



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

A G E N D A

MEETING: JUNE 5, 2015

A meeting of the South Coast Air Quality Management District Board will be held at 9:00 a.m., in the Auditorium at SCAQMD Headquarters, 21865 Copley Drive, Diamond Bar, California.

Questions About an Agenda Item

- The name and telephone number of the appropriate staff person to call for additional information or to resolve concerns is listed for each agenda item.
- In preparation for the meeting, you are encouraged to obtain whatever clarifying information may be needed to allow the Board to move expeditiously in its deliberations.

Meeting Procedures

- The public meeting of the SCAQMD Governing Board begins at 9:00 a.m. The Governing Board generally will consider items in the order listed on the agenda. However, any item may be considered in any order.
- After taking action on any agenda item not requiring a public hearing, the Board may reconsider or amend the item at any time during the meeting.

Questions About Progress of the Meeting

- During the meeting, the public may call the Clerk of the Board's Office at (909) 396-2500 for the number of the agenda item the Board is currently discussing.

The agenda and documents in the agenda packet will be made available upon request in appropriate alternative formats to assist persons with a disability. Disability-related accommodations will also be made available to allow participation in the Board meeting. Any accommodations must be requested as soon as practicable. Requests will be accommodated to the extent feasible. Please telephone the Clerk of the Boards Office at (909) 396-2500 from 7:00 a.m. to 5:30 p.m. Tuesday through Friday.

All documents (i) constituting non-exempt public records, (ii) relating to an item on the agenda, and (iii) having been distributed to at least a majority of the Governing Board after the agenda is posted, are available prior to the meeting for public review at the South Coast Air Quality Management District Clerk of the Board's Office, 21865 Copley Drive, Diamond Bar, CA 91765.

The Agenda is subject to revisions. For the latest version of agenda items herein or missing agenda items, check the District's web page (www.aqmd.gov) or contact the Clerk of the Board, (909) 396-2500. Copies of revised agendas will also be available at the Board meeting.

CALL TO ORDER

- Pledge of Allegiance
- Opening Comments: William A. Burke, Ed.D., Chair
Other Board Members
Barry R. Wallerstein, D. Env., Executive Officer

Staff/Phone (909) 396-

CONSENT CALENDAR (Items 1 through 17)

Note: Consent Calendar items held for discussion will be moved to Item No. 18

1. Approve Minutes of May 1, 2015 Board Meeting **McDaniel/2500**

2. Set Public Hearing September 4, 2015 to Consider Amendments to and/or Adoption of SCAQMD Rules and Regulations **Wallerstein/3131**

Amend Rule 1156 – Further Emission Reductions from Cement Manufacturing Facilities **Fine/2239**

Rule 1156 was amended in March 2009 to address elevated ambient hexavalent chromium levels from cement manufacturing measured in conjunction with MATES III. The amendment established monitoring requirements, as well as requirements for the storage, handling, and transport of clinker material to minimize future potential emissions of the toxic material. As part of the Rule 1156 adoption resolution, the Board directed staff to re-evaluate, based on collected data, the need for and frequency of hexavalent chromium monitoring, and to work with stakeholders to develop a facility closure plan option in lieu of monitoring requirements. Proposed amendments to Rule 1156 will establish the conditions, including plant closure, under which monitoring can be reduced or eliminated. In addition, the proposed amendments will also reflect an adjustment to the fence-line risk threshold for hexavalent chromium pursuant to the new OEHHA guidance, as well as other minor amendments. (Reviewed: Stationary Source Committee, April 17 and May 15, 2015)

Budget/Fiscal Impact

3. **Execute Contracts to Develop and Demonstrate Class 8 Plug-In Hybrid Electric Drayage Trucks and Amend Contract to Integrate On-Board Chargers** **Miyasato/3249**

On October 5, 2012, the Board approved \$958,120 for Vision Industries and \$925,000 for Balqon to develop and demonstrate zero emission drayage trucks as part of a DOE-funded zero emission cargo transport demonstration project. Since then, Vision Industries has filed for bankruptcy and ceased operation and Balqon has notified the SCAQMD of their decision to withdraw from the project leaving \$1,883,120 of the DOE funds available for reallocation. This action is to execute contracts, pending approval by the DOE, with Transportation Power Inc. and US Hybrid to develop and demonstrate Class 8 plug-in hybrid electric drayage trucks. This action is to also amend a contract with US Hybrid to add on-board chargers in their battery electric drayage trucks. The total amount of awards shall not exceed \$2,176,342, comprised of \$1,883,120 from the DOE funds recognized in the Advanced Technology Goods Movement Fund (61) and \$293,222 from the Clean Fuels Fund (31). (Reviewed: Technology Committee, May 15, 2015; Recommended for Approval)

4. **Implement Programs in Clean Communities Pilot Study Communities under U.S. EPA Targeted Air Shed Grant** **Fine/2239**

On July 5, 2013, the Board approved funding reallocations for programs to implement the Clean Communities Plan in Boyle Heights and the City of San Bernardino under the U.S. EPA Targeted Air Shed Grant. Board actions are needed to implement four U.S. EPA Air Shed Grant programs including Air Filtration in Schools, Yard Equipment Exchange, Boiler and Process Heater Efficiency Upgrades, and Weatherization Program for Homes Adjacent to Freeways and Intermodal Facilities in Boyle Heights and the City of San Bernardino. This action is to: 1) amend a contract with IQAir North America, adding \$435,632 to install air filtration systems at Murchison Street Elementary school in Boyle Heights; 2) execute contracts with Black and Decker, Inc. and The Greenstation to purchase up to 800 lawn mowers in an amount not to exceed \$164,000 to conduct two residential lawn mower exchanges; 3) execute a contract with the City of San Bernardino in an amount not to exceed \$57,000 for the differential cost of installing high efficiency condensing boilers; and 4) authorize the Executive Officer to enter into a Collaboration Agreement with Southern California Gas Company in an amount not to exceed \$500,000 to conduct a home weatherization program. (Reviewed: Administrative Committee; May 8, 2015; Recommended for Approval)

5. **Issue RFP to Sell Equipment Dismantled under SCAQMD Incentive Programs to Generate Revenue for Additional Incentive Projects and Execute Contract under SOON Provision** **Miyasato/3249**

The SCAQMD incentives program includes dismantling of on-road trucks as well as repowering of off-road construction equipment. 1) The first proposal is to release an RFP to identify qualified dismantlers to sell the dismantled equipment with a percentage of the sale proceeds returned to SCAQMD to fund additional incentive projects. 2) The second action is to execute a contract under the SOON Provision in the amount of \$2,540,779 from the Carl Moyer Program SB 1107 Fund (32). (Reviewed: Technology Committee, May 15, 2015; Recommended for Approval)

6. **Issue RFP for Refurbishment of Pace Air Handlers at SCAQMD Headquarters** **Johnson/3018**

The current Pace air handlers are over 24 years old and have been operating 365 days a year, 20 or more hours a day. With a life expectancy of 15 to 20 years, maintenance costs have risen and dependability of the handlers is declining rapidly. Staff is requesting to refurbish the air handlers, which provide filtered conditioned air to SCAQMD headquarters, and will also increase the efficiency and provide necessary back up. This action is to issue an RFP to solicit proposals from qualified contractors to refurbish various air handlers. (Reviewed: Administrative Committee, May 8, 2015; Recommended for Approval)

7. **Approve Transfer of Monies from Health Effects Research Fund to Brain & Lung Tumor and Air Pollution Foundation and Authorize Solicitation and Potential Funding of Proposals** **Wallerstein/3131**

At the March 13, 2015 meeting of the Brain & Lung Tumor and Air Pollution Foundation (Foundation), the Foundation Board asked that funds that the SCAQMD Board had previously transferred to the Health Effects Research Fund be designated for the Foundation's use to support brain and lung tumor and air pollution research. The Foundation would then issue a Request for Proposals to identify specific projects for review and potential funding upon approval by the Foundation Board. This action is to transfer \$2,500,000 from the Health Effects Research Fund to the Foundation to fund such research. This action is also to authorize the Foundation to solicit research proposals and to review and potentially fund such proposals. (Reviewed: Administrative Committee, May 8, 2015; Recommended for Approval)

8. Execute Sole-Source Contract for Three-Year Service Agreement for SCAQMD Access to On-line Legal Research Libraries **Wiese/3460**

The current service agreement with Thomson Reuters-West to provide SCAQMD with on-line legal research libraries will expire on June 30, 2015. This action is to enter into a new three-year agreement with Thomson Reuters-West. A sole-source contract is recommended since SCAQMD is securing print publications through this agreement at a substantially lower cost than the open market. (Reviewed: Administrative Committee, May 8, 2015; Recommended for Approval)

9. Approve Contract Awards Approved by MSRC **Pettis**

As part of their FYs 2014-16 AB 2766 Discretionary Fund Work Program, the MSRC approved two new contracts under the Major Event Center Transportation Program, as well as a sole-source contract to support transportation services for the 2015 Special Olympics World Games. At this time the MSRC seeks Board approval of the contract awards. (Reviewed: Mobile Source Air Pollution Reduction Review Committee, May 21, 2015; Recommended for Approval)

Action Item/No Fiscal Impact

10. Withdrawal of South Coast Air Basin Transportation Conformity SIP Submittal **Fine/2239**

This action is to request that CARB withdraw an outdated Transportation Conformity SIP Submittal and its associated Consultation MOU from the California SIP. The Transportation Conformity SIP and associated Consultation MOU in question are incorporated in Rule 1902, which was last amended by Board actions on August 14, 1998. U.S. EPA Region IX notified CARB and the SCAQMD that the outdated Transportation Conformity SIP submittal is no longer approvable. After discussions with staff from CARB and U.S. EPA, the SCAQMD staff concurs with the proposed approach to withdraw the outdated Transportation Conformity SIP submittal and its associated interagency Consultation MOU from the California SIP. (Reviewed: Mobile Source Committee, May 15, 2015; Recommended for Approval)

Items 11 through 17 - Information Only/Receive and File

11. Legislative and Public Affairs Report **Smith/3242**

This report highlights the April 2015 outreach activities of Legislative and Public Affairs, which include: Environmental Justice Update, Community Events/Public Meetings, Business Assistance, and Outreach to Business and Federal, State, and Local Government. (No Committee Review)

12. Hearing Board Report **Camarena/2500**

This reports the actions taken by the Hearing Board during the period of April 1 through April 30, 2015. (No Committee Review)

13. **Civil Filings and Civil Penalties Report** **Wiese/3460**

This reports the monthly penalties from April 1 through April 30, 2015, and legal actions filed by the General Counsel's Office from April 1 through April 30, 2015. An Index of District Rules is attached with the penalty report. (Reviewed: Stationary Source Committee, May 15, 2015)

14. **Lead Agency Projects and Environmental Documents Received by SCAQMD** **Fine/2239**

This report provides, for the Board's consideration, a listing of CEQA documents received by the SCAQMD between April 1, 2015 and April 30, 2015, and those projects for which the SCAQMD is acting as lead agency pursuant to CEQA. (Reviewed: Mobile Source Committee, May 15, 2015)

15. **Rule and Control Measure Forecast** **Fine/2239**

This report highlights SCAQMD rulemaking activities and public workshops potentially scheduled for the year 2015 and portions of 2016. (No Committee Review)

16. **Report of RFPs Scheduled for Release in June** **O'Kelly/2828**


This report summarizes the RFPs for budgeted services over \$75,000 scheduled to be released for advertisement for the month of June. (Reviewed: Administrative Committee, May 8, 2015; Recommended for Approval)

17. **Status Report on Major Projects for Information Management Scheduled to Start During Last Six Months of FY 2014-15** **Marlia/3148**

Information Management is responsible for data systems management services in support of all SCAQMD operations. This action is to provide the monthly status report on major automation contracts and projects to be initiated by Information Management during the last six months of FY 2014-15. (No Committee Review)

18. **Items Deferred from Consent Calendar**

BOARD CALENDAR

- | | | | |
|-----|---|---------------------------|------------------|
| 19. | Administrative Committee (Receive & File) | Chair: Burke | Wallerstein/3131 |
| 20. | Legislative Committee (Receive & File) | Chair: Mitchell | Smith/3242 |
| 21. | Mobile Source Committee (Receive & File) | Chair: Parker | Fine/2239 |
| 22. | Stationary Source Committee (Receive & File) | Chair: Yates | Nazemi/2662 |
| 23. | Technology Committee (Receive & File) | Chair: J. Benoit | Miyasato/3249 |
| 24. | Mobile Source Air Pollution Reduction Review Committee (Receive & File) | Board Liaison: Antonovich | Hogo/3184 |
| 25. | California Air Resources Board Monthly Report (Receive & File) | Board Rep: Mitchell | McDaniel/2500 |
| 26. | California Fuel Cell Partnership Executive Board Meeting Agenda and Quarterly Updates  | | Miyasato/3249 |
| 27. | Potential Serious Area 24-Hour PM2.5 SIP for South Coast Air Basin | | Fine/2239 |

This report summarizes the California Fuel Cell Partnership Executive Board meeting held April 14, 2015, and provides updates for quarters beginning October 2014 and January 2015. (Reviewed: Technology Committee, May 15, 2015; Recommended for Approval)

While the long term trend of 24-hour PM2.5 in the South Coast Air Basin (Basin) supported targeting attainment of the 2006 24-hour PM2.5 National Ambient Air Quality Standards in 2015, analysis of recent (2013-2014) particulate measurements and preliminary 2015 data indicate that attainment may not occur as projected. Severe drought conditions during the late fall and winter months have impacted the frequency and number of observed high PM2.5 days that exceed the standard. Failure to attain the standard in 2015, or receive a one-year extension to 2016 from the U.S. EPA will result in the Basin being reclassified as "serious nonattainment," thereby requiring a Serious Area 24-hour PM2.5 SIP submittal. While the data is still preliminary, staff is proposing to include a Serious Area SIP as a component of the 2016 Air Quality Management Plan (AQMP) to be submitted to U.S. EPA only if the Basin fails to attain in 2015 or receive the extension to attain in 2016. This action is to direct staff to include a PM2.5 24-hour Serious SIP in the 2016 AQMP. (No Committee Review)

PUBLIC HEARINGS

28. Amend Rules 212, 1401, 1401.1 and 1402

Fine/2239

In March 2015, the Office of Environmental Health Hazard Assessment (OEHHA) approved revisions to their Air Toxics Hot Spots Program Risk Assessment Guidelines. Rule 212 – Standards for Approving Permits and Issuing Public Notice, Rule 1401 – New Source Review of Toxic Air Contaminants, Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools, and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources currently rely on the prior OEHHA Risk Assessment Guidelines to calculate health risks. Amendments are proposed to reference the Revised OEHHA Guidelines and to amend specific provisions to harmonize with the Revised OEHHA Guidelines. Proposed Amended Rule 1401 may include provisions for specific source categories or situations that cannot meet the Rule 1401 risk thresholds using the Revised OEHHA Guidelines. This action is to adopt the resolution: 1) Certifying the Final Environmental Assessment for Proposed Amended Rules 1401, 1401.1, 1402, and 212; and 2) Amending Rules 1401, 1401.1, 1402, and 212. This action is to also receive and file: 1) SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (Version 8.0); 2) SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (June 5, 2015); and 3) SCAQMD Facility Prioritization Procedures for AB 2588 Program (June 2015). (Reviewed: Stationary Source Committee, April 17, 2015)

29. Amend Rule 1148.1 – Oil and Gas Production Wells

Fine/2239

Staff is recommending that the public hearing on this item be continued to the July 10, 2015 Board Meeting.

