1. INITIAL FEE: ~~$34.16~~ 35.87 per MM BTU/HOUR
   - ~~a. All ratings rounded to the nearest MM BTU/Hr~~
   - ~~b~~a. The minimum fee per source is: ~~$182~~ 191
   - ~~c~~b. The maximum fee per source is: ~~$63,733~~ 66,920

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   - a. RSF for first TAC source in application: $272 plus $35.87 per MM BTU/hr
   - b. Minimum RSF for first TAC source: $463
   - c. RSF for each additional TAC source: $35.87 per MM BTU/Hr *
   - d. Minimum RSF per additional TAC source: $191 *
   - e. Maximum RSF per source is: $66,920
     - * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3~~2~~. PERMIT TO OPERATE FEE: ~~$17.08~~ 17.93 per MM BTU/HOUR
   - ~~a. All ratings rounded to the nearest MM BTU/HR~~
   - ~~b~~a. The minimum fee per source is: ~~$130~~ 137
   - ~~c~~b. The maximum fee per source is: ~~$31,866~~ 33,459

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5~~3~~. ROUNDING: Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

~~4. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

6~~5~~. Applicants for an authority to construct and permit to operate a project, which burns municipal waste or refuse-derived fuel, shall pay in addition to all required fees, an additional fee to cover the costs incurred by the State Department of Health Services, and/or a qualified contractor designated by the State Department of Health Services, in reviewing a risk assessment as required under H&S Code Section 42315. The fee shall be transmitted by the District to the Department of Health Services and/or the qualified contractor upon completion of the review and submission of comments in writing to the District.

7~~6~~. A surcharge equal to 100% of all required initial and permit to operate fees shall be charged for sources permitted to burn one or more of the following fuels: coke, coal, wood, tires, black liquor, and municipal solid waste.

NOTE: MM BTU is million BTU of higher heat value
One MM BTU/HR = 1.06 gigajoules/HR

(Amended 6/5/85; 6/4/86; 3/4/87; 6/6/90; 7/3/91; 6/15/94; 10/8/97; 7/1/98, 5/19/99; 6/7/00; 6/6/01, 5/1/02; 5/21/03, 6/2/04)

SCHEDULE C
STATIONARY CONTAINERS FOR THE STORAGE OF ORGANIC LIQUIDS
(Adopted June 18, 1980)

For each stationary container of organic liquids which is not exempted from permits by Regulation 2 and which is not part of a gasoline dispensing facility, the fee shall be computed based on the container volume, as follows:

1. INITIAL FEE: 0.165 cents per gallon
   a. The minimum fee per source is: $182
   b. The maximum fee per source is: $24,806

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $272 plus 0.165 cents per gallon
   b. Minimum RSF for first TAC source: $454
   c. RSF for each additional TAC source: 0.165 cents per gallon *
   d. Minimum RSF per additional TAC source: $182 *
   e. Maximum RSF per source is: $24,806
      * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3~~2~~. PERMIT TO OPERATE FEE: 0.083 cents per gallon
   a. The minimum fee per source is: $130
   b. The maximum fee per source is: $12,403

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5~~3~~. ROUNDING: Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

~~4. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

(Amended 2/20/85; 6/5/85; 6/4/86; 7/3/91; 6/15/94; 7/1/98; 5/19/99; 6/7/00; 6/6/01, 5/1/02; 5/21/03; 6/2/04)

SCHEDULE D
GASOLINE TRANSFER AT GASOLINE DISPENSING FACILITIES, BULK PLANTS AND TERMINALS
(Adopted June 18, 1980)

A ~~1~~. All gasoline dispensing facilities shall pay the following fees:

A1. INITIAL FEE: ~~$82.50~~ 94.88 per single product nozzle (spn)
~~$82.50~~ 94.88 per product for each multi-product nozzle (mpn)

~~b~~2. PERMIT TO OPERATE FEE: ~~$31.60~~ 36.34 per single product nozzle (spn)
~~$31.60~~ 36.34 per product for each multi-product nozzle (mpn)

3. Initial fees and permit to operate fees for hardware mModifications at a currently permitted gasoline dispensing facility ~~shall pay the following fees with no change to the facilities' expiration date~~ shall be consolidated into a single fee calculated according to the following formula:

c. ~~MODIFICATION FEE:~~

$\cancel{\$114.10}\ 131.22 \times \{[(mpn_{proposed})(\text{products per nozzle}) + spn_{proposed}] - [(mpn_{existing})(\text{products per nozzle}) + spn_{existing}]\}$

mpn = multi-product nozzles
spn = single product nozzles

The above formula includes a toxic surcharge.

If the above formula yields zero or negative results, no ~~modification~~ initial fees or permit to operate fees shall be charged. ~~These projects shall pay a filing fee only.~~

For the purposes of calculating the above fees, a fuel blended from two or more different grades shall be considered a separate product.

Other modifications to facilities' equipment, including but not limited to tank addition/replacement/conversion, vapor recovery piping replacement, moving or extending pump islands, will ~~pay a filing fee only.~~ not be subject to initial fees or permit to operate fees.

4. RISK SCREENING FEE (RSF) of $272 per application is only applicable to projects for which a health risk screening analysis is required under Regulation 2-5-401 [including increases in permitted throughput for which a health risk screening analysis is required.]

~~2~~5. Nozzles used exclusively for the delivery of diesel fuel or other fuels exempt from permits shall pay no fee. Multi-product nozzles used to deliver both exempt and non-exempt fuels shall pay fees for the non-exempt products only.

B~~3~~. All bulk plants, terminals or other facilities using loading racks to transfer gasoline or gasohol into trucks, railcars or ships shall pay the following fees:

~~a. INITIAL FEE: $1,084 per single product loading arm~~
~~$1,084 per product for multi-product arms~~

~~b. PERMIT TO OPERATE FEE: $303 per single product loading arm~~
~~$303 per product for multi-product arms~~

1. INITIAL FEE: $1,247 per single product loading arm
$1,247 per product for multi-product arms

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $1,519
   b. RSF for each additional TAC source: $1,247 *
      * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $348 per single product loading arm
   $348 per product for multi-product arms

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

C~~4~~. Fees in (~~1~~A) above are in lieu of tank fees. Fees in (~~3~~B) above are in addition to tank fees.

D~~5~~. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

~~6. The initial fee and the permit to operate fee have been raised for the above sources that emit benzene, a toxic air contaminant identified by the Air Resources Board.~~

(Amended 2/20/85; 6/5/85; 6/4/86; 7/3/91; 6/15/94; 10/8/97; 7/1/98; 5/19/99; 6/7/00; 6/6/01, 5/1/02; 5/21/03; 6/2/04)

SCHEDULE E
SOLVENT EVAPORATING SOURCES
(Adopted June 18, 1980)

For each solvent evaporating source, as defined in Section 3-210 except for dry cleaners, the fee shall be computed based on the net amount of organic solvent processed through the sources on an annual basis (or anticipated to be processed, for new sources) including solvent used for the cleaning of the sources.

1. INITIAL FEE:

a.	The minimum fee per source is:	$~~182~~ 209
b.	If usage is not more than 1,000 gallons/year:	$~~182~~ 209
c.	If usage is more than 1,000 gallons/year:	$~~365~~ 420 per 1,000 gallons
d.	The maximum fee per source is:	$~~14,510~~ 16,687

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.

a.	RSF for first TAC source in application:	$272 plus initial fee
b.	Minimum RSF for first TAC source:	$481
c.	RSF for each additional TAC source:	equal to initial fee *
d.	Minimum RSF per additional TAC source:	$209 *
e.	Maximum RSF per source is:	$16,687

* RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3~~2~~. PERMIT TO OPERATE FEE:

a.	The minimum fee per source is:	$~~130~~ 150
b.	If usage is not more than 1,000 gallons/year:	$~~130~~ 150
c.	If usage is more than 1,000 gallons/year:	$~~182~~ 209 per 1,000 gallons
d.	The maximum fee per source is:	$~~7,255~~ 8,343

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5~~3~~. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

~~4. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

(Amended 5/19/82; 10/17/84; 6/5/85; 6/4/86; 10/8/87; 7/3/91; 6/15/94; 7/1/98; 5/19/99; 6/7/00, 6/6/01, 5/1/02, 5/21/03; 6/2/04)

SCHEDULE F
MISCELLANEOUS SOURCES
(Adopted June 18, 1980)

For each source not governed by Schedules B, C, D, E, H or I, ~~the initial fee is $176 and the permit to operate fee is $126,~~ (except for those sources in the special classification lists, G1-G4 ~~below~~) the fees are:

1. INITIAL FEE: $209

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $481
   b. RSF for each additional TAC source: $209 *
      * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $150

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.4

List of special classifications requiring graduated fees is shown in Schedules G-1, G-2, G-3, and G-4.

G-1. FEES FOR SCHEDULE G-1, For each source in a G-1 classification, fees are:
~~a. The initial fee is: $1,087~~
~~b. The permit to operate fee is: $543~~

1. INITIAL FEE: $1,250

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $1,522
   b. RSF for each additional TAC source: $1,250 *
      * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $624

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

G-2. FEES FOR SCHEDULE G-2, For each source in a G-2 classification, fees are:
~~a. The initial fee is: $2,175~~
~~b. The permit to operate fee is: $1,087~~

1. INITIAL FEE: $2,284

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $2,556
   b. RSF for each additional TAC source: $2,284 *
      * RSF for additional TAC sources is only applicable to those sources that emit

one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $1,141

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1. This fee shall not be assessed for TACs not listed in Table 2-5-1.
   a. Toxic surcharge: $114

G-3. FEES FOR SCHEDULE G-3. For each source in a G-3 classification, fees are:

~~a. The initial fee is: $16,565~~
~~b. The permit to operate fee is: $8,282~~

1. INITIAL FEE: $16,565

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $16,837
   b. RSF for each additional TAC source: $16,565 *
      * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $8,282

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

G-4. FEES FOR SCHEDULE G-4. For each source in a G-4 classification, fees are:

~~a. The initial fee is: $47,335~~
~~b. The permit to operate fee is: $23,667~~

1. INITIAL FEE: $47,335

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $47,607
   b. RSF for each additional TAC source: $47,335 *
      * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3. PERMIT TO OPERATE FEE: $23,667

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

~~5. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.~~

~~6. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

(Amended 5/19/82; 6/5/85; 6/4/86; 6/6/90; 7/3/91; 6/15/94; 10/8/97; 7/1/98; 5/19/99; 6/7/00; 6/6/01, 5/1/02, 5/21/03; 6/2/04)

SCHEDULE G-1
(Adopted June 18, 1980)

Equipment or Process Description	Materials Processed or Produced
Asphalt Roofing Manufacturing – Asphalt Dipping	Asphalt Roofing or Related Materials
Calcining Kilns, excluding those processing cement, lime, or coke (see G-4 for cement, lime, or coke Calcining Kilns)	Any Materials except cement, lime, or coke
Chemical Manufacturing, Inorganic – Processing Units with a Capacity of 1000 Gallons/Hour or more	Any Inorganic Materials
Chemical Manufacturing, Inorganic – Processing Units with a Capacity of 5 Tons/Hour or more	Any Inorganic Materials
Chemical Manufacturing, Inorganic – Reactors with a Capacity of 1000 Gallons or more	Any Inorganic Materials
Chemical Manufacturing, Organic - Latex Dipping	Any latex materials
Chemical Manufacturing, Organic – Processing Units with a Capacity of 1000 Gallons/Hour or more	Any Organic Materials
Chemical Manufacturing, Organic – Processing Units with a Capacity of 5 Tons/Hour or more	Any Organic Materials
Chemical Manufacturing, Organic – Reactors with a Capacity of 1000 Gallons or more	Any Organic Materials
Crushers	Any minerals or mineral products such as rock, aggregate, cement, concrete, or glass; waste products such as building or road construction debris; and any wood, wood waste, green waste; or similar materials
Electroplating Equipment	Hexavalent Decorative Chrome with permitted capacity greater than 500,000 amp-hours per year or Hard Chrome
Foil Manufacturing – Any Converting or Rolling Lines	Any Metal or Alloy Foils
Galvanizing Equipment	Any
Glass Manufacturing – Batching Processes including storage and weigh hoppers or bins, conveyors, and elevators	Any Dry Materials
Glass Manufacturing – Mixers	Any Dry Materials
Glass Manufacturing – Molten Glass Holding Tanks	Any molten glass