The proposed amendment seeks to provide enforceable mechanisms to reduce odor nuisance potential from emissions associated with oil and gas production facility operations and also updates rule language to promote clarity, consistency and enforceability. The proposed amendment: requires use of odor mitigation best practices; requires facilities located within 1,500 feet of a sensitive receptor to conduct and submit a specific cause analysis for any confirmed odor event; and requires facilities with continuing odor issues to develop and implement an approved Odor Mitigation Plan. This action is to adopt the resolution: 1) Determining that the proposed amendments to Rule 1148.1 - Oil and Gas Production Wells are exempt from the requirements of the California Environmental Quality Act; and 2) Amending Rule 1148.1 - Oil and Gas Production Wells. (Reviewed: Stationary Source Committee, February 20 and April 17, 2015)

30. Amend Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers **Fine/2239**

Staff is recommending that the public hearing on this item be continued to the July 10, 2015 Board Meeting.

Rule 1148.2 was adopted April 5, 2013 to establish requirements for owners or operators of oil and gas wells to notify the Executive Officer when conducting well drilling, well reworking, hydraulic fracturing, and other well production stimulation activities. The rule also includes reporting requirements for operators and chemical suppliers to report trade secret and non-trade secret chemicals used. The California Department of Conservation, through its Division of Oil, Gas, and Geothermal Resources (DOGGR) has approved Well Stimulation Treatment Regulations in response to the passage of SB 4 on December 30, 2014. Chemical reporting requirements for chemicals claimed as trade secret are different between the new DOGGR regulation and Rule 1148.2. Proposed Amended Rule 1148.2 includes revisions to the chemical reporting requirements to be consistent with DOGGR's regulation. This action is to adopt the resolution: 1) Determining that the proposed amendments to Rule 1148.2 are exempt from the CEQA; and 2) Amending Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers. (Reviewed: Stationary Source Committee, April 17, 2015)

OTHER BUSINESS

31. Approve Three-Year Labor Agreement with South Coast Professional Employees Association **Johnson/3018**

SCAQMD management and representatives of the South Coast Professional Employees Association, representing the Professional bargaining unit, have reached agreement on a new three-year labor agreement. The bargaining unit members have ratified the agreement, and this action is to present the proposed agreement to the Board for consideration and approval. (No Committee Review)

PUBLIC COMMENT PERIOD – (Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3)

BOARD MEMBER TRAVEL – (No Written Material)

Board member travel reports have been filed with the Clerk of the Boards, and copies are available upon request.

CLOSED SESSION - (No Written Material)

Wiese/3460

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION

It is necessary for the Board to recess to closed session pursuant to Government Code section 54956.9(a) and 54956.9(d)(1) to confer with its counsel regarding pending litigation which has been initiated formally and to which the SCAQMD is a party. The actions are:

- California Nozzle Specialists, Inc. v. SCAQMD, Los Angeles County Superior Court Case No. BS152037 (Public Records Act);
- CBE, CCAT v. EPA, U.S. Court of Appeals, Ninth Circuit, Case No. 12-72358 (1315);
- Communities for a Better Environment, et al. v. U.S. EPA, et al., U.S. Court of Appeals, Ninth Circuit, Case No. 13-70167 (Sentinel);
- People of the State of California, ex rel SCAQMD v. Exide Technologies, Inc., Los Angeles Superior Court Case No. BC533528;
- In the Matter of SCAQMD v. Exide Technologies, Inc., SCAQMD Hearing Board Case No. 3151-29 (Order for Abatement);
- Exide Technologies, Inc., Petition for Variance, SCAQMD Hearing Board Case No. 3151-31;
- In re: Exide Technologies, Inc., U.S. Bankruptcy Court for the District of Delaware Case No. 13-11482 (KJC) (Bankruptcy case);
- Fast Lane Transportation, Inc. et al. v. City of Los Angeles, et al., Contra Costa County Superior Court Case No. MSN14-0300 (formerly South Coast Air Quality Management District v. City of Los Angeles, et al., Los Angeles Superior Court Case No. BS 143381) (SCIG);
- Friends of the Eel River v. North Coast Railway Authority, California Supreme Court Case No. S222472 (amicus brief);
- Friends of the Fire Rings v. SCAQMD, San Diego Superior Court, North County, Case No. 37-2014-00008860-CU-WM-NC (Nov. 26, 2013; transferred March 20, 2014);
- Petition for Declaratory Order by U.S. Environmental Protection Agency, Surface Transportation Board Docket No. FD 35803 (Railroad Rules) and SCAQMD v. STB, et al., U.S. Court of Appeals, Ninth Circuit, Case No. 15-70609 (appeal of STB Decision);
- Physicians for Social Responsibility, et al. v. U.S. EPA, U.S. Court of Appeals, Ninth Circuit, Case No. 12-70079 (PM2.5);
- Physicians for Social Responsibility, et al. v. U.S. EPA, U.S. Court of Appeals, Ninth Circuit, Case No. 14-73362 (1-Hour ozone);
- SCAQMD v. U.S. EPA, U.S. Court of Appeals, Ninth Circuit, Case No. 13-73936 (Morongo Redesignation);
- Sierra Club v. County of Fresno, California Supreme Court Case No. S219783 (amicus brief);
- Sierra Club, et al. v. U.S. EPA, U.S. District Court for Northern District of California Case No. 3:14-CV-04596 (PM2.5 designation to serious); and
- WildEarth Guardians v. U.S. EPA, D.C. Circuit Court Case No. 14-1145 (PM2.5 moderate designation).

CONFERENCE WITH LEGAL COUNSEL – INITIATING LITIGATION

It is also necessary for the Board to recess to closed session pursuant to Government Code section 54956.9(a) and 54956.9(d)(4) to consider initiation of litigation (three cases).

CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION

It is also necessary for the Board to recess to closed session pursuant to Government Code section 54956.9(b) due to significant exposure to litigation (one case).

CONFERENCE WITH LABOR NEGOTIATORS

In addition, it is necessary for the Board to recess to closed session pursuant to Government Code section 54957.6 to confer regarding upcoming labor negotiations with:

- designated representatives regarding represented employee salaries and benefits or other mandatory subjects within the scope of representation [Negotiator: William Johnson; Represented Employees: SCAQMD Professional Employees Association].

ADJOURNMENT

*****PUBLIC COMMENTS*****

Members of the public are afforded an opportunity to speak on any listed item before or during consideration of that item. Please notify the Clerk of the Board, (909) 396-2500, if you wish to do so. All agendas are posted at SCAQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, at least 72 hours in advance of the meeting. At the end of the agenda, an opportunity is also provided for the public to speak on any subject within the SCAQMD's authority. Speakers may be limited to three (3) minutes each.

Note that on items listed on the Consent Calendar and the balance of the agenda any motion, including action, can be taken (consideration is not limited to listed recommended actions). Additional matters can be added and action taken by two-thirds vote, or in the case of an emergency, by a majority vote. Matters raised under Public Comments may not be acted upon at that meeting other than as provided above.

Written comments will be accepted by the Board and made part of the record, provided 25 copies are presented to the Clerk of the Board. Electronic submittals to cob@aqmd.gov of 10 pages or less including attachment, in MS WORD, plain or HTML format will also be accepted by the Board and made part of the record if received no later than 5:00 p.m., on the Tuesday prior to the Board meeting.

ACRONYMS

AQIP = Air Quality Investment Program	NGV = Natural Gas Vehicle
AVR = Average Vehicle Ridership	NOx = Oxides of Nitrogen
BACT = Best Available Control Technology	NSPS = New Source Performance Standards
Cal/EPA = California Environmental Protection Agency	NSR = New Source Review
CARB = California Air Resources Board	OEHHA = Office of Environmental Health Hazard Assessment
CEMS = Continuous Emissions Monitoring Systems	PAMS = Photochemical Assessment Monitoring Stations
CEC = California Energy Commission	PAR = Proposed Amended Rule
CEQA = California Environmental Quality Act	PEV = Plug-In Electric Vehicle
CE-CERT =College of Engineering-Center for Environmental Research and Technology	PHEV = Plug-In Hybrid Electric Vehicle
CNG = Compressed Natural Gas	PM10 = Particulate Matter ≤ 10 microns
CO = Carbon Monoxide	PM2.5 = Particulate Matter ≤ 2.5 microns
CTG = Control Techniques Guideline	PON = Public Opportunity Notice
DOE = Department of Energy	PR = Proposed Rule
EV = Electric Vehicle	RFP = Request for Proposals
FY = Fiscal Year	RFQ = Request for Quotations
GHG = Greenhouse Gas	SCAG = Southern California Association of Governments
HRA = Health Risk Assessment	SIP = State Implementation Plan
IAIC = Interagency AQMP Implementation Committee	SOx = Oxides of Sulfur
LEV = Low Emission Vehicle	SOON = Surplus Off-Road Opt-In for NOx
LNG = Liquefied Natural Gas	SULEV = Super Ultra Low Emission Vehicle
MATES = Multiple Air Toxics Exposure Study	TCM = Transportation Control Measure
MOU = Memorandum of Understanding	ULEV = Ultra Low Emission Vehicle
MSERCs = Mobile Source Emission Reduction Credits	U.S. EPA = United States Environmental Protection Agency
MSRC = Mobile Source (Air Pollution Reduction) Review Committee	VOC = Volatile Organic Compound
NATTS =National Air Toxics Trends Station	VMT = Vehicle Miles Traveled
NESHAPS = National Emission Standards for Hazardous Air Pollutants	ZEV = Zero Emission Vehicle

 [Back to Agenda](#)

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 1

MINUTES: Governing Board Monthly Meeting

SYNOPSIS: Attached are the Minutes of the May 1, 2015 meeting.

RECOMMENDED ACTION:

Approve Minutes of the May 1, 2015 Board Meeting.

Sandra McDaniel,
Clerk of the Boards

SM:dg

FRIDAY, MAY 1, 2015

Notice having been duly given, the regular meeting of the South Coast Air Quality Management District Board was held at District Headquarters, 21865 Copley Drive, Diamond Bar, California. Members present:

William A. Burke, Ed.D., Chairman
Speaker of the Assembly Appointee

Mayor Dennis R. Yates, Vice Chairman
Cities of San Bernardino County

Mayor Michael D. Antonovich (arrived at 9:15 a.m.; left at approximately 10:45 a.m.)
County of Los Angeles

Mayor Ben Benoit
Cities of Riverside County

Supervisor John J. Benoit
County of Riverside

Councilmember Joe Buscaino
City of Los Angeles

Councilmember Michael A. Cacciotti
Cities of Los Angeles County – Eastern Region

Dr. Joseph K. Lyou
Governor's Appointee

Councilmember Judith Mitchell
Cities of Los Angeles County – Western Region

Supervisor Shawn Nelson (arrived at 9:20 a.m.)
County of Orange

Dr. Clark E. Parker, Sr.
Senate Rules Committee Appointee

Mayor Miguel A. Pulido (left at 9:35 a.m.)
Cities of Orange County

Supervisor Janice Rutherford
County of San Bernardino

CALL TO ORDER: Chairman Burke called the meeting to order at 9:00 a.m.

- Pledge of Allegiance: Led by Councilmember Cacciotti.
- Opening Comments

Dr. Lyou. Announced that he participated on a panel at the Move Los Angeles Conference on April 22, 2015; and noted the potential for funding clean freight through proposed Measure R2.

Councilmember Mitchell. Announced that during a recent visit to Sacramento she discussed legislation to reduce GHGs and the need for it to be coupled with criteria pollutant reductions. She noted that Tesla Motors has announced the development of Powerwall, a lithium-ion battery that will store solar and other forms of renewable energy received from solar panels at residences.

Mayor Pulido. Announced that on May 11, 2015 an event will be held in Santa Ana to celebrate the milestones made in the OC Streetcar project that is expected to be completed in 2019.

Dr. Parker. Expressed optimism for the development of a more widespread hydrogen fueling infrastructure in the region now that a way to measure the amount of hydrogen dispensed during fueling has been developed.

(Supervisor Antonovich arrived at 9:15 a.m.)

- Presentation of Retirement Award to Elaine Chang

Chairman Burke presented a retirement award to Elaine Chang, DEO/Planning, Rule Development and Area Sources, in recognition of 28 years of dedicated District service.

CONSENT CALENDAR

1. Approve Minutes of April 3, 2015 Board Meeting
2. Set Public Hearings June 5, 2015 to Consider Amendment to and/or Adoption of SCAQMD Rules and Regulations
 - (A) Amend Rule 1148.1 – Oil and Gas Production Wells
 - (B) Amend Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers

Budget/Fiscal Impact

3. Develop and Demonstrate Fuel Cell Hybrid Electric Medium-Duty Trucks **E**
4. Execute Contract to Construct, Operate and Maintain Fast-Fill Public Access CNG Fueling Station at SCAQMD Headquarters and Authorize Property Usage Agreement **E**
5. Issue RFP for CEQA Documentation Support to Prepare Program Environmental Impact Report for 2016 AQMP and Other CEQA-related Activities
6. Recognize Revenue and Appropriate Funds for PM2.5 Monitoring Program and Issue Purchase Orders for Air Monitoring Equipment and CNG Vehicle
7. Execute Lease Contract for Mailing Equipment
8. Establish New Classification of Career Development Intern
9. Issue RFP for Evaluation and Improvement of SCAQMD's Website
10. Appointment of Members to SCAQMD Hearing Board
11. Issue Solicitations Approved by MSRC

Items 12 through 18 - Information Only/Receive and File

12. Legislative and Public Affairs Report
13. Hearing Board Report
14. Civil Filings and Civil Penalties Report
15. Lead Agency Projects and Environmental Documents Received by SCAQMD
16. Rule and Control Measure Forecast

17. Report of RFQs Scheduled for Release in May
18. Status Report on Major Projects for Information Management Scheduled to Start During Last Six Months of FY 2014-15

Dr. Lyou announced his abstention on Item No. 3 because UPS is a potential source of income to him, and on Item No. 4 because Clean Energy is a potential source of income to him. Supervisor Antonovich announced his abstention on Item No. 4 because of a campaign contribution from Clean Energy.

Agenda Items 2, 4, 9, 15 and 16 were withheld for comment and discussion.

MOVED BY CACCOTTI, SECONDED BY J. BENOIT, AGENDA ITEMS 1, 3, 5 THROUGH 8, 10 THROUGH 14, 17 AND 18 APPROVED AS RECOMMENDED, ADOPTING RESOLUTION NO. 15-11 AMENDING SCAQMD'S SALARY RESOLUTION TO ESTABLISH NEW CLASSIFICATION OF CAREER DEVELOPMENT INTERN AT ANNUAL SALARY OF \$31,782.40, BY THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit, Burke, Buscaino, Cacciotti, Lyou (*except Item #3*), Mitchell, Parker, Pulido, Rutherford and Yates.

NOES: None.

ABSTAIN: Lyou (*Item #3 only*).

ABSENT: Nelson.

(Supervisor Nelson arrived at 9:20 a.m.)

19. Items Deferred from Consent Calendar

2. Set Public Hearings June 5, 2015 to Consider Amendments and/or Adoption to SCAQMD Rules and Regulations
 - (A) Amend Rule 1148.1 – Oil and Gas Production Wells
 - (B) Amend Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers
9. Issue RFP for Evaluation and Improvement of SCAQMD's Website
15. Lead Agency Projects and Environmental Documents Received by SCAQMD
16. Rule and Control Measure Forecast


Dr. Tom Williams, Citizens Coalition for a Safe Community and Sierra Club, addressed the Board on Items 2, 9, 15 and 16. He recommended that the Board hold hearings on PARs 1148.1 and 1148.2 in the communities most affected by the proposed amendments; and suggested that a rule be developed related to tunnel vents, as the emissions expected to result from the 710 freeway tunnel need to be regulated.

MOVED BY YATES, SECONDED BY CACCIOTTI, AGENDA ITEMS 2, 9, 15 AND 16 APPROVED AS RECOMMENDED, BY THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit, Burke, Buscaino, Cacciotti, Lyou, Mitchell, Nelson, Parker, Pulido, Rutherford and Yates.

NOES: None.

ABSENT: None.

4. Execute Contract to Construct, Operate and Maintain Fast-Fill Public Access CNG Fueling Station at SCAQMD Headquarters and Authorize Property Usage Agreement 

Supervisor Antonovich and Dr. Lyou left the room during discussion of Item No. 4.

Supervisor Benoit suggested adding additional signage to make the public aware of the CNG and hydrogen fueling stations located at SCAQMD Headquarters.

MOVED BY J. BENOIT, SECONDED BY PULIDO, AGENDA ITEM 4 APPROVED AS RECOMMENDED, BY THE FOLLOWING VOTE:

AYES: B. Benoit, J. Benoit, Burke, Buscaino, Cacciotti, Lyou, Mitchell, Nelson, Parker, Pulido, Rutherford and Yates.

NOES: None.

ABSTAIN: Antonovich and Lyou.

BOARD CALENDAR

20. Administrative Committee
21. Legislative Committee
22. Mobile Source Committee
23. Stationary Source Committee
24. Technology Committee
25. Mobile Source Air Pollution Reduction Review Committee
26. California Air Resources Board Monthly Report

MOVED BY BUSCAINO, SECONDED BY J. BENOIT, AGENDA ITEMS 20 AND 22 THROUGH 26 APPROVED AS RECOMMENDED, RECEIVING AND FILING THE COMMITTEE, MSRC AND CARB REPORTS, BY THE FOLLOWING VOTE:

AYES: B. Benoit, J. Benoit, Burke, Buscaino, Cacciotti, Lyou, Mitchell, Nelson, Parker, Pulido, Rutherford and Yates.

NOES: None.

ABSENT: Antonovich.

(Mayor Pulido left at 9:35 a.m.)

21. Legislative Committee

Dr. Parker noted the importance of the Board being proactive and supporting SB 350.

Supervisor Benoit explained that his position to oppose the bill is based on the concern that the true impacts of the bill have not been made clear.

Councilmember Mitchell pointed out that the language in SB 350 is well defined and complete.

In response to Supervisor Rutherford's inquiry concerning how much of the bill is superseded by the Governor's Executive Order, Dr. Wallerstein explained that the bill passed the senate Environmental Quality Committee and is intended to reflect the Governor's Executive Order and is continuing to move along.

DR. PARKER MOVED TO ADOPT A POSITION OF "SUPPORT" AS TO SB 350. THE MOTION WAS SECONDED BY COUNCILMEMBER CACCIOTTI, AND PASSED BY THE FOLLOWING VOTE:

AYES: Buscaino, Cacciotti, Lyou,
Mitchell, Nelson, Parker and
Yates.

NOES: Antonovich, B. Benoit, J. Benoit,
Burke and Rutherford.

ABSENT: Pulido.

Dr. Wallerstein noted that AB 335 did not pass in committee and a request for reconsideration of the bill was not made.

Supervisor Nelson recommended that the Board take no position on AB 335.

SUPERVISOR NELSON MOVED TO ADOPT
"NO POSITION" AS TO AB 335. THE MOTION
WAS SECONDED BY SUPERVISOR BENOIT,
AND PASSED BY THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit,
Burke, Buscaino, Cacciotti, Lyou,
Mitchell, Nelson, Parker,
Rutherford and Yates.

NOES: None.

ABSENT: Pulido.

Dr. Tom Williams, Sierra Club Transportation Committee, addressed the Board, noting his support for H.B. 1308 and encouraged the use of rail for transporting freight.

THE BOARD ADDRESSED THE REMAINDER
OF ITEM 21 BY TAKING THE
RECOMMENDED POSITIONS ON SB 513
AND H.R. 1308 AS SET FORTH BELOW,
AND RECEIVING AND FILING THE
LEGISLATIVE COMMITTEE REPORT, BY
THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit, Burke, Buscaino, Cacciotti, Lyou, Mitchell, Nelson, Parker, Rutherford and Yates.

NOES: None.

ABSENT: Pulido.

Agenda Item	Recommendation
H.R. 1308 (Lowenthal) Economy in Motion: The National Multimodal and Sustainable Freight Infrastructure Act	Support
SB 513 (Beall) Carl Moyer Memorial Air Quality Standards Attainment Program	Support

Staff Presentation/Board Discussion

27. Annual Meeting of Brain & Lung Tumor and Air Pollution Foundation
(Continued from April 3, 2015 Meeting)

Megan Lorenz, Senior Deputy District Counsel, gave the staff presentation on Item 27.

Dr. Tom Williams, Citizens Coalition for a Safe Community, addressed the Board on Item 27 requesting that more information regarding the BLTAP be made available to the public, and stressed the importance of including the results of the studies as areas to address in the AQMP.

Chairman Burke commented that Dr. Black will be scheduled to make a presentation at a future meeting and that information will be available to the public.

In response to Councilman Cacciotti's inquiry regarding the testing of the health impacts of diesel emissions done by the Health Effects Institute, Dr. Jean Ospital, Health Effects Officer, noted that the Cedar Sinai study is focusing on collective ambient particle exposure and not on a specific source. He clarified the procedures used in the Health Effects Institute study and how that impacted the results.

Councilman Cacciotti expressed support for sharing information about the BLTAP's efforts, as well as connecting with other medical institutions to see if they want to get involved in the research efforts.

Dr. Lyou noted a concern raised by a commenter on the MATES study regarding the lack of a study that compares whether new PM diesel exhaust is less toxic than old PM diesel exhaust and inquired whether it would be prudent to support such research.

Dr. Ospital confirmed that there has not been a comparison study of that nature; noting, however, that a BLTAP-funded study is underway at UCLA aimed at developing an assay that can then potentially be applied to future studies.

Supervisor Benoit noted that the MATES study and other studies may appear to reflect dramatic improvements that will eliminate the need for this Board. He suggested a balanced approach in achieving the goal of improving air quality while mindful of the impacts on jobs.

MOVED BY CACCIOTTI, SECONDED BY MITCHELL, AGENDA ITEM 27 APPROVED AS RECOMMENDED RECEIVING AND FILING THE ANNUAL REPORT AND RATIFYING THE FOUNDATION DISBURSEMENTS DESCRIBED IN THE ANNUAL REPORT AND RATIFYING THE APPOINTMENT OF DR. WILLIAM A. BURKE AS A FOUNDATION DIRECTOR, REPLACING FORMER BOARD MEMBER JOSIE GONZALES, BY THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit, Burke, Cacciotti, Lyou, Mitchell, Nelson, Parker, Rutherford and Yates.

NOES: None.

ABSENT: Pulido.

28. Final MATES IV Report

Dr. Jean Ospital, Health Effects Officer, gave the staff presentation.

MOVED BY CACCIOTTI, SECONDED BY LYOU, AGENDA ITEM 28 APPROVED AS RECOMMENDED RECEIVING AND FILING THE FINAL MATES IV REPORT, BY THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit, Burke, Cacciotti, Lyou, Mitchell, Parker, Rutherford and Yates.

NOES: None.

ABSENT: Nelson and Pulido.

29. Draft 2016 AQMP White Papers on Particulate Matter Controls and Volatile Organic Compound Controls

Staff waived the oral presentation on Agenda Item 29.

In response to Supervisor Rutherford's questions regarding how the white papers impact the AQMP, Dr. Philip Fine, Assistant DEO/Planning and Rules, explained that the ten 2016 AQMP white papers are being developed and released with the goal of receiving input from stakeholders as their contents will form a policy framework for development of the AQMP.

Dr. Wallerstein added that staff plans to come back to the Board in the fall after the papers have been released, to receive input that will then aid in the development of the AQMP.

Dr. Lyou expressed concern with the lack of focus towards achieving the state ambient air quality standards at the earliest date achievable with the application of all reasonable available control measures and technologies; and suggested the addition of information in the white papers explaining the differences between attaining the federal and state PM2.5 and PM10 standards.

Dr. Wallerstein noted that the focus is often more on meeting the federal standards because they are more stringent. He confirmed that staff would add information regarding the state PM standards.

RECEIVED AND FILED; NO ACTION NECESSARY.

PUBLIC HEARINGS

30. Adopt Executive Officer's FY 2015-16 SCAQMD Budget and Work Program and Authorize Mid-Year Budget Adjustments, Transfers, Purchase of Vehicles, and Hearing Board Compensation

Michael O'Kelly, Chief Financial Officer, gave the staff presentation.

Councilmember Cacciotti noted the impacts to traffic congestion as the population of San Bernardino and Riverside County grew exponentially.

In response to Chairman Burke's inquiry regarding accounting for population growth patterns, Dr. Wallerstein noted that staff utilizes data from SCAG and those forecasts are incorporated into the emissions estimates.

The public hearing was opened and the following individual addressed the Board on Agenda Item 30.

CURTIS COLEMAN, Southern California Air Quality Alliance

Expressed support for the proposed goals and objectives; and urged the Board to ensure that the Budget provides for the appropriate level of staffing for timely permit processing.

There being no further public testimony on this item, the public hearing was closed.

Supervisor Benoit and Supervisor Nelson expressed concern with positions remaining vacant for an extended period of time.

Dr. Wallerstein explained the benefits to leaving some positions vacant for more than a year.