Equipment or Process Description	Materials Processed or Produced
Grinders	Any minerals or mineral products such as rock, aggregate, cement, concrete, or glass; waste products such as building or road construction debris; and any wood, wood waste, green waste; or similar materials
Incinerators – Crematory	Human and/or animal remains
Incinerators – Flares	Any waste gases
Incinerators – Other (see G-2 for hazardous or municipal solid waste incinerators, see G-3 for medical or infectious waste incinerators)	Any Materials except hazardous wastes, municipal solid waste, medical or infectious waste
Incinerators – Pathological Waste (see G-3 for medical or infectious waste incinerators)	Pathological waste only
Loading and/or Unloading Operations – Bulk Plants and Bulk Terminals, excluding those loading gasoline or gasohol (see Schedule D for Bulk Plants and Terminals loading gasoline or gasohol)	Any Organic Materials except gasoline or gasohol
Petroleum Refining – Alkylation Units	Any Hydrocarbons
Petroleum Refining – Asphalt Oxidizers	Any Hydrocarbons
Petroleum Refining – Benzene Saturation Units/Plants	Any Hydrocarbons
Petroleum Refining – Catalytic Reforming Units	Any Hydrocarbons
Petroleum Refining – Chemical Treating Units including alkane, naphthenic acid, and naptha merox treating, or similar processes	Any Hydrocarbons
Petroleum Refining – Converting Units including Dimersol Plants, Hydrocarbon Splitters, or similar processes	Any Hydrocarbons
Petroleum Refining – Distillation Units, excluding crude oil units with capacity > 1000 barrels/hour (see G-3 for > 1000 barrels/hour crude distillation units)	Any Hydrocarbons
Petroleum Refining – Hydrogen Manufacturing	Hydrogen or Any Hydrocarbons
Petroleum Refining – Hydrotreating or Hydrofining	Any Hydrocarbons
Petroleum Refining – Isomerization	Any Hydrocarbons
Petroleum Refining – MTBE Process Units/Plants	Any Hydrocarbons
Petroleum Refining – Sludge Converter	Any Petroleum Waste

Equipment or Process Description	Materials Processed or Produced
	Materials
Petroleum Refining – Solvent Extraction	Any Hydrocarbons
Petroleum Refining – Sour Water Stripping	Any Petroleum Process or Waste Water
Petroleum Refining – Storage (enclosed)	Petroleum Coke or Coke Products
Petroleum Refining – Waste Gas Flares (not subject to Regulation 12, Rule 11)	Any Petroleum Refining Gases
Petroleum Refining – Miscellaneous Other Process Units	Any Hydrocarbons
Remediation Operations, Groundwater – Strippers	Contaminated Groundwater
Remediation Operations, Soil - Any Equipment	Contaminated Soil
Spray Dryers	Any Materials
Sterilization Equipment	Ethylene Oxide
Wastewater Treatment, Industrial – Oil-Water Separators, excluding oil-water separators at petroleum refineries (see G-2 for Petroleum Refining - Oil-Water Separators)	Wastewater from any industrial facilities except petroleum refineries
Wastewater Treatment, Industrial – Strippers including air strippers, nitrogen strippers, dissolved air flotation units, or similar equipment and excluding strippers at petroleum refineries (see G-2 for Petroleum Refining – Strippers)	Wastewater from any industrial facilities except petroleum refineries
Wastewater Treatment, Industrial - Storage Ponds, excluding storage ponds at petroleum refineries (see G-2 for Petroleum Refining – Storage Ponds)	Wastewater from any industrial facilities except petroleum refineries
Wastewater Treatment, Municipal – Preliminary Treatment	Municipal Wastewater
Wastewater Treatment, Municipal – Primary Treatment	Municipal Wastewater
Wastewater Treatment, Municipal – Digesters	Municipal Wastewater
Wastewater Treatment, Municipal – Sludge Handling Processes, excluding sludge incinerators (see G-2 for sludge incinerators)	Sewage Sludge

(Amended 6/4/86; 6/6/90; 5/19/99; 6/7/00; 6/2/04)

SCHEDULE G-2
(Adopted June 6, 1990)

Equipment or Process Description	Materials Processed or Produced
Asphalt Roofing Manufacturing – Asphalt Blowing	Asphalt Roofing or Related Materials
Asphaltic Concrete Manufacturing – Aggregate Dryers	Any Dry Materials
Asphaltic Concrete Manufacturing – Batch Mixers	Any Asphaltic Concrete Products
Asphaltic Concrete Manufacturing – Drum Mixers	Any Asphaltic Concrete Products
Asphaltic Concrete Manufacturing – Other Mixers and/or Dryers	Any Dry Materials or Asphaltic Concrete Products
Concrete or Cement Batching Operations – Mixers	Any cement, concrete, or stone products or similar materials
Furnaces – Electric	Any Mineral or Mineral Product
Furnaces – Electric Induction	Any Mineral or Mineral Product
Furnaces – Glass Manufacturing	Soda Lime only
Furnaces – Reverberatory	Any Ores, Minerals, Metals, Alloys, or Related Materials
Incinerators – Hazardous Waste including any unit required to have a RCRA permit	Any Liquid or Solid Hazardous Wastes
Incinerators – Solid Waste, excluding units burning human/animal remains or pathological waste exclusively (see G-1 for Crematory and Pathological Waste Incinerators)	Any Solid Waste including Sewage Sludge (except human/animal remains or pathological waste)
Metal Rolling Lines, excluding foil rolling lines (see G-1 for Foil Rolling Lines)	Any Metals or Alloys
Petroleum Refining – Stockpiles (open)	Petroleum Coke or coke products only
Petroleum Refining, Wastewater Treatment – Oil-Water Separators	Wastewater from petroleum refineries only
Petroleum Refining, Wastewater Treatment – Strippers including air strippers, nitrogen strippers, dissolved air flotation units, or similar equipment	Wastewater from petroleum refineries only
Petroleum Refining, Wastewater Treatment – Storage Ponds	Wastewater from petroleum refineries only
Pickling Lines or Tanks	Any Metals or Alloys
Sulfate Pulping Operations – All Units	Any
Sulfite Pulping Operations – All Units	Any

(Amended June 7, 2000)

SCHEDULE G-3
(Adopted June 18, 1980)

Equipment or Process Description	Materials Processed or Produced
Furnaces – Electric Arc	Any Metals or Alloys
Furnaces – Electric Induction	Any Metals or Alloys
Incinerators – Medical Waste, excluding units burning pathological waste exclusively (see G-1 for Pathological Waste Incinerators)	Any Medical or Infectious Wastes
Loading and/or Unloading Operations – Marine Berths	Any Organic Materials
Petroleum Refining – Waste Gas Flares (subject to Regulation 12, Rule 11)	Any Petroleum Refining Gases
Petroleum Refining – Cracking Units including hydrocrackers and excluding thermal or fluid catalytic crackers (see G-4 for Thermal Crackers and Catalytic Crackers)	Any Hydrocarbons
Petroleum Refining – Distillation Units (crude oils) including any unit with a capacity greater than 1000 barrels/hour (see G-1 for other distillation units)	Any Petroleum Crude Oils
Phosphoric Acid Manufacturing – All Units (by any process)	Phosphoric Acid