Chairman Burke referred the matter of extended vacancies to the Personnel Committee for further review.

Councilman Cacciotti requested that the Goals and Objectives include the item that encourages alternative forms of transportation that he suggested at the April 3, 2015 meeting.

MOVED BY LYOU, SECONDED BY
CACCIOTTI, AGENDA ITEM 30 APPROVED
AS RECOMMENDED WITH THE ADDITION
OF THE ITEM NOTED BELOW:

- 1) REMOVE FROM RESERVES AND DESIGNATIONS ALL AMOUNTS ASSOCIATED WITH THE FY 2014-15 BUDGET;
- 2) APPROVE TOTAL APPROPRIATIONS OF \$137,217,800;
- 3) APPROVE A PROJECTED JUNE 30, 2016 RESERVES AND DESIGNATIONS FUND BALANCE OF \$14,859,899 AND TOTAL UNDESIGNATED OF \$30,062,622;

- 4) APPROVE TOTAL REVENUES OF \$134,980,310;
- 5) APPROVE THE ADDITION OF THREE (3) NET AUTHORIZED/FUNDED POSITIONS AS DETAILED IN THE FY 2015-16 DRAFT BUDGET;
- 6) APPROVE THE FY 2015-16 GOALS AND PRIORITY OBJECTIVES AS PREVIOUSLY DISCUSSED AND INCLUDED IN THE FY 2015-16 DRAFT BUDGET AND WORK PROGRAM;
- 7) INCREASE THE FY 2014-15 GENERAL FUND REVENUE BUDGET AND APPROVE THE TRANSFER OF \$1,127,500 FROM THE UNDESIGNATED FUND BALANCE TO THE INFRASTRUCTURE IMPROVEMENT FUND FOR BUILDING INFRASTRUCTURE PROJECTS;
- 8) INCREASE THE FY 2014-15 GENERAL FUND REVENUE BUDGET BY \$640,000 AND APPROPRIATE \$600,000 FOR THE REPLACEMENT OF SCAQMD FLEET VEHICLES AND \$40,000 FOR THE REPLACEMENT OF A CNG VAN FOR USE IN AIR MONITORING EFFORTS;
- 9) AUTHORIZE THE EXECUTIVE OFFICER TO ISSUE AN RFQ AND EXECUTE THE SUBSEQUENT PURCHASE ORDER(S) FOR THE PURCHASE OF FLEET VEHICLES AND A CNG VAN FOR AIR MONITORING IN AN AMOUNT NOT TO EXCEED \$640,000; AND
- 10) APPROVE ADJUSTMENT TO COMPENSATION FOR HEARING BOARD MEMBERS AND THEIR ALTERNATES EFFECTIVE ON JANUARY 2015, 2016 AND 2017 AS AUTHORIZED AND DIRECTED BY RESOLUTION NO. 07-23.

BY THE FOLLOWING VOTE:

AYES: Antonovich, B. Benoit, J. Benoit, Burke, Cacciotti, Lyou, Mitchell, Nelson, Parker, Rutherford and Yates.

NOES: None.

ABSENT: Pulido.

Add the following to the SCAQMD FY 2015-16 – Goals and Objectives:

“to promote, support, and partner with other organizations and groups on strategies and programs to encourage multi-modal forms of transportation such as bus, light rail, heavy rail, bicycle, to accomplish SCAQMD’s mission to reduce traffic congestion and air pollution and improve health and air quality.”

31. Amend Rule 2202 Employee Commute Reduction Program Guidelines

Staff waived the oral presentation on Agenda Item 31.

The public hearing was opened, and the following individual addressed the Board on Agenda Item 31.

MANSFIELD COLLINS, Walnut Resident

Expressed concern that as the student population continues to increase at Mt. SAC, these student vehicles are not accounted for in the average number of vehicles traveled to determine compliance with Rule 2202, and requested that the Board amend the rule to include all vehicles traveling to and from colleges, in order to accurately assess actual health risks to surrounding communities.

There being no further public testimony on this item, the public hearing was closed.

Carol Gomez, Planning and Rules Manager, explained that students are not included in Rule 2202 as it is pertains solely to employees, but emissions from student vehicles are accounted for in CEQA documents that have a bearing on expansion efforts.

Councilmember Cacciotti expressed concern with the impacts of an increased student population and suggested promoting alternate modes of transportation for local college students.

Councilmember Mitchell suggested the need for further discussion regarding the guidelines related to colleges and universities.

(Supervisor Antonovich left at approximately 10:45 a.m.)

MOVED BY LYOU, SECONDED BY MITCHELL, AGENDA ITEM NO. 31 APPROVED AS RECOMMENDED BY STAFF, ADOPTING RESOLUTION NO. 15-12 CERTIFYING THE FINAL ENVIRONMENTAL ASSESSMENT FOR AMENDED RULE 2202 AND ADOPTING AMENDED RULE 2202 EMPLOYEE COMMUTE REDUCTION PROGRAM GUIDELINES, BY THE FOLLOWING VOTE:

AYES: J. Benoit, Burke, Buscaino, Cacciotti, Lyou, Mitchell, Nelson, Parker, Rutherford and Yates.

NOES: None.

ABSENT: Antonovich, B. Benoit and Pulido.

32. Adopt Rule 2202 Emission Reduction Quantification Protocol for Electric Vehicle Charging Station Projects

Staff waived the oral presentation on Agenda Item 32.

The public hearing was opened and the following individual addressed the Board on Agenda Item 32.

SCOTT BRIASCO, Los Angeles Department of Water and Power

Expressed support for the charging station protocol; and explained that LADWP offers rebates to residential and commercial customers who install charging stations.

There being no further public testimony on this item, the public hearing was closed.

MOVED BY CACCIOTTI, SECONDED BY MITCHELL, AGENDA ITEM NO. 32 APPROVED AS RECOMMENDED BY STAFF, ADOPTING RESOLUTION NO. 15-13 CERTIFYING THE FINAL ENVIRONMENTAL ASSESSMENT FOR RULE 2202 AND ADOPTING RULE 2202 EMISSION REDUCTION QUANTIFICATION PROTOCOL FOR ELECTRIC VEHICLE CHARGING STATION PROJECTS, BY THE FOLLOWING VOTE:

AYES: J. Benoit, Burke, Buscaino, Cacciotti, Lyou, Mitchell, Nelson, Parker, Rutherford and Yates.

NOES: None.

ABSENT: Antonovich, B. Benoit and Pulido.

PUBLIC COMMENT PERIOD – (Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3)

Dr. Tom Williams, Citizens Coalition for a Safe Community and No 710 Coalition, expressed concern for the enormous negative impacts that will result from the 710 tunnel that will vent the emissions of approximately 40,000 trucks per day into surrounding neighborhoods.

CLOSED SESSION

The Board recessed to closed session at 10:50 a.m., pursuant to Government Code sections:

- 54956.9(a) and 54956.9(d)(1) to confer with its counsel regarding pending litigation which has been initiated formally and to which the District is a party, as follows:

People of the State of California, ex rel SCAQMD v. Exide Technologies, Inc., Los Angeles Superior Court Case No. BC533528;

In the Matter of SCAQMD v. Exide Technologies, Inc., SCAQMD Hearing Board Case No. 3151-29 (Order for Abatement);

Exide Technologies, Inc., Petition for Variance, SCAQMD Hearing Board Case No. 3151-31; and

In re: Exide Technologies, Inc., U.S. Bankruptcy Court for the District of Delaware Case No. 13-11482 (KJC) (Bankruptcy case).

- 54956.9(a) and 54956.9(d)(4) to consider initiation of litigation (one case).

Following closed session, General Counsel Kurt Wiese announced that a report of any reportable actions taken in closed session will be filed with the Clerk of the Board and made available upon request.

ADJOURNMENT

There being no further business, the meeting was adjourned by Kurt Wiese at 11:10 a.m.

The foregoing is a true statement of the proceedings held by the South Coast Air Quality Management District Board on May 1, 2015.

Respectfully Submitted,

Rosalinda Diaz
Deputy Clerk Transcriber

Date Minutes Approved: _____

Dr. William A. Burke, Chairman

ACRONYMS

AQMP = Air Quality Management Plan

CaFCP= California Fuel Cell Partnership

CARB = California Air Resources Board

CEQA = California Environmental Quality Act

CNG = Compressed Natural Gas

EV = Electric Vehicle

FY = Fiscal Year

MATES = Multiple Air Toxics Study

MSRC = Mobile Source (Air Pollution Reduction) Review Committee

PAR = Proposed Amended Rule

PM10 = Particulate Matter \leq 10 microns

PM2.5 = Particulate Matter \leq 2.5 microns

RFP = Request for Proposals

SCAG = Southern California Associated Governments

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 2

PROPOSAL: Set Public Hearing September 4, 2015 to Consider Amendments and/or Adoption to SCAQMD Rules and Regulations

Amend Rule 1156 – Further Emission Reductions from Cement Manufacturing Facilities. Rule 1156 was amended in March 2009 to address elevated ambient hexavalent chromium levels from cement manufacturing measured in conjunction with MATES III. The amendment established monitoring requirements, as well as requirements for the storage, handling, and transport of clinker material to minimize future potential emissions of the toxic material. As part of the Rule 1156 adoption resolution, the Board directed staff to re-evaluate, based on collected data, the need for and frequency of hexavalent chromium monitoring, and to work with stakeholders to develop a facility closure plan option in lieu of monitoring requirements. Proposed amendments to Rule 1156 will establish the conditions, including plant closure, under which monitoring can be reduced or eliminated. In addition, the proposed amendments will also reflect an adjustment to the fence-line risk threshold for hexavalent chromium pursuant to the new OEHHA guidance, as well as other minor amendments. (Reviewed: Stationary Source Committee, April 17 and May 15, 2015)

The complete text of the proposed amendments, staff report and other supporting documents will be available from the District's Public Information Center, (909) 396-2550 and on the Internet (www.aqmd.gov) as of August 5, 2015.

RECOMMENDED ACTION:

Set public hearing September 4, 2015 to amend Rule 1156.

Barry R. Wallerstein, D.Env.
Executive Officer

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 3

PROPOSAL: Execute Contracts to Develop and Demonstrate Class 8 Plug-In Hybrid Electric Drayage Trucks and Amend Contract to Integrate On-Board Chargers 

SYNOPSIS: On October 5, 2012, the Board approved \$958,120 for Vision Industries and \$925,000 for Balqon to develop and demonstrate zero emission drayage trucks as part of a DOE-funded zero emission cargo transport demonstration project. Since then, Vision Industries has filed for bankruptcy and ceased operation and Balqon has notified the SCAQMD of their decision to withdraw from the project leaving \$1,883,120 of the DOE funds available for reallocation. This action is to execute contracts, pending approval by the DOE, with Transportation Power Inc. and US Hybrid to develop and demonstrate Class 8 plug-in hybrid electric drayage trucks. This action is to also amend a contract with US Hybrid to add on-board chargers in their battery electric drayage trucks. The total amount of awards shall not exceed \$2,176,342, comprised of \$1,883,120 from the DOE funds recognized in the Advanced Technology Goods Movement Fund (61) and \$293,222 from the Clean Fuels Fund (31).

COMMITTEE: Technology, May 15, 2015; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the Chairman to execute contracts, contingent upon DOE approval, with the following entities:
 - A. Transportation Power Inc. to develop and demonstrate two Class 8 CNG plug-in hybrid electric drayage trucks in an amount not to exceed \$1,153,446, comprised of \$958,120 from the Advanced Technology Goods Movement Fund (61) and \$195,326 from the Clean Fuels Fund (31); and
 - B. US Hybrid to develop and demonstrate three Class 8 LNG plug-in hybrid electric drayage trucks in an amount not to exceed \$947,896, comprised of \$925,000 from the Advanced Technology Goods Movement Fund (61) and \$22,896 from the Clean Fuels Fund (31).

2. Authorize the Chairman to amend a contract with US Hybrid to integrate on-board chargers into two battery electric drayage trucks in an amount not to exceed \$75,000 from the Clean Fuels Fund (31).

Barry R. Wallerstein, D.Env.
Executive Officer

MMM:FM:BC

Background

Heavy-duty diesel trucks in the South Coast Air Basin remain a large source of emissions with adverse health effects, especially in the surrounding communities along the goods movement corridors near the Ports of Los Angeles and Long Beach and next to major freeways. In order to mitigate the impact and attain stringent federal ozone standards, SCAQMD has been strongly promoting and supporting the development and deployment of advanced zero emission cargo transport technologies.

Replacement Projects

On October 5, 2012, the Board recognized a \$4,169,000 grant from DOE into the Advanced Technology Goods Movement Fund (61) for the development and demonstration of zero emission drayage truck technologies. Concurrently, the Board also approved contracts with four electric vehicle manufacturers to develop these truck technologies, including a \$958,120 contract with Vision Industries for four fuel cell drayage trucks and a \$925,000 contract with Balqon for three battery electric drayage trucks. On September 24, 2014, Vision Industries filed for Chapter 11 bankruptcy protection, with an intention to continue with the project once they re-emerged from the reorganization process. However, in December 2014, the case was subsequently converted to a Chapter 7 liquidation bankruptcy and Vision Industries ceased operation. Furthermore, due to limited resources, Balqon has notified the SCAQMD of their decision to withdraw from their vehicle demonstration project. With both Vision and Balqon no longer able to proceed with their projects, staff has proposed alternative electric drayage truck technologies as replacement projects.

On-Board Chargers

US Hybrid is one of four manufacturers awarded contracts by the Board to develop zero emission drayage trucks. US Hybrid has been developing two battery electric trucks in this project with a plan to use off-board chargers to support the trucks during demonstration. However, based on feedback from fleet operators and available EV charging infrastructure for heavy-duty trucks at the demonstrator sites, US Hybrid has

opted to upgrade their electric trucks with an on-board charger to offer simpler charging logistics and cost savings for fleet operators.

Proposal

This action is to execute contracts, contingent upon approval by DOE, with Transportation Power Inc. (TransPower) to develop and demonstrate two Class 8 CNG plug-in hybrid electric drayage trucks and with US Hybrid to develop and demonstrate three Class 8 LNG plug-in hybrid electric drayage trucks. This action is also to amend a contract with US Hybrid to integrate on-board chargers in their battery electric trucks.

Replacement Projects

TransPower will manufacture two Class 8 CNG plug-in hybrid electric drayage trucks with a targeted operating range of 150-200 miles, including 30-40 all-electric miles. The hybrid technology is based on the advanced electric drive system TransPower has developed for their battery electric trucks, which are currently in demonstration with fleet partners at the Ports of Los Angeles and Long Beach. The proposed CNG hybrid electric trucks also share many components and subsystems with the catenary truck that TransPower is developing for the Siemens overhead catenary system demonstration. In addition, by utilizing commercially available and widely used CNG engines and components, these trucks are expected to be more cost-competitive and well-positioned for commercialization.

US Hybrid will develop three Class 8 LNG plug-in hybrid electric drayage trucks for demonstration. US Hybrid is currently working to develop two LNG hybrid trucks using Autocar trucks with an 8.9L ISL G engine but the trucks are designed for refuse haulers with a heavy front axle. For the proposed project, US Hybrid will convert three LNG drayage trucks from Total Transportation Services, Inc. (TTSI) with the hybrid electric drive system they have developed for demonstration in revenue drayage service. The battery pack will be 80-100 kilowatt-hour (kWh) and will provide a target of 30-40 miles of all-electric range.

These natural gas hybrid trucks will be deployed in revenue drayage service for at least two years of demonstration. With the anticipated 30-40 miles of all electric range, these trucks will be designed to operate mostly with zero tailpipe emissions during idling and low-power operations in sensitive zones around the ports and railyards, which may account for up to 40% of the drayage duty cycles.

On-Board Chargers

US Hybrid will develop an on-board charger for the two battery electric drayage trucks they are building for demonstration as part of a DOE-funded zero emission cargo transport demonstration project. The on-board charger will have approximately 60 kW in charging capacity and will be compatible with the charger interface plugs, control

signals and feeders for the EV supply equipment to be used by fleet operators, including TTSI and SA Recycling, during demonstration. This upgrade will provide simpler charging logistics for the fleet demonstrators in lieu of bulky off-board chargers. Furthermore, this will negate any need for the fleet demonstrators to be concerned with additional electrical work to accommodate off-board chargers in this project.

Sole Source Justification

Section VIII.B.3. of the Procurement Policy and Procedure identifies provisions under which a sole source award may be justified when funded in whole or in part with federal funds. The request for a sole source award for this project is made under the provision B.3.c: The awarding federal agency authorizes noncompetitive proposals. Both plug-in hybrid electric truck projects will be funded by DOE under their Zero Emission Cargo Transport Demonstration Program. Additionally, TransPower has been awarded funds for the CNG hybrid electric trucks by CEC under PON-13-506 – Natural Gas Engine-Hybrid Electric Research and Development. US Hybrid is also leveraging a portion of a CEC grant they have received as a subcontractor to Gas Technology Institute under PON-10-603 – Advanced Medium- and Heavy-Duty Vehicle Technologies Pre-Commercial Demonstrations for the proposed project. Both TransPower and US Hybrid have extensive knowledge and experience in advanced electric vehicle technologies that are required to successfully complete this project in a timely manner. For the proposed on-board charger project, US Hybrid has also requested the San Pedro Bay Port’s Technology Advancement Program (TAP) to co-sponsor this upgrade for their battery electric trucks.

Benefits to SCAQMD

These projects are included in the *Technology Advancement Office Clean Fuels Program 2015 Plan Update* under “Electric/Hybrid Technologies & Infrastructure.” Successful development and demonstration of hybrid electric drayage trucks will move the technology closer to commercialization for wide-scale market deployment as well as move the region closer to attainment of clean air standards by eliminating diesel particulate matter and substantially reducing NO_x emissions. Additionally, since drayage trucks are used to move goods in and around the ports, the application of zero emission and near-zero emission technologies will improve the air quality in the surrounding communities that are disproportionately impacted by these operations.

Resource Impacts

The SCAQMD’s total cost-share for these three projects shall not exceed \$2,176,342, comprised of \$1,883,120 in DOE funds (originally allocated for Vision Industries and Balqon), which were recognized in the Advanced Technology Goods Movement Fund (61), and \$293,222 from the Clean Fuels Fund (31). Project costs and funding amounts from participating entities are summarized in the tables below:

Proposed Project	Funding Partners	Cost-Share	Percentage
CNG Plug-In Hybrid Electric Trucks	DOE	\$958,120	46%
	CEC	\$900,000	43%
	TransPower	\$50,000	2%
	SCAQMD (<i>requested</i>)	\$195,326	9%
	Total	\$2,103,446	100%

Proposed Project	Funding Partners	Cost-Share	Percentage
LNG Plug-In Hybrid Electric Trucks	DOE	\$925,000	44%
	CEC	\$450,000	21%
	TTSI	\$630,000	30%
	US Hybrid	\$90,000	4%
	SCAQMD (<i>requested</i>)	\$22,896	1%
	Total	\$2,117,896	100%

Proposed Project	Funding Partners	Cost-Share	Percentage
On-Board Chargers	Ports/TAP	\$75,000	50%
	SCAQMD (<i>requested</i>)	\$75,000	50%
	Total	\$150,000	100%

Sufficient funds are available in the Clean Fuels Fund (31) for this proposed project. The Clean Fuels Fund (31) is established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 4

PROPOSAL: Implement Programs in Clean Communities Pilot Study Communities under U.S. EPA Targeted Air Shed Grant

SYNOPSIS: On July 5, 2013, the Board approved funding reallocations for programs to implement the Clean Communities Plan in Boyle Heights and the City of San Bernardino under the U.S. EPA Targeted Air Shed Grant. Board actions are needed to implement four U.S. EPA Targeted Air Shed Grant programs including Air Filtration in Schools, Yard Equipment Exchange, Boiler and Process Heater Efficiency Upgrades, and Weatherization Program for Homes Adjacent to Freeways and Intermodal Facilities in Boyle Heights and the City of San Bernardino. Staff is recommending to 1) amend a contract with IQAir North America, adding \$435,632 to install air filtration systems at Murchison Street Elementary school in Boyle Heights; 2) execute contracts with Black and Decker, Inc. and The Greenstation to purchase up to 800 lawn mowers in an amount not to exceed \$164,000 to conduct two residential lawn mower exchanges; 3) execute a contract with the City of San Bernardino in an amount not to exceed \$57,000 for the differential cost of installing high efficiency condensing boilers; and 4) authorize the Executive Officer to enter into a Collaboration Agreement with Southern California Gas Company in an amount not to exceed \$500,000 to conduct a home weatherization program.

COMMITTEE: Administrative, May 8, 2015; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the Chairman to amend a contract with IQAir North America to install air filtration systems at Murchison Street Elementary school in Boyle Heights, adding \$435,632 from the Advanced Technology, Outreach and Education Fund (17);
2. Authorize the Chairman to execute a contract with the City of San Bernardino to cover the differential cost of installing high efficiency condensing boilers in an amount not to exceed \$57,000 from the Advanced Technology, Outreach and Education Fund (17);

3. Authorize the Chairman to execute contracts from the Advanced Technology, Outreach and Education Fund (17) with the following entities to conduct lawn mower exchanges in Boyle Heights and the City of San Bernardino:
 - a. Black and Decker, Inc. to purchase up to 400 lawn mowers in an amount not to exceed \$80,000;
 - b. The Greenstation to purchase up to 400 lawn mowers in an amount not to exceed \$84,000;
4. Authorize the Executive Officer to redistribute (add or reduce) funding among the two participating lawn mower vendors (Black and Decker, Inc. and The Greenstation) to address demand, not to exceed \$164,000.
5. Authorize the Executive Officer to enter into a Collaboration Agreement with Southern California Gas Company in an amount not to exceed \$500,000 from the Advanced Technology, Outreach and Education Fund (17) to conduct a home weatherization program in Boyle Heights and the City of San Bernardino.

Barry R. Wallerstein, D.Env.
Executive Officer

PF:SN:MM:RG

Background

On July 5, 2013, the Board approved funding allocations from U.S. EPA's Targeted Air Shed Grant Program for nine incentive programs to assist in the implementation of the Clean Communities Plan (CCP). These grant funds are to implement programs for reduction of toxic air contaminants and criteria air pollutants in the two Clean Communities Plan pilot areas of Boyle Heights and San Bernardino. SCAQMD staff has been working on implementation of four incentive programs for air filtration in schools, yard equipment exchange (residential and commercial), and boiler and process heater efficiency upgrades, that would occur in Boyle Heights and San Bernardino. The following summarizes each of these incentive programs and staff's recommendations.

Proposal

Installation of Air Filtration Systems in Schools

Over the past few years, SCAQMD staff has worked with Legacy LA, a youth-based organization in Boyle Heights that focuses on environmental issues in the Boyle Heights area. Youth representatives from Legacy LA reached out to the SCAQMD staff to install air filtration at Murchison Street Elementary School, which serves many of the residents in Ramona Gardens, the largest public housing project in the City of Los Angeles. Previously, SCAQMD had partnered with two non-profit community organizations, Mothers of East Los Angeles and the Center for Community Action and Environmental Justice, based in Boyle Heights and San Bernardino, and completed

installation of air filtration systems in 12 schools and one community center with funds from the Unocal Reformulated Gasoline Fund and the U.S EPA.

SCAQMD staff is recommending to amend a contract with IQAir North America to install air filtration systems at Murchison Street Elementary School in Boyle Heights. IQAir's current work includes the installation of air filtration systems in 40 schools near the Port of Los Angeles (TraPac air filtration program), three schools near the Ports of Los Angeles and Long Beach (SCAQMD air filtration pilot study), seven schools near the Ports of Los Angeles and Long Beach (SCAQMD Valero air filtration program), seven schools in Boyle Heights (MELA air filtration program), five schools and a community center in San Bernardino (CCAIEJ air filtration program), and seven schools in the Coachella Valley (AB 1318 grant). IQAir was selected through competitive processes as the contractor for the TraPac air filtration program and for the AB 1318 projects.

Lawn Mower Exchange

For the past 12 years, the SCAQMD has conducted lawn mower exchange events in which over 53,000 gasoline-powered lawn mowers were exchanged for cordless zero-emission electric lawn mowers. Cordless zero-emission electric lawn mowers are eligible for funding under the U.S. EPA Targeted Air Shed Grant. Previously, SCAQMD staff conducted two yard equipment exchange events in Boyle Heights and San Bernardino, representing 1,399 lawn mowers and 1,365 leaf blowers. To date, over \$750,000 has been spent on yard equipment exchanges in the two pilot study communities funded under the U.S. EPA Targeted Air Shed Grant: \$380,000 in San Bernardino and \$366,000 in Boyle Heights.

On September 5, 2014, the Board approved the release of three Program Announcements to solicit competitive bids from cordless electric lawn mowers to conduct the 2015 Lawn Mower Exchange Program. Proposals were received from Black & Decker, Inc. and The Greenstation; these vendors had lawn mowers featured in lawn mower exchange events for the past two years. These two vendors were selected for the regularly scheduled 2015 Lawn Mower Exchange Program. SCAQMD staff is recommending the purchase of additional lawn mowers from these vendors for a lawn mower exchange event to take place in Boyle Heights in the fall of 2015 and in the City of San Bernardino shortly following. Subsidies offsetting the price of the different lawn mower models will vary between \$195 - \$225 per lawn mower. This will result in a subsidized price to residents of both communities of \$50 or \$100 per lawn mower, depending on the selected model.

This action is to execute contracts from the Advanced Technology, Outreach and Education Fund (17) with Black and Decker, Inc. and The Greenstation to conduct lawn mower exchanges in Boyle Heights and the City of San Bernardino in amounts not to

exceed \$80,000 for The Greenstation and \$84,000 for Black and Decker, Inc. with authorization to redistribute funding between the two vendors based on demand.

Boiler and Process Heater Efficiency Upgrades

Newly purchased non-condensing boilers have thermal efficiencies of up to 86%, whereas condensing boilers have thermal efficiencies typically greater than 90%. The higher thermal efficiency improvement reduces operating costs through a decrease in fuel use and also yields reductions in criteria pollutants along with greenhouse gases. For the Boiler and Process Heater Upgrade, SCAQMD staff has been working with The Energy Network, a public utility funded program to assist local governments with identifying and implementing energy efficiency projects for their own facilities. The Energy Network has been working with the City of San Bernardino to improve the efficiency of its aging heating, ventilation and air conditioning system at City Hall. The City of San Bernardino has many restrictions on its expenditures and has limited funds that would only support the purchase of non-condensing boilers. Additional funding of \$57,000 would allow the City to purchase the high efficiency condensing boilers and further reduce its fuel use. As a result, criteria pollutants would be decreased, along with greenhouse gases emissions. This action is to execute a contract with the City of San Bernardino to reimburse the differential cost of installing high efficiency condensing boilers, upon receipt of an invoice and verification of installation of the equipment, in an amount not to exceed \$57,000 from the Advanced Technology, Outreach and Education Fund (17).