(Amended 5/19/82; Amended and renumbered 6/6/90; Amended 6/7/00)

SCHEDULE G-4
(Adopted June 6, 1990)

Equipment or Process Description	Materials Processed or Produced
Acid Regeneration Units	Sulfuric or Hydrochloric Acid only
Annealing Lines (continuous only)	Metals and Alloys
Calcining Kilns (see G-1 for Calcining Kilns processing other materials)	Cement, Lime, or Coke only
Fluidized Bed Combustors	Solid Fuels only
Nitric Acid Manufacturing – Any Ammonia Oxidation Processes	Ammonia or Ammonia Compounds
Petroleum Refining - Coking Units including fluid cokers, delayed cokers, flexicokers, and coke kilns	Petroleum Coke and Coke Products
Petroleum Refining - Cracking Units including fluid catalytic crackers and thermal crackers and excluding hydrocrackers (see G-3 for Hydrocracking Units)	Any Hydrocarbons
Petroleum Refining - Sulfur Removal including any Claus process or any other process requiring caustic reactants	Any Petroleum Refining Gas
Sulfuric Acid Manufacturing – Any Chamber or Contact Process	Any Solid, Liquid or Gaseous Fuels Containing Sulfur

(Amended June 7, 2000)

SCHEDULE H
SEMICONDUCTOR AND RELATED OPERATIONS
(Adopted May 19, 1982)

All of the equipment within a semiconductor fabrication area will be grouped together and considered one source. The fee shall be as indicated:

1. INITIAL FEE:

   a. The minimum fee per source is: $~~182~~ 209

   b. The maximum fee per source is: $~~14,511~~ 16,688

   The initial fee shall include the fees for each type of operation listed below, which is performed at the fabrication area:

   c. SOLVENT CLEANING OPERATIONS, such as usage of:
   Solvent Sinks (as defined in Regulation 8-30-214);
   Solvent Spray Stations (as defined in Regulation 8-30-221);
   Solvent Vapor Stations (as defined in Regulation 8-30-222); and
   Wipe Cleaning Operation (as defined in Regulation 8-30-225).
   The fee is based on the gross throughput of organic solvent processed through the solvent cleaning operations on an annual basis (or anticipated to be processed, for new sources):
      i. If gross throughput is not more than 3,000 gal/yr: $~~182~~ 209
      ii. If gross throughput is more than 3,000 gallons/year: $~~123~~ 141 per 1,000 gallon

   d. COATING OPERATIONS, such as application of:
   Photoresist (as defined in Regulation 8-30-215); other wafer coating;
   Solvent-Based Photoresist Developer (as defined in Regulation 8-30-219); and other miscellaneous solvent usage.
   The fee is based on the gross throughput of organic solvent processed through the coating operations on an annual basis (or anticipated to be processed, for new sources):
      i. If gross throughput is not more than 1,000 gal/yr: $~~182~~ 209
      ii. If gross throughput is more than 1,000 gallons/year: $~~365~~ 420 per 1,000 gallon

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.

   a. RSF for first TAC source in application: $272 plus initial fee

   b. Minimum RSF for first TAC source: $481

   c. RSF for each additional TAC source: equal to initial fee *

   d. Minimum RSF per additional TAC source: $209 *

   e. Maximum RSF per source is: $16,688

   * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3~~2~~. PERMIT TO OPERATE FEE:

   a. The minimum fee per source is: $~~130~~ 150

   b. The maximum fee per source is: $~~7,255~~ 8,343

   The permit to operate fee shall include the fees for each type of operation listed below, which is performed at the fabrication area:

   c. SOLVENT CLEANING OPERATIONS, such as usage of:
   Solvent Sinks (as defined in Regulation 8-30-214);
   Solvent Spray Stations (as defined in Regulation 8-30-221);
   Solvent Vapor Stations (as defined in Regulation 8-30-222); and
   Wipe Cleaning Operation (as defined in Regulation 8-30-225).

The fee is based on the gross throughput of organic solvent processed through the solvent cleaning operations on an annual basis (or anticipated to be processed, for new sources):

i. If gross throughput is not more than 3,000 gal/yr: $~~130~~ 150

ii. If gross throughput is more than 3,000 gallons/year: $~~61~~ 70 per 1,000 gallon

d. COATING OPERATIONS, such as application of:
Photoresist (as defined in Regulation 8-30-215); other wafer coating;
Solvent-Based Photoresist Developer (as defined in Regulation 8-30-219); and other miscellaneous solvent usage.
The fee is based on the gross throughput of organic solvent processed through the coating operations on an annual basis (or anticipated to be processed, for new sources):

i. If gross throughput is not more than 1,000 gal/yr: $~~130~~ 150

ii. If gross throughput is more than 1,000 gallons/year: $~~182~~ 209 per 1,000 gallon

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5~~3~~. The fee for each source will be rounded to the whole dollar. Fees for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

~~4. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

(Amended 1/9/85; 6/5/85; 6/4/86; 7/3/91; 6/15/94; 10/8/97; 7/1/98; 5/19/99; 10/20/99; 6/7/00; 6/6/01, 5/1/02, 5/21/03, 6/2/04)

SCHEDULE I
DRY CLEANERS
(Adopted July 6, 1983)

For dry cleaners, the fee shall be computed based on each cleaning machine, except that machines with more than one drum shall be charged based on each drum, regardless of the type or quantity of solvent, as follows:

1. INITIAL FEE FOR A DRY CLEANING MACHINE (per drum):
   a. If the washing or drying capacity is no more than 100 pounds: $~~182~~ 209
   b. If the washing or drying capacity exceeds 100 pounds: $~~182~~ 209 plus
      For that portion of the capacity exceeding 100 pounds: $~~5.42~~ 6.23 per pound

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $272 plus initial fee
   b. Minimum RSF for first TAC source: $481
   c. RSF for each additional TAC source: equal to initial fee *
   d. Minimum RSF per additional TAC source: $209 *
   * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

3~~2~~. PERMIT TO OPERATE FEE FOR A DRY CLEANING MACHINE (per drum):
   a. If the washing or drying capacity is no more than 100 pounds: $~~130~~ 150
   b. If the washing or drying capacity exceeds 100 pounds: $~~130~~ 150 plus
      For that portion of the capacity exceeding 100 pounds: ~~2.71~~ 3.12 per pound

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5~~3~~. Fees for each source will be rounded to the nearest dollar. The fee for sources will be rounded up to the nearest dollar for 51 cents and above, and amounts 50 cents and lower will be rounded down to the nearest dollar.

~~4. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

(Amended 10/17/84; 6/5/85; 6/4/86; 7/3/91; 6/15/94; 10/8/97, 7/1/98; 5/19/99, 6/7/00; 6/6/01, 5/1/02, 5/21/03, 6/02/04)

SCHEDULE K
SOLID WASTE DISPOSAL SITES
(Adopted July 15, 1987)

1. INITIAL FEE:
   a. Inactive or Closed Solid Waste Disposal Sites ~~$1,087~~ 1,250
   b. Active Solid Waste Disposal Sites ~~$2,175~~ 2,501

2. RISK SCREENING FEE (RSF) is only applicable for new and modified sources of toxic air contaminants (TACs) for which a health risk screening analysis is required under Regulation 2-5-401.
   a. RSF for first TAC source in application: $272 plus initial fee
   b. RSF for each additional TAC source: equal to initial fee *
   * RSF for additional TAC sources is only applicable to those sources that emit one or more TACs at a rate that exceeds a trigger level listed in Table 2-5-1

2. PERMIT TO OPERATE FEE:
   a. Inactive or Closed Solid Waste Disposal Sites ~~$543~~ 624
   b. Active Solid Waste Disposal Sites ~~$1,087~~ 1,250

4. TOXIC SURCHARGE is only applicable for a source that emits one or more TACs at a rate that exceeds a chronic trigger level listed in Table 2-5-1: the permit to operate fee shall be raised by ten percent. This fee shall not be assessed for TACs not listed in Table 2-5-1.

5~~3~~. Evaluation of Reports and Questionnaires:
   a. Evaluation of Solid Waste Air Assessment Test Report as required by Health & Safety Code Section 41805.5(g) $864
   b. Inactive Site Questionnaire evaluation as required by Health & Safety Code Section 41805.5(b) $433
   c. Evaluation of Solid Waste Air Assessment Test report in conjunction with evaluation of Inactive Site Questionnaire as required by Health & Safety Code Section 41805.5(b) $433
   d. Evaluation of Initial or Amended Design Capacity Reports as required by Regulation 8, Rule 34, Section 405 $318
   e. Evaluation of Initial or Periodic NMOC Emission Rate Reports as required by Regulation 8, Rule 34, Sections 406 or 407 $911
   f. Evaluation of Closure Report as required by Regulation 8, Rule 34, Section 409 $318
   g. Evaluation of Annual Report as required by Regulation 8, Rule 34, Section 411 $797

6~~4~~. Fees for each source will be rounded off to the nearest dollar. The fee for sources will be rounded up or down to the nearest dollar.

~~5. Toxic Surcharge Fee: The initial fee shall be doubled and the permit to operate fee shall be raised by ten percent, for sources which emit one or more toxic air contaminant (TAC), identified by the Air Resources Board, at a rate which exceeds the trigger levels listed in Table 2-1-316 of Regulation 2, Rule 1. This fee shall not be assessed for TACs not listed in Table 2-1-316.~~

7~~6~~. For the purposes of this fee schedule, a solid waste disposal site shall be considered active, if it has accepted solid waste for disposal at any time during the previous 12 months or has plans to accept solid waste for disposal during the next 12 months.

(Amended 7/3/91; 6/15/94; 10/8/97; 7/1/98; 5/19/99; 10/6/99; 6/7/00; 6/6/01, 5/1/02, 5/21/03; 6/2/04)

SCHEDULE L
ASBESTOS OPERATIONS
(Adopted July 6, 1988)

1. Asbestos Operations conducted at single family dwellings are subject to the following fees:

a.	OPERATION FEE:	$89	for amounts 100 to 500 square feet or linear feet.
		$327	for amounts 501 square feet or linear feet to 1000 square feet or linear feet.
		$475	for amounts 1001 square feet or liner feet to 2000 square feet or linear feet.
		$653	for amounts greater than 2000 square feet or linear feet.
b.	Cancellation:	$43	of above amounts non-refundable, for notification processing.

2. Asbestos Operations, other than those conducted at single family dwellings, are subject to the following fees:

a.	OPERATION FEE:	$251	for amounts 100 to 159 square feet or 100 to 259 linear feet or 35 cubic feet
		$364	for amounts 160 square feet or 260 linear feet to 500 square or linear feet or greater than 35 cubic feet.
		$529	for amounts 501 square feet or linear feet to 1000 square feet or linear feet.
		$779	for amounts 1001 square feet or liner feet to 2500 square feet or linear feet.
		$1111	for amounts 2501 square feet or linear feet to 5000 square feet or linear feet.
		$1526	for amounts 5001 square feet or linear feet to 10000 square feet or linear feet.
		$1941	for amounts greater than 10001 square feet or linear feet.
b.	Cancellation:	$120	of above amounts non-refundable for notification processing.

3. Demolitions (including zero asbestos demolitions) conducted at a single-family dwelling are subject to the following fee:

a.	OPERATION FEE:	$43	
b.	Cancellation:	$43	(100% of fee) non-refundable, for notification processing.

4. Demolitions (including zero asbestos demolitions) other than those conducted at a single family dwelling are subject to the following fee:

a.	OPERATION FEE:	$179	
b.	Cancellation:	$120	of above amount non-refundable for notification processing.

5. Asbestos operations with less than 10 days prior notice (excluding emergencies) are subject to the following additional fee:

   a. OPERATION FEE: $297

6. Asbestos demolition operations for the purpose of fire training are exempt from fees.

7. Floor mastic removal using mechanical buffers and solvent is subject to the following fee:

a.	OPERATION FEE:	$179	
b.	Cancellation:	$120	of above amount non-refundable for notification processing.

(Amended 9/5/90; 1/5/94; 8/20/97; 10/7/98; 7/19/00; 8/1/01, 6/5/02, 7/2/03; 6/2/04)

SCHEDULE M
MAJOR STATIONARY SOURCE FEES
(Adopted June 6, 1990)

For each major stationary source emitting 50 tons per year or more of Organic Compounds, Sulfur Oxides, Nitrogen Oxides, and/or PM_{10}, the fee shall be based on the following:

1.	Organic Compounds	$~~54.36~~ 62.51 per ton
2.	Sulfur Oxides	$~~54.36~~ 62.51 per ton
3.	Nitrogen Oxides	$~~54.36~~ 62.51 per ton
4.	PM_{10}	$~~54.36~~ 62.51 per ton

Emissions calculated by the APCO shall be based on the data reported for the most recent 12-month period prior to billing. In calculating the fee amount, emissions of Organic Compounds, Sulfur Oxides, Nitrogen Oxides, or PM_{10}, if occurring in an amount less than 50 tons per year, shall not be counted.