Weatherization Program for Homes Near Freeways and Intermodal Facilities

Weatherization of leaky homes will reduce residential exposure to criteria pollutants and diesel particulate matter (DPM). Certain homes in the CCP study areas are adjacent to freeways and heavily used intermodal facilities with trucks and locomotives. Weatherization of homes along freeways and intermodal facilities will improve indoor air quality for the residents, minimize exposure to criteria pollutants such as NO₂, CO and PM, and reduce energy usage.

Southern California Gas Company (SoCalGas) has an existing low-income assistance program for households in its service territory. This program, known as the Energy Savings Assistance Program (ESAP) offers no-cost energy-saving home improvements and furnace repair or replacement services for qualified limited-income renters and homeowners. Under the ESAP program, qualifying households receive a home assessment, and at no cost to the homeowner a contractor then implements qualifying measures. These measures include attic insulation, door weather-stripping, caulking, and minor repairs to doors and windows. Other measures that are performed under the ESAP program address lower energy usage but may not have a direct impact on indoor air quality or reduction to criteria and DPM emissions. These measures include installation of faucet aerators, low-flow showerheads, water heater blankets, evaporative

cooler covers, air conditioning covers, furnace repair/replacement, and water heater repair/replacement.

SoCalGas has an existing network of contractors that are qualified to conduct work under the ESAP program. SCAQMD's weatherization program proposes to conduct additional measures not currently performed under the ESAP program. These include attic air sealing of penetrations from the attic into the living spaces below, installation of baffles around eave vents and roof vents in the attic, sealing around penetrations into the living space through exterior walls (utility lines, dryer vents, etc) and installation of a CO monitor.

Under a Collaboration Agreement with SoCalGas, existing contractors in the two CCP pilot study areas will perform all weatherization and air sealing measures. For homes adjacent to freeways and intermodal facilities that qualify for the ESAP program, SoCalGas qualified contractors will perform SCAQMD measures, in addition to qualified measures under the ESAP program. SCAQMD will provide cost sharing, where SCAQMD will pay 25 percent, through the Air Shed Grant, and SoCalGas will pay 75 percent of all qualified weatherization measures approved by SCAQMD. Cost sharing will allow for more homes to participate in this program. For SCAQMD-approved measures that cannot be funded under ESAP because the measure(s) are not covered under the program or the home does not qualify for the ESAP program, the SCAQMD will pay 100 percent, through the Air Shed Grant.

This action is to authorize the Executive Officer to enter into a Collaboration Agreement with SoCalGas in an amount not to exceed \$500,000 to conduct a home weatherization program in Boyle Heights and San Bernardino. Partnership with SoCalGas will leverage an existing utility program by focusing implementation of this program on households located in high DPM exposure areas within the CCP pilot study areas. In addition, this partnership will allow for implementation of weatherization measures utilizing SoCalGas' qualified contractors with knowledge and experience in performing weatherization measures, overseeing work with residential customers, and conducting audit/home inspection programs to ensure these measures are performed satisfactorily.

Sole Source Justification

Installation of Air Filtration Systems in Schools

Section VIII.B.3 of the SCAQMD Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified using federal funding. This request for sole source award to IQAir qualifies under the following provision: a. – The item is only available from a single source. These technologies are not commercially available, “off-the-shelf” solutions, but instead require a total systems approach for successful implementation. As the developer of the technology, IQAir is

the only vendor qualified and able to oversee the successful installation of these systems.

Benefits to SCAQMD

The installation of air filtration systems in schools, the yard equipment exchange program, boiler and process heater efficiency upgrades and the weatherization program for homes near freeways and intermodal facilities support the implementation of the Clean Communities Plan to identify strategies to reduce children's exposure of criteria and toxic pollutants and ultrafine PM, help residents accelerate clean air efforts in these communities, and help offset the costs of pollution reduction strategies while also promoting more livable neighborhoods. Health studies have determined that fine and ultra-fine particles, including potent air toxic diesel particulate matter, present the greatest air pollution health risk to Southern California communities. Air filtration systems will be installed at no cost to host schools. Residents in Boyle Heights and San Bernardino will be eligible to receive cordless zero-emission electric lawn mowers at a significantly reduced cost compared to participants of the regular 2015 Lawn Mower Exchange Program. The Boiler Efficiency Upgrade will support accelerating clean air efforts to reduce criteria pollutants along with greenhouse gases emissions. It would also improve fuel efficiency and assist to offset some of the costs of pollution reduction strategies while at the same time incorporate newer equipment and technologies in the area. Weatherization of homes along freeways and intermodal facilities will improve indoor air quality for the residents, minimize exposure to criteria pollutants such as NO₂, CO and PM, and reduce energy usage.

Resource Impacts

The proposed action will not have an impact on SCAQMD financial resources. Funding will be provided under the U.S. EPA Targeted Air Shed Grant program recognized by the Board on March 4, 2011. Existing staff resources are sufficient to implement these programs.

[↑ Back to Agenda](#)

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 5

PROPOSAL: Issue RFP to Sell Equipment Dismantled under SCAQMD Incentive Programs to Generate Revenue for Additional Incentive Projects and Execute Contract under SOON Provision

SYNOPSIS: The SCAQMD incentives program includes dismantling of on-road trucks as well as repowering of off-road construction equipment. 1) The first proposal is to release an RFP to identify qualified dismantlers to sell the dismantled equipment with a percentage of the sale proceeds returned to SCAQMD to fund additional incentive projects. 2) The second action is to execute a contract under the SOON Provision in the amount of \$2,540,779 from the Carl Moyer Program SB 1107 Fund (32).

COMMITTEE: Technology, May 15, 2015; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the release of RFP #P2015-30 to sell equipment dismantled under SCAQMD incentive programs to generate revenue for additional incentive projects.
2. Authorize the Chairman to execute a contract with Peed Equipment Company for the repower of 9 off-road equipment under the SOON Provision in an amount not to exceed \$2,540,779 from the Carl Moyer Program SB 1107 Fund (32).

Barry R. Wallerstein, D.Env.
Executive Officer

MMM:FM:VAW

Background

Dismantled Equipment

The Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs are incentive-based programs geared at encouraging owners of diesel engines and equipment to upgrade their older equipment with new and cleaner engines to achieve surplus emission reductions. SCAQMD funds thousands of clean vehicles and equipment each year through these programs. Most of these projects require the old equipment to be dismantled.

The dismantling process includes cutting a hole in the engine block and cutting various parts so that the structural integrity of the vehicle is destroyed and it is rendered inoperable. For on-road trucks, this means cutting the frame rails completely in half between the cab and rear axle. The dismantlers participating in SCAQMD's incentive programs typically recover their costs by selling the metal parts and other parts for scrap value. Under the current program model, SCAQMD does not receive any revenue from the sale of the dismantled equipment or parts. The Sacramento Metropolitan Air Quality Management District recently initiated a program that recovers a portion of the costs through an agreement with the dismantler.

SOON Provision

On October 3, 2014, Program Announcement #PA2015-05 was issued to solicit off-road projects under the SOON Provision. By the closing date of February 4, 2015, one application was received requesting funding for the repower of nine off-road equipment.

Proposal

Dismantled Equipment

On March 20, 2015, SCAQMD submitted an approval request to CARB to implement a program recovering a portion of the proceeds from the sale of dismantled equipment parts from its incentive programs to fund additional incentive projects. The current scrap/dismantle requirements would not be affected. The replaced equipment would be dismantled and rendered inoperable according to applicable program requirements. The new process would allow the dismantled equipment to be sold for scrap, parts or other allowable uses.

This action is to release RFP #2015-30 to identify qualified dismantlers to sell equipment dismantled through the SCAQMD's incentive programs and return a portion of the sale proceeds to the SCAQMD to fund additional incentive projects. This proposal would result in selection of one or more dismantlers to enter into an agreement with the SCAQMD.

SOON Provision

This action is to execute a contract with Peed Equipment Company for the repower of 9 off-road equipment under the SOON Provision in an amount not to exceed \$2,540,779 from the Carl Moyer Program SB 1107 Fund (32).

Total NO_x emissions reductions from this project will be 23.3 tons/year. This project is not located in a disproportionately impacted area. However, since about 53% of the “Year 16” Carl Moyer awards were in disproportionately impacted areas, the overall program goal of 50% has been met.

Outreach

In accordance with SCAQMD’s Procurement Policy and Procedure, a public notice advertising the RFP and inviting bids will be published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County’s Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential bidders may have been/may be notified utilizing SCAQMD’s own electronic listing of certified minority vendors. Notice of the RFP will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on the Internet at SCAQMD’s website (<http://www.aqmd.gov>) where it can be viewed by making the selection “Grants & Bids.”.

Bid Evaluation

Proposals will be reviewed and evaluated by a diverse, technically qualified panel in accordance with criteria contained in the attached RFP.

Benefits to SCAQMD

The successful implementation of this program will result in the generation of revenue to fund additional incentive projects and reduce NO_x, PM and other pollutant emissions in a cost-effective and expeditious manner, which will help achieve the goals of the Air Quality Management Plan. The new vehicles to be funded are expected to operate for many years, providing long-term emission reduction benefits in the region.

Resource Impacts

The proposals selected from this RFP will generate a new revenue stream for the SCAQMD’s incentive programs. The revenues generated will be deposited into each programs’ fund. As allowed by CARB, SCAQMD may retain a portion of the revenue earned for administrative activities subject to the limits established by each program.

Funding for the project under the SOON Provision shall not exceed \$2,540,779 from the Carl Moyer Program SB 1107 Fund (32).

Attachment

RFP #P2015-30

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

REQUEST FOR PROPOSALS

Sell Equipment Dismantled under SCAQMD Incentive Programs to Generate Revenue for Additional Incentive Projects

#P2015-30

The South Coast Air Quality Management District (SCAQMD) requests proposals for the following purpose according to terms and conditions attached. In the preparation of this Request for Proposals (RFP) the words "Proposer," "Contractor," and "Consultant" are used interchangeably.

PURPOSE

The purpose of this Request for Proposals (RFP) is to solicit proposals from qualified dismantlers with the capability to sell equipment dismantled under SCAQMD incentive programs with a percentage of the sale proceeds rendered to SCAQMD to fund additional incentive projects.

Dismantling companies submitting a proposal should demonstrate knowledge and experience with the Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs relating to the dismantling and scrapping requirements, including, but not limited to, equipment destruction methodologies and digital documentation of equipment destruction. Additionally, dismantling companies should demonstrate the ability to auction and/or sell dismantled equipment as well as the ability to provide adequate reporting of auction sales and proceeds per SCAQMD specifications. At a minimum, the dismantler must be licensed by the California Department of Motor Vehicles (DMV) within the SCAQMD jurisdiction and possess a California Environmental Protection Agency (Cal-EPA) Hazardous Materials Generator Permit. It is preferred that the dismantler be listed by SCAQMD as an approved dismantler to participate in one or more of the SCAQMD incentive programs.

The intent of this RFP is to select one or more qualified dismantlers to generate revenue through the sale of equipment dismantled under SCAQMD incentive programs with a percentage of the proceeds rendered to SCAQMD to fund additional incentive projects.

INDEX - The following are contained in this RFP:

Section I	Background/Information
Section II	Contact Person
Section III	Schedule of Events
Section IV	Participation in the Procurement Process
Section V	Statement of Work/Schedule of Deliverables
Section VI	Required Qualifications
Section VII	Proposal Submittal Requirements
Section VIII	Proposal Submission
Section IX	Proposal Evaluation/Contractor Selection Criteria
Section X	Funding
Section XI	Draft Contract

Attachment A - Certifications and Representations

SECTION I: BACKGROUND/INFORMATION

The SCAQMD's incentive programs, such as Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs, are innovative, incentive-based programs geared at encouraging owners of diesel engines and equipment to upgrade their older equipment with new, cleaner engines to achieve early or surplus emission reductions. SCAQMD funds thousands of clean vehicles and/or equipment each year through these programs, which result in significant reductions of oxides of nitrogen (NOx), reactive organic gases (ROGs) and diesel particulate matter (PM10) emissions. Most of these projects require the old equipment to be dismantled.

Each incentive program is governed by a set of guidelines established by the California Air Resources Board (CARB). These guidelines address administrative and reporting requirements as well as specify how the older equipment and engines must be dismantled to assure the emission reductions are achieved. The dismantling process includes cutting a hole in the engine block and cutting various parts of the vehicle or equipment so that the structural integrity is destroyed and the vehicle or equipment is rendered inoperable. For on-road trucks, this means cutting the frame rails completely in half between the cab and rear axle. The dismantlers participating in SCAQMD's incentive programs typically recover their costs by selling the metal parts for scrap value. They also sell other parts of the vehicle or equipment such as seats, tires, mirrors, hoods, bumpers, frames, axles, water-pumps and other parts deemed reusable on other similar equipment. Under the current program model, SCAQMD does not receive any revenue from the sale of the dismantled equipment or parts thereof.

SCAQMD plans to partner with one or more dismantling companies within the South Coast Air Basin to sell equipment dismantled through SCAQMD incentive programs, including Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs, with a portion of the sale proceeds rendered to SCAQMD to fund additional incentive projects. The current scrap/dismantle requirements would not be affected. The old equipment would be dismantled and rendered inoperable according to applicable program requirements. The new process would allow the dismantled equipment to be sold for scrap, parts or other allowable uses with a portion of the sale proceeds rendered to SCAQMD to fund additional incentive projects.