(Amended 7/3/91; 6/15/94; 7/1/98; 5/9/99; 6/7/00; 6/6/01, 5/1/02, 5/21/03; 6/2/04)

SCHEDULE N
TOXIC INVENTORY FEES
(Adopted October 21, 1992)

For each stationary source emitting substances covered by California Health and Safety Code Section 44300 *et seq.*, the Air Toxics "Hot Spots" Information and Assessment Act of 1987, which have trigger levels listed in Table 2-5-1, a fee based on the weighted emissions of the facility shall be assessed based on the following formulas:

1. A fee of $5 for each gasoline product dispensing nozzle in the facility, if the facility is a Gasoline Dispensing Facility; or
2. A fee of $125 if the facility has emissions in the current Toxic Emissions Inventory which are greater than or equal to 50 weighted pounds per year and less than 1000 weighted pounds per year; or
3. A fee of $125 + $S_L \times (w_j - 1000)$ if the facility has emissions in the current Toxic Emissions Inventory which are greater than or equal to 1000 weighted pounds per year;

where the following relationships hold:

w_j = facility weighted emissions for facility j; where the weighted emission for the facility shall be calculated as a sum of the individual emissions of the facility multiplied by either the Unit Risk Factor ~~Value~~ (URF) for the substance times one hundred thousand (in cubic meters/microgram) if the emission is a carcinogen, or by the reciprocal of the ~~acceptable~~ chronic reference exposure level ~~(AEL~~ REL_C) for the substance (in cubic meters/microgram) if the emission is not a carcinogen [use URF and REL_C as listed in Table 2-5-1]:

w_j = Facility Weighted Emission = $\sum_{i=1}^{n} E_i * Q_i$ where

- n = number of toxic substances emitted by facility
- E_i = amount of substance i emitted by facility in lbs/year
- Q_i = ~~Unit Risk Value~~ URF * 10^5, if i is a carcinogen; or
- Q_i = [~~Acceptable Exposure Level~~ $REL_C]^{-1}$, if i is not a carcinogen

F_T = Total amount of fees to be collected by the District to cover District and State of California AB 2588 costs as most recently adopted by the Board of Directors of the California Environmental Protection Agency, Air Resources Board, and set out in the most recently published "Amendments to the Air Toxics "Hot Spots" Fee Regulation," published by that agency.

N_L = Number of facilities with emissions in current District Toxic Emissions Inventory greater than 1000 weighted pounds per year.

N_S = Number of facilities with emissions in current District Toxic Emissions Inventory greater than 50 weighted pounds per year and less than 1000 weighted pounds per year.

N_{NOZ} = Number of gasoline-product-dispensing nozzles in currently permitted Gasoline Dispensing Facilities.

S_L = Surcharge per pound of weighted emissions for each pound in excess of 1000 weighted pounds per year, where s_L is given by the following formula:

$$S_L = \frac{F_T - (125 \times N_S) - (125 \times N_L) - 5 \times N_{NOZ}}{\sum_{i=1}^{N_L} (w_i - 1000)}$$

(Amended December 15, 1993)

SCHEDULE P
MAJOR FACILITY REVIEW FEES
(Adopted November 3, 1993)

1. MFR / SYNTHETIC MINOR ANNUAL FEES

   Each facility, which is required to undergo major facility review in accordance with the requirements of Regulation 2, Rule 6, shall pay annual fees (1a and 1b below) for each source holding a District Permit to Operate. These fees shall be in addition to and shall be paid in conjunction with the annual renewal fees paid by the facility. However, these MFR permit fees shall not be included in the basis to calculate Alternative Emission Control Plan (bubble) or toxic air contaminant surcharges. If a major facility applies for and obtains a synthetic minor operating permit, the requirement to pay the fees in 1a and 1b shall terminate as of the date the APCO issues the synthetic minor operating permit.

   a. MFR SOURCE FEE .... $~~186~~ 214 per source
   b. MFR EMISSIONS FEE .... $~~7.32~~ 8.42 per ton of regulated air pollutants emitted

   Each MFR facility and each synthetic minor facility shall pay an annual monitoring fee (1c below) for each pollutant measured by a District-approved continuous emission monitor or a District-approved parametric emission monitoring system.

   c. MFR/SYNTHETIC MINOR MONITORING FEE $~~1858~~ 2,137 per monitor per pollutant

2. SYNTHETIC MINOR APPLICATION FEES

   Each facility that applies for a synthetic minor operating permit or a revision to a synthetic minor operating permit shall pay application fees according to 2a and either 2b (for each source holding a District Permit to Operate) or 2c (for each source affected by the revision). If a major facility applies for a synthetic minor operating permit prior to the date on which it would become subject to the annual major facility review fee described above, the facility shall pay, in addition to the application fee, the equivalent of one year of annual fees for each source holding a District Permit to Operate.

   a. SYNTHETIC MINOR FILING FEE .... $~~259~~ 298 per application
   b. SYNTHETIC MINOR INITIAL PERMIT FEE .... $~~182~~ 209 per source
   c. SYNTHETIC MINOR REVISION FEE .... $~~182~~ 209 per source modified

3. MFR APPLICATION FEES

   Each facility that applies for or is required to undergo: an initial MFR permit, an amendment to an MFR permit, a minor or significant revision to an MFR permit, a reopening of an MFR permit or a renewal of an MFR permit shall pay, with the application and in addition to any other fees required by this regulation, the applicable fees according to 3a-h below. The fees in 3b and 3g apply to each source in the initial or renewal permit, while the fees in 3d-f apply to each source affected by the revision or reopening.

   a. MFR FILING FEE .... $~~259~~ 298 per application
   b. MFR INITIAL PERMIT FEE .... $~~250~~ 288 per source
   c. MFR ADMINISTRATIVE AMENDMENT FEE .... $~~73~~ 84 per application
   d. MFR MINOR REVISION FEE .... $~~368~~ 423 per source modified
   e. MFR SIGNIFICANT REVISION FEE .... $~~686~~ 789 per source modified
   f. MFR REOPENING FEE .... $~~224~~ 258 per source modified
   g. MFR RENEWAL FEE .... $~~109~~ 125 per source

   Each facility that requests a permit shield or a revision to a permit shield under the provisions of Regulation 2, Rule 6 shall pay the following fee for each source (or group of sources, if the requirements for these sources are grouped together in a single table in the MFR permit) that is covered by the requested shield. This fee shall be paid in addition to any other applicable fees.

h. MFR PERMIT SHIELD FEE ....$~~386~~ 444 per shielded source or group of sources

4. MFR PUBLIC NOTICE FEES

Each facility that is required to undergo a public notice related to any permit action pursuant to Regulation 2-6 shall pay the following fee upon receipt of a District invoice.

MFR PUBLIC NOTICE FEE .... Cost of Publication

5. MFR PUBLIC HEARING FEES

If a public hearing is required for any MFR permit action, the facility shall pay the following fees upon receipt of a District invoice.

a. MFR PUBLIC HEARING FEE.........Cost of Public Hearing not to exceed $~~5000~~ 5,750

b. NOTICE OF PUBLIC HEARING FEE.......Cost of distributing Notice of Public Hearing

6. POTENTIAL TO EMIT DEMONSTRATION FEE

Each facility that makes a potential to emit demonstration under Regulation 2-6-312 in order to avoid the requirement for an MFR permit shall pay the following fee:

a. PTE DEMONSTRATION FEE ....$50 per source, not to exceed $5,000

(Amended 6/15/94; 10/8/97; 7/1/98; 5/19/99; 6/7/00; 6/6/01, 5/1/02, 5/21/03; 6/2/04)

SCHEDULE Q
EXCAVATION OF CONTAMINATED SOIL AND REMOVAL OF UNDERGROUND STORAGE TANKS
(Adopted January 5, 1994)

1. Persons excavating contaminated soil or removing underground storage tanks subject to the provisions of Regulation 8, Rule 40, Section 401, 402, 403 or 405 are subject to the following fee:
   a. OPERATION FEE: $120

(Amended 7/19/00; 8/1/01, 6/5/02, 7/2/03; 6/2/04)

AGENDA: 10

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Townsend and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 7, 2005

Re: Final Public Hearing and Adoption of the Proposed District Budget for Fiscal Year 2005/2006

RECOMMENDED ACTION:

Adopt proposed District Budget for Fiscal Year 2005/2006 and the attached resolution reflecting actions of the Board in adopting the proposed budget.

BACKGROUND

The District Budget for FY 2005/2006 represents input from staff, Board members, and the public over the past several months. The Budget and Finance Committee reviewed the Budget at its May 5, 2005 and May 18, 2005 meetings. The Budget and Finance Committee at its May 18, 2005, meeting unanimously recommended Board of Director approval of the budget upon completion of the required public hearings. The first public hearing, held for the exclusive purpose of the Budget was conducted at the Board of Directors' meeting on June 1, 2005.

DISCUSSION_

At the June 15, 2005 meeting, staff will address follow-up items on information requested at the June 1, 2005 public hearing. The follow-up items are relative to fulltime employees at the District, information on the BioWatch program, the draft Environmental Impact Report (EIR) review process and Air District contributions towards Spare the Air free transit on the first (5) five weekdays when a Spare the Air Alert is announced.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jeff McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Resolution No. 2005-___

A Resolution to Approve the Budget for the Fiscal Year Ending June 30, 2006 (FY 2005-2006) and Various Budget Related Actions

WHEREAS, the Board of Directors has the statutory authority and direction to set the District's financial budget pursuant to Health & Safety Code Sections 40130-40131 and 40270-40276;

WHEREAS, by Resolution No. 2004-12, the Board of Directors adopted the District budget for Fiscal Year (FY) 2004-2005 on June 16, 2004, pursuant to the above-mentioned statutory authority;

WHEREAS, the Board of Directors, in connection with that action, approved the following budget related actions:

A. Transfer Funds from Unencumbered Balance of Appropriations to the General Reserve
B. Transfer Funds from Permanent Salaries to a Reserve for Adjustments for Prior Years
C. Transfer Funds to Provide for District Expenses
D. Fund Contingency Reserve
E. Fund General Reserve from Year to Year
F. Authorize Disposal of Surplus Government Property
G. Salary Ranges for District Employees
H. Approve Proposed District Budget;

WHEREAS, District staff has determined through its annual budget review and analysis that similar actions are necessary in connection with the adoption of a budget for FY 2005-2006 and that all of these actions be incorporated into a single resolution;

WHEREAS, the Budget & Finance Committee of the Board of Directors reviewed the proposed FY 2005-2006 District Budget at public meetings held on May 5, 2005, and May 18, 2005, and following that review, in accordance with the District's Administrative Code, recommended that the Board of Directors approve the proposed FY 2005-2006 District Budget upon completion of all required public hearings;

WHEREAS, an initial public hearing was duly noticed and held on June 1, 2005, at a Meeting of the Board of Directors held pursuant to Health & Safety Code Section 40131, for the exclusive purpose of reviewing the District's proposed FY 2004-2005 Budget and of providing the public with an opportunity to comment upon the proposed District budget;

WHEREAS, at the June 1, 2005, Regular Meeting of the Board of Directors the Proposed FY 2005-2006 District Budget was set for further hearing and proposed adoption of the FY 2005-2006 District Budget at the Regular Meeting of the Board of Directors to be held on June 15, 2005;

WHEREAS, in connection with the public hearing and consideration of the Proposed FY 2005-2006 District Budget on June 15, 2005, the Board of Directors decided to take the following actions related to the FY 2005-2006 District Budget:

A. TRANSFER FUNDS FROM UNENCUMBERED BALANCE OF APPROPRATIONS TO THE GENERAL RESERVE

WHEREAS, the Proposed District Budget provides sufficient funds for the operation of the District for FY 2005-2006;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors hereby directs District staff, that in the event there is an unencumbered balance of appropriations from FY 2004-2005, to transfer such excess balance to the General Reserve.

B. FUND CONTINGENCY RESERVE

WHEREAS, the Board of Directors by Resolution No. 161, adopted on August 7, 1985, created a Reserve for Contingencies by transferring to this Reserve from the General Reserve in order to pay for unforeseen District expenditures;

WHEREAS, the Board of Directors continued to include the Reserve for Contingencies in subsequent fiscal year budgets, and by Resolution No. 2218, adopted on June 14, 1994, established a Reserve for Contingency level of Four Hundred Thousand Dollars ($400,000.00) for that FY 1994-95;

WHEREAS, District staff has determined that there is still a need to continue funding this reserve for contingencies;

WHEREAS, District staff recommends that this Reserve for Contingencies remain in the 2005-2006 fiscal year budget and that it be funded to a level of Four Hundred Thousand Dollars ($400,000.00) by a transfer from the General Reserve;

WHEREAS, the Board of Directors concurs with these District staff recommendations regarding the transfer of funds to fund the Reserve for Contingencies;

NOW, THEREFORE, BE IT FURTHER RESOLVED that the Reserve for Contingencies be continued for FY 2005-2006 and be funded in the amount of Four Hundred Thousand Dollars ($400,000.00).