SECTION II: CONTACT PERSON:

Questions regarding the content or intent of this RFP or on procedural matters should be addressed to:

Walter Shen
Staff Specialist
Technology Advancement Office
SCAQMD
21865 Copley Drive
Diamond Bar, CA 91765-4178
(909) 396-2487

SECTION III: SCHEDULE OF EVENTS

June 5, 2015	RFP Released
June 25, 2015	Bidder's Conference*
July 30, 2015	Proposals Due – No Later Than 1:00 pm
July 30-August 28, 2015	Proposal Evaluations
October 2, 2015	Governing Board Approval
October 30, 2015	Anticipated Contract Execution

*Participation in the Bidder's Conference is optional. Such participation would assist in notifying potential bidders of any updates or amendments. The Bidder's Conference will be held in Room CC6 at the SCAQMD Headquarters in Diamond Bar, California at 10:00 am on Thursday, June 25, 2015. Please contact Walter Shen at (909) 396-2487 by close of business on Friday, June 19, 2015, if you plan to attend.

SECTION IV: PARTICIPATION IN THE PROCUREMENT PROCESS

A. It is the policy of the South Coast Air Quality Management District to ensure that all businesses including minority business enterprises, women business enterprises, disabled veteran business enterprises and small businesses have a fair and equitable opportunity to compete for and participate in SCAQMD contracts.

B. Definitions:

The definition of minority, women or disadvantaged business enterprises set forth below is included for purposes of determining compliance with the affirmative steps requirement described in Paragraph G below on procurements funded in whole or in part with federal grant funds which involve the use of subcontractors. The definition provided for disabled veteran business enterprise, local business, small business enterprise, low-emission vehicle business and off-peak hours delivery business are provided for purposes of determining eligibility for point or cost considerations in the evaluation process.

1. "Women business enterprise" (WBE) as used in this policy means a business enterprise that meets all of the following criteria:
 - a. a business that is at least 51 percent owned by one or more women, or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more women.
 - b. a business whose management and daily business operations are controlled by one or more women.
 - c. a business which is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign-based business.
2. "Disabled veteran" as used in this policy is a United States military, naval, or air service veteran with at least 10 percent service-connected disability who is a resident of California.

3. "Disabled veteran business enterprise" (DVBE) as used in this policy means a business enterprise that meets all of the following criteria:
 - a. is a sole proprietorship or partnership of which at least 51 percent is owned by one or more disabled veterans or, in the case of a publicly owned business, at least 51 percent of its stock is owned by one or more disabled veterans; a subsidiary which is wholly owned by a parent corporation but only if at least 51 percent of the voting stock of the parent corporation is owned by one or more disabled veterans; or a joint venture in which at least 51 percent of the joint venture's management and control and earnings are held by one or more disabled veterans.
 - b. the management and control of the daily business operations are by one or more disabled veterans. The disabled veterans who exercise management and control are not required to be the same disabled veterans as the owners of the business.
 - c. is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, firm, or other foreign-based business.
4. "Local business" as used in this policy means a company that has an ongoing business within geographical boundaries of the SCAQMD at the time of bid or proposal submittal and performs 90% of the work related to the contract within the geographical boundaries of the SCAQMD and satisfies the requirements of subparagraph H below.
5. "Small business" as used in this policy means a business that meets the following criteria:
 - a. 1) an independently owned and operated business; 2) not dominant in its field of operation; 3) together with affiliates is either:
 - A service, construction, or non-manufacturer with 100 or fewer employees, and average annual gross receipts of ten million dollars (\$10,000,000) or less over the previous three years, or
 - A manufacturer with 100 or fewer employees.
 - b. Manufacturer means a business that is both of the following:
 - 1) Primarily engaged in the chemical or mechanical transformation of raw materials or processed substances into new products.
 - 2) Classified between Codes 311000 and 339000, inclusive, of the North American Industrial Classification System (NAICS) Manual published by the United States Office of Management and Budget, 2007 edition.
6. "Joint ventures" as defined in this policy pertaining to certification means that one party to the joint venture is a DVBE or small business and owns at least 51 percent of the joint venture.

7. "Low-Emission Vehicle Business" as used in this policy means a company or contractor that uses low-emission vehicles in conducting deliveries to the SCAQMD. Low-emission vehicles include vehicles powered by electric, compressed natural gas (CNG), liquefied natural gas (LNG), liquefied petroleum gas (LPG), ethanol, methanol, hydrogen and diesel retrofitted with particulate matter (PM) traps.
 8. "Off-Peak Hours Delivery Business" as used in this policy means a company or contractor that commits to conducting deliveries to the SCAQMD during off-peak traffic hours defined as between 10:00 a.m. and 3:00 p.m.
 9. "Benefits Incentive Business" as used in this policy means a company or contractor that provides janitorial, security guard or landscaping services to the SCAQMD and commits to providing employee health benefits (as defined below in Section VIII.D.2.d) for full time workers with affordable deductible and co-payment terms.
 10. "Minority Business Enterprise" as used in this policy means a business that is at least 51 percent owned by one or more minority person(s), or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more or minority persons.
 - a. a business whose management and daily business operations are controlled by one or more minority persons.
 - b. a business which is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign-based business.
 - c. "Minority person" for purposes of this policy, means a Black American, Hispanic American, Native-American (including American Indian, Eskimo, Aleut, and Native Hawaiian), Asian-Indian (including a person whose origins are from India, Pakistan, and Bangladesh), Asian-Pacific-American (including a person whose origins are from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the United States Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, and Taiwan).
 11. Disadvantaged Business Enterprise" as used in this policy means a business that is an entity owned and/or controlled by a socially and economically disadvantaged individual(s) as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note) (10% statute), and Public Law 102-389 (42 U.S.C. 4370d)(8% statute), respectively;
 - a Small Business Enterprise (SBE);
 - a Small Business in a Rural Area (SBRA);
 - a Labor Surplus Area Firm (LSAF); or
 - a Historically Underutilized Business (HUB) Zone Small Business Concern, or a concern under a successor program.
- C. Under Request for Quotations (RFQ), DVBEs, DVBE business joint ventures, small businesses, and small business joint ventures shall be granted a preference in an amount equal to 5% of the lowest cost responsive bid. Low-Emission Vehicle Businesses shall be

granted a preference in an amount equal to 5 percent of the lowest cost responsive bid. Off-Peak Hours Delivery Businesses shall be granted a preference in an amount equal to 2 percent of the lowest cost responsive bid. Local businesses (if the procurement is not funded in whole or in part by federal grant funds) shall be granted a preference in an amount equal to 2% of the lowest cost responsive bid.

- D. Under Request for Proposals, DVBEs, DVBE joint ventures, small businesses, and small business joint ventures shall be awarded ten (10) points in the evaluation process. A non-DVBE or large business shall receive seven (7) points for subcontracting at least twenty-five (25%) of the total contract value to a DVBE and/or small business. Low-Emission Vehicle Businesses shall be awarded five (5) points in the evaluation process. On procurements which are not funded in whole or in part by federal grant funds local businesses shall receive five (5) points. Off-Peak Hours Delivery Businesses shall be awarded two (2) points in the evaluation process.
- E. SCAQMD will ensure that discrimination in the award and performance of contracts does not occur on the basis of race, color, sex, national origin, marital status, sexual preference, creed, ancestry, medical condition, or retaliation for having filed a discrimination complaint in the performance of SCAQMD contractual obligations.
- F. SCAQMD requires Contractor to be in compliance with all state and federal laws and regulations with respect to its employees throughout the term of any awarded contract, including state minimum wage laws and OSHA requirements.
- G. When contracts are funded in whole or in part by federal funds, and if subcontracts are to be let, the Contractor must comply with the following, evidencing a good faith effort to solicit disadvantaged businesses. Contractor shall submit a certification signed by an authorized official affirming its status as a MBE or WBE, as applicable, at the time of contract execution. The SCAQMD reserves the right to request documentation demonstrating compliance with the following good faith efforts prior to contract execution.
 - 1. Ensure Disadvantaged Business Enterprises (DBEs) are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 - 2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
 - 3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and Local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
 - 4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.

5. Using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.
 6. If the prime contractor awards subcontracts, require the prime contractor to take the above steps.
- H. To the extent that any conflict exists between this policy and any requirements imposed by federal and state law relating to participation in a contract by a certified MBE/WBE/DVBE as a condition of receipt of federal or state funds, the federal or state requirements shall prevail.
- I. When contracts are not funded in whole or in part by federal grant funds, a local business preference will be awarded. For such contracts that involve the purchase of commercial off-the-shelf products, local business preference will be given to suppliers or distributors of commercial off-the-shelf products who maintain an ongoing business within the geographical boundaries of the SCAQMD. However, if the subject matter of the RFP or RFQ calls for the fabrication or manufacture of custom products, only companies performing 90% of the manufacturing or fabrication effort within the geographical boundaries of the SCAQMD shall be entitled to the local business preference.
- J. In compliance with federal fair share requirements set forth in 40 CFR Part 33, the SCAQMD shall establish a fair share goal annually for expenditures with federal funds covered by its procurement policy.

SECTION V: STATEMENT OF WORK/SCHEDULE OF DELIVERABLES

Statement of Work

Under the direction of SCAQMD's Science and Technology Advancement Office, the contractor(s) will provide dismantling and destruction services in accordance with the applicable guideline requirements of the Carl Moyer, Proposition 1B – Goods Movement and/or Lower-Emission School Bus Programs.

1. Upon the award of the contract, the contractor agrees to assist SCAQMD in dismantling and/or destroying diesel engines and related-equipment per guidelines set-forth by Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs. Guidelines will include:
 - a. Cutting a minimum three-inch hole in the engine block, oil pan flange;
 - b. Cutting other parts of the vehicle so that the structural integrity is destroyed and rendered inoperable.
2. Dismantling and/or destruction will be conducted within 60 days of receiving said engines, vehicles and/or equipment.
3. The contractor will notify SCAQMD within 10 days of destroying the engine, vehicle or equipment and schedule an on-site inspection with SCAQMD.

4. The contractor will submit to DMV a Report of Vehicle to be Dismantled Form for vehicles subject to Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs within 10 days of receiving the vehicle.
5. The contractor will register the salvage vehicle title with DMV as non-repairable/non-revivable within 10 days of receiving the vehicle.
6. The contractor will transfer funds to SCAQMD within 30 days after the auction and/or sale of dismantled and/or destroyed equipment.
7. All records relating to the auction and sale of dismantled and/or destroyed equipment subject to Carl Moyer, Proposition 1B – Goods Movement and Lower-Emission School Bus Programs will be retained by the contractor for 5 years after the termination of the contract.

Schedule of Deliverables

Upon the award of the contract to the most qualified contractor, the following schedule of deliverables will be met:

1. Within 30 days after the date of contract execution, the contractor will provide contact information for one active employee who received training with Carl Moyer, Proposition 1B – Goods Movement and/or Lower-Emission School Bus Programs. SCAQMD reserves the right to request an alternate employee should the one active employee fail to demonstrate competence with the Carl Moyer, Proposition 1B – Goods Movement and/or Lower-Emission School Bus Programs.
2. At the 3rd and 9th month after the date of contract execution, the contractor will provide a comprehensive report of vehicles and/or engines subjected to SCAQMD incentive-based projects, dismantled and/or destroyed with the corresponding vehicle identification number (VIN) or engine serial number.
 - a. The report will be signed by a responsible official prior to submittal to SCAQMD.
3. At the 6th and 12th month after the date of contract execution, the contractor will provide a comprehensive report of vehicles and/or engines subjected to SCAQMD incentive-based projects, dismantled and/or destroyed with the corresponding VIN or serial number. In addition, the contractor will provide a payment report to include all monies obtained from the sale of auctioned equipment subject to SCAQMD incentive-based projects, with specified line items indicating monies paid to SCAQMD.
 - a. The report will be signed by a responsible official prior to submittal to SCAQMD.

SECTION VI: REQUIRED QUALIFICATIONS

- A. Contractor(s) proposing to bid on this proposal must demonstrate their knowledge and/or experience in the dismantling and destruction requirements of incentive-based programs, such as Carl Moyer, Proposition 1B – Goods Movement and/or Lower-Emission School Bus Programs. This should include a description of the types of equipment dismantled, including but not limited to trucks, off-road vehicles, harbor craft, marine vessels, locomotives and the specific incentive program under which the equipment was dismantled.
- B. Contractor must demonstrate their ability to sell dismantled equipment by providing sales records from the previous 12 months.
- C. Contractor must describe the proposed accounting and management system to implement this program
- D. Contractor must describe the proposed recordkeeping and reporting activities to implement this program
- E. Contractor must describe their capability to sell or auction the dismantled equipment, including advertising, expected sales demand, maximum number of equipment that can be offered for sale at a single event, proposed frequency of sale/auction events, etc.)
- F. Contractor must describe a proposed method for making payments to SCAQMD
- G. Contractor(s) must provide the following certifications:
 1. California DMV Dismantler License (must include an address in the South Coast Air Basin)
 2. Cal-EPA Hazardous Materials Generator Permit
 3. List of representative clients
 4. Summary of proposer's general capabilities in meeting the required qualifications and fulfilling the statement of work.

SECTION VII: PROPOSAL SUBMITTAL REQUIREMENTS

Submitted proposals must follow the format outlined below and all requested information must be supplied. Failure to submit proposals in the required format will result in elimination from proposal evaluation.

Each proposal must be submitted in three separate volumes:

- Volume I – Technical Proposal
- Volume II – Cost Proposal
- Volume III – Certifications and Representations included in Attachment A to this RFP, should be executed by an authorized official of the Contractor.

A separate cover letter including the name, address, and telephone number of the contractor, and signed by the person or persons authorized to represent the firm should accompany the proposal submission. Firm contact information as follows should also be included in the cover letter:

1. Address and telephone number of office in, or nearest to, Diamond Bar, California.
2. Name and title of firm's representative designated as contact.