C. FUND THE GENERAL RESERVE FROM YEAR TO YEAR

WHEREAS, the Board of Directors on June 12, 1958, created a General Reserve in the District's budget and transferred certain funds into it;

WHEREAS, the District has operated for much of its existence with a General Reserve in its fiscal year budget;

WHEREAS, the District retained the consulting firm of KPMG LLP in 1998-99 to conduct a permit fee cost recovery study of the District;

WHEREAS, KPMG determined through their study of District finances that the General Reserve was inadequately funded and therefore recommended that the General Reserve be funded to a level consistent with generally accepted governmental practices;

WHEREAS, District staff concurred with this finding and recommendation from KPMG LLP;

WHEREAS, the Board of Directors concurs with the recommendation of KPMG LLP, District staff and its Budget & Finance Committee that maintaining a healthy and properly funded General Reserve in the District's budget is a prudent and financially sound decision;

NOW THEREFORE, BE IT FURTHER RESOLVED that the General Reserve be continued for FY 2005-2006, and thereafter until discontinued by resolution of the Board of Directors.

D. AUTHORIZE MODIFICATION TO NAME AND PURPOSE OF CERTAIN DESIGNATED RESERVE FUNDS

WHEREAS, in connection with the preparation of the Proposed District Budget for FY 2005-2006, Staff has reviewed the titles and purposes of certain designated reserves and recommended that the name and purpose of the Reserve for Office Furniture be changed to Reserve for Building and Facilities, and that the name and purpose of the Reserve for Best of Breed be changed to Reserve for Production System; and

WHEREAS, the Board of Directors concurs with the recommendation of Staff.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the name and purpose of the Reserve for Office Furniture be changed to Reserve for Building and Facilities, and that the name and purpose of the Reserve for Best of Breed be changed to Reserve for Production System.

E. AUTHORIZE DISPOSAL OF SURPLUS GOVERNMENT PROPERTY

WHEREAS, the District Budget for FY 2005-2006 provides for the replacement of certain equipment and other property that has either become obsolete and surplus or will become obsolete and surplus;

WHEREAS, District staff has determined that certain equipment or other property will no longer be economically feasible to maintain or repair, and that some equipment will become obsolete and not useful for District purposes;

WHEREAS, from time to time during the course of the coming fiscal year it may be advantageous to the District to sell or dispose of such equipment or other property;

WHEREAS, the Board of Directors desires to authorize the Executive Officer/APCO, or his or her designee, to sell or dispose of such surplus or obsolete equipment or other property pursuant the requirements and guidelines of Government Code Sections 25363 and 25504.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Board of Directors hereby authorizes the Executive Officer/APCO, or his or her designee, to sell or dispose of surplus or obsolete equipment or other property during FY 2005-2006.

F. SALARY RANGES FOR DISTRICT EMPLOYEES

WHEREAS, the Board of Directors of the Bay Area Air Quality Management District established Salary Ranges and Classifications on June 10, 1962, pursuant to Resolution No. 270 and has from time to time amended those Salary Ranges and Classifications;

WHEREAS, management employees and confidential employees are not represented by a recognized employee organization;

WHEREAS, the approved District Budget for FY 2005-2006 includes funds for Board of Director discretionary use in adjusting salaries and fringe benefits for District employees;

WHEREAS, on May 15, 2002, by Resolution No. 2002-05, the Board of Directors approved a Memorandum of Understanding (the “MOU”) with the employees represented by the recognized employee organization Bay Area Air Quality Management District Employees Association (“EA”) which MOU had been previously ratified by the EA;

WHEREAS, the MOU provides, among other things, for certain adjustments to the salary and fringe benefits for EA members for FY 2005-2006 including a cost of living adjustment (“COLA”);

WHEREAS, on October 16, 2002, by Resolution No. 2002-17, the Board of Directors approved certain adjustments to salary and fringe benefits for non-Board of Director appointed management and confidential employees who are not represented by a recognized employee organization;

WHEREAS, by Resolution No. 2003-04, on June 18, 2003, the Board of Directors approved adjustments to the salaries for non-Board of Director appointed management and confidential employees to reflect the same COLA as provided for in the MOU; and

WHEREAS, salaries adjusted in accordance with the provisions of the MOU for Represented Classes and salaries for non-Board of Director appointed Management and Confidential employees in accordance with Resolution Nos. 2002-17, 2003-04 and 2005-02, the proposed FY2005-2006 budget, and with contracts with Board appointed management employees are reflected in the salary schedules attached hereto.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Board of Directors approves the revised salary schedules attached hereto which, consistent with the MOU and Resolution Nos. 2002-17, 2003-04 and 2005-02, the proposed FY2005-2006 budget, and with contracts with Board appointed management employees provide salary increases effective July 1, 2005.

G. APPROVE PROPOSED DISTRICT BUDGET FOR FY 2004-2005

WHEREAS, on June 1, 2005, and June 15, 2005, public proceedings have been held in a manner and form required by Health & Safety Code Section 40131 for the adoption of the FY 2005-2006 Budget of the Bay Area Air Quality Management District;

WHEREAS, the Board of Directors has considered the Proposed Budget for the fiscal year ending June 30, 2006, as well as the report on this proposed budget from the Budget & Finance Committee of the Board of Directors which considered the Proposed FY 2005-2006 District Budget at their meetings of May 5, 2005, and May 18, 2005;

WHEREAS, at the June 1, 2005, Regular Meeting of the Board of Directors, in its report to the Board of Directors, the Budget & Finance Committee of the Board of Directors recommended that the Board of Directors approve the Proposed FY 2005-2006 District Budget; and

WHEREAS, the Board of Directors concurs with the recommendation of its Budget & Finance Committee.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the Proposed District Budget for FY 2005-2006 in the total consolidated amount of Fifty-Seven Million, Five Hundred Sixty-Two Thousand Two Hundred Eight Dollars, ($57,562,208.00), specifying by appropriation classification – personnel, services and supplies, and capital outlay – be and hereby is adopted by the Board of Directors of the Bay Area Air Quality Management District to become effective as of July 1, 2005.

The foregoing resolution was duly and regularly introduced, passed and adopted at a regular meeting of the Board of Directors of the Bay Area Air Quality Management District on the Motion of Director___________________________, seconded by Director _________________________, on the ______ day of ___________ 2005 by the following vote of the Board:

AYES:

NOES:

ABSENT:

____
MARLAND TOWNSEND
Chairperson of the Board of Directors

ATTEST:

____
MARK ROSS
Secretary of the Board of Directors