A separate Table of Contents should be provided for Volumes I and II.

VOLUME I - TECHNICAL PROPOSAL

DO NOT INCLUDE ANY COST INFORMATION IN THE TECHNICAL VOLUME

Summary (Section A) - State overall approach to meeting the objectives and satisfying the scope of work to be performed, the sequence of activities, and a description of methodology or techniques to be used.

Program Schedule (Section B) - Provide projected milestones or benchmarks for submitting reports within the total time allowed.

Project Organization (Section C) - Describe the proposed management structure, program monitoring procedures, and organization of the proposed team.

Qualifications (Section D) - Describe the technical capabilities of the firm. Provide references of other similar projects performed during the last five years demonstrating ability to successfully complete the project. Include contact name, title, and telephone number for any references listed. Provide a statement of your firm's background and experience in performing similar projects for other governmental organizations.

Assigned Personnel (Section E) - Provide the following information on the staff to be assigned to this project:

1. List all key personnel assigned to the project by level and name. Provide a resume or similar statement of the qualifications of the lead person and all persons assigned to the project. Substitution of project manager or lead personnel will not be permitted without prior written approval of SCAQMD.
2. Provide a spreadsheet of the labor hours proposed for each labor category at the task level.
3. Provide a statement indicating whether or not 90% of the work will be performed within the geographical boundaries of the SCAQMD.
4. Provide a statement of the education and training program provided by, or required of, the staff identified for participation in the project, particularly with reference to management consulting, governmental practices and procedures, and technical matters.
5. Provide a summary of your firm's general qualifications to meet required qualifications and fulfill statement of work, including additional firm personnel and resources beyond those who may be assigned to the project.

Subcontractors (Section F) - This project may require expertise in multiple technical areas. List any subcontractors that may be used and the work to be performed by them.

Conflict of Interest (Section G) - Address possible conflicts of interest with other clients affected by actions performed by the firm on behalf of SCAQMD. Although the Proposer will not be automatically disqualified by reason of work performed for such firms, SCAQMD reserves the right to consider the nature and extent of such work in evaluating the proposal.

Additional Data (Section H) - Provide other essential data that may assist in the evaluation of this proposal.

VOLUME II - COST PROPOSAL

Name and Address - The Cost Proposal must list the name and complete address of the Proposer in the upper left-hand corner.

Cost Proposal – SCAQMD anticipates awarding a fixed price contract. Cost information must be provided as listed below:

1. Detail must be provided by the following categories:
 - A. Labor - List the total number of hours and the hourly billing rate for each level of professional staff. A breakdown of the proposed billing rates must identify the direct labor rate, overhead rate and amount, fringe benefit rate and amount, General and Administrative rate and amount, and proposed profit or fee. Provide a basis of estimate justifying the proposed labor hours and proposed labor mix.
 - B. Subcontractor Costs - List subcontractor costs and identify subcontractors by name. Itemize subcontractor charges per hour or per day.
 - C. Travel Costs - Indicate amount of travel cost and basis of estimate to include trip destination, purpose of trip, length of trip, airline fare or mileage expense, per diem costs, lodging and car rental.
 - D. Other Direct Costs -This category may include such items as postage and mailing expense, printing and reproduction costs, etc. Provide a basis of estimate for these costs.

VOLUME III - CERTIFICATIONS AND REPRESENTATIONS (see Attachment A to this RFP)

SECTION VIII: PROPOSAL SUBMISSION

All proposals must be submitted according to specifications set forth in the section above. Failure to adhere to these specifications may be cause for rejection of proposal.

Signature - All proposals should be signed by an authorized representative of the Proposer.

Due Date - The Proposer shall submit four (4) complete copies of the proposal in a sealed envelope, plainly marked in the upper left-hand corner with the name and address of the Proposer and the words "Request for Proposals #P2015-30." **All proposals are due no later than 1:00 p.m., July 30, 2015, and should be directed to:**

Procurement Unit
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178
(909) 396-3520

Late bids/proposals will not be accepted under any circumstances.

Grounds for Rejection - A proposal may be immediately rejected if:

- It is not prepared in the format described, or
- It is signed by an individual not authorized to represent the firm.

Modification or Withdrawal - Once submitted, proposals cannot be altered without the prior written consent of SCAQMD. All proposals shall constitute firm offers and may not be withdrawn for a period of ninety (90) days following the last day to accept proposals.

SECTION IX: PROPOSAL EVALUATION/CONTRACTOR SELECTION CRITERIA

- A. Proposals will be evaluated by a panel of three to five SCAQMD staff members familiar with the subject matter of the project. The panel shall be appointed by the Executive Officer or his designee. In addition, the evaluation panel may include such outside public sector or academic community expertise as deemed desirable by the Executive Officer. The panel will make a recommendation to the Executive Officer and/or the Governing Board of the SCAQMD for final selection of a contractor and negotiation of a contract.
- B. Each member of the evaluation panel shall be accorded equal weight in his or her rating of proposals. The evaluation panel members shall evaluate the proposals according to the specified criteria and numerical weightings set forth below.

(a) <u>Standardized Services</u>	<u>Points</u>
Understanding of Requirement	20
Contractor Qualifications	20
Past Experience	10
Cost	<u>50</u>
TOTAL:	100

(b) <u>Additional Points</u>	
Small Business or Small Business Joint Venture	10
DVBE or DVBE Joint Venture	10
Use of DVBE or Small Business Subcontractors	7
Low-Emission Vehicle Business	5
Local Business (Non-Federally Funded Projects Only)	5
Off-Peak Hours Delivery Business	2

The cumulative points awarded for small business, DVBE, use of small business or DVBE subcontractors, low-emission vehicle business, local business, and off-peak hours delivery business shall not exceed 15 points.

Self-Certification for Additional Points

The award of these additional points shall be contingent upon Proposer completing the Self-Certification section of Attachment A – Certifications and Representations and/or inclusion of a statement in the proposal self-certifying that Proposer qualifies for additional points as detailed above.

1. To receive additional points in the evaluation process for the categories of Small Business or Small Business Joint Venture, DVBE or DVBE Joint Venture or Local Business (for non-federally funded projects), the proposer must submit a self-certification or certification from the State of California Office of Small Business Certification and Resources at the time of proposal submission certifying that the proposer meets the requirements set forth in Section III. To receive points for the use of DVBE and/or Small Business subcontractors, at least 25 percent of the total contract value must be subcontracted to DVBEs and/or Small Businesses. To receive points as a Low-Emission Vehicle Business, the proposer must demonstrate to the Executive Officer, or designee, that supplies and materials delivered to the SCAQMD are delivered in vehicles that operate on either clean-fuels or if powered by diesel fuel, that the vehicles have particulate traps installed. To receive points as an Off-Peak Hours Delivery Business, the proposer must submit, at proposal submission, certification of its commitment to delivering supplies and materials to SCAQMD between the hours of 10:00 a.m. and 3:00 p.m. The cumulative points awarded for small business, DVBE, use of Small Business or DVBE Subcontractors, Local Business, Low-Emission Vehicle Business and Off-Peak Hour Delivery Business shall not exceed 15 points.
 2. The Procurement Section will be responsible for monitoring compliance of suppliers awarded purchase orders based upon use of low-emission vehicles or off-peak traffic hour delivery commitments through the use of vendor logs which will identify the contractor awarded the incentive. The purchase order shall incorporate terms which obligate the supplier to deliver materials in low-emission vehicles or deliver during off-peak traffic hours. The Receiving department will monitor those qualified supplier deliveries to ensure compliance to the purchase order requirements. Suppliers in non-compliance will be subject to a two percent of total purchase order value penalty. The Procurement Manager will adjudicate any disputes regarding either low-emission vehicle or off-peak hour deliveries.
 3. The lowest cost proposal will be awarded the maximum cost points available and all other cost proposals will receive points on a prorated basis. For example if the lowest cost proposal is \$1,000 and the maximum points available are 30 points, this proposal would receive the full 30 points. If the next lowest cost proposal is \$1,100 it would receive 27 points reflecting the fact that it is 10% higher than the lowest cost (90% of 30 points = 27 points).
- C. During the selection process the evaluation panel may wish to interview some proposers for clarification purposes only. No new material will be permitted at this time. Additional information provided during the bid review process is limited to clarification by the Proposer of information presented in his/her proposal, upon request by SCAQMD.
- D. The Executive Officer or Governing Board may award the contract to a Proposer other than the Proposer receiving the highest rating in the event the Governing Board determines that another Proposer from among those technically qualified would

provide the best value to SCAQMD considering cost and technical factors. The determination shall be based solely on the Evaluation Criteria contained in the Request for Proposal (RFP), on evidence provided in the proposal and on any other evidence provided during the bid review process.

- E. Selection will be made based on the above-described criteria and rating factors. The selection will be made by and is subject to Executive Officer or Governing Board approval. Proposers may be notified of the results by letter.
- F. The Governing Board has approved a Bid Protest Procedure which provides a process for a bidder or prospective bidder to submit a written protest to the SCAQMD Procurement Manager in recognition of two types of protests: Protest Regarding Solicitation and Protest Regarding Award of a Contract. Copies of the Bid Protest Policy can be secured through a request to the SCAQMD Procurement Department.
- G. The Executive Officer or Governing Board may award contracts to more than one proposer if in (his or their) sole judgment the purposes of the (contract or award) would best be served by selecting multiple proposers.
- H. If additional funds become available, the Executive Officer or Governing Board may increase the amount awarded. The Executive Officer or Governing Board may also select additional proposers for a grant or contract if additional funds become available.
- I. Disposition of Proposals – Pursuant to the District's Procurement Policy and Procedure, SCAQMD reserves the right to reject any or all proposals. All proposals become the property of SCAQMD, and are subject to the California Public Records Act. One copy of the proposal shall be retained for SCAQMD files. Additional copies and materials will be returned only if requested and at the proposer's expense.
- J. **If proposal submittal is for a Public Works project as defined by State of California Labor Code Section 1720, Proposer is required to include Contractor Registration No. in Attachment A. Proposal submittal will be deemed as non-responsive and bidder may be disqualified if Contractor Registration No. is not included in Attachment A. Proposer is alerted to changes to California Prevailing Wage compliance requirements as defined in Senate Bill 854 (Stat. 2014, Chapter 28).**

SECTION XI: DRAFT CONTRACT (Provided as a sample only)



**South Coast
Air Quality Management District**

This Contract consists of *** pages.

1. PARTIES - The parties to this Contract are the South Coast Air Quality Management District (referred to here as "SCAQMD") whose address is 21865 Copley Drive, Diamond Bar, California 91765-4178, and *** (referred to here as "CONTRACTOR") whose address is ***.
2. RECITALS
 - A. SCAQMD is the local agency with primary responsibility for regulating stationary source air pollution within the geographical boundaries of the South Coast Air Quality Management District in the State of California. SCAQMD desires to contract with CONTRACTOR for services described in Attachment 1 - Statement of Work, attached here and made a part here by this reference. CONTRACTOR warrants that it is well-qualified and has the experience to provide such services on the terms set forth here.
 - B. CONTRACTOR is authorized to do business in the State of California and attests that it is in good tax standing with the California Franchise Tax Board.
 - C. All parties to this Contract have had the opportunity to have this Contract reviewed by their attorney.
3. PERFORMANCE REQUIREMENTS
 - A. CONTRACTOR agrees to obtain and maintain the required licenses, permits, and all other appropriate legal authorizations from all applicable federal, state and local jurisdictions and pay all applicable fees. CONTRACTOR further agrees to immediately notify SCAQMD in writing of any change in its licensing status which has a material impact on the CONTRACTOR's performance under this Contract.
 - B. CONTRACTOR shall submit reports to SCAQMD as outlined in Attachment 1 - Statement of Work. All reports shall be submitted in an environmentally friendly format: recycled paper; stapled, not bound; black and white, double-sided print; and no three-ring, spiral, or plastic binders or cardstock covers. SCAQMD reserves the right to review, comment, and request changes to any report produced as a result of this Contract.
 - C. CONTRACTOR shall perform all tasks set forth in Attachment 1 - Statement of Work, and shall not engage, during the term of this Contract, in any performance of work that is in direct or indirect conflict with duties and responsibilities set forth in Attachment 1 - Statement of Work.
 - D. CONTRACTOR shall be responsible for exercising the degree of skill and care customarily required by accepted professional practices and procedures subject to SCAQMD's final approval which SCAQMD will not unreasonably withhold. Any costs incurred due to the failure to meet the foregoing standards, or otherwise defective services which require re-performance, as directed by SCAQMD, shall be the responsibility of CONTRACTOR. CONTRACTOR's failure to achieve the performance goals and objectives stated in Attachment 1- Statement of Work, is not a basis for requesting re-performance unless work conducted by CONTRACTOR is deemed by SCAQMD to have failed the foregoing standards of performance.
 - E. CONTRACTOR shall post a performance bond in the amount of *** Dollars (\$***) from a surety authorized to issue such bonds within the State. [OPTIONAL]
 - F. SCAQMD has the right to review the terms and conditions of the performance bond and to request modifications thereto which will ensure that SCAQMD will be compensated in the event CONTRACTOR fails to perform and also provides SCAQMD with the opportunity to review the qualifications of the entity

designated by the issuer of the performance bond to perform in CONTRACTOR's absence and, if necessary, the right to reject such entity. [OPTIONAL]

G. CONTRACTOR shall require its subcontractors to abide by the requirements set forth in this Contract.

4. TERM - The term of this Contract is from the date of execution by both parties (or insert date) to ***, unless further extended by amendment of this Contract in writing. No work shall commence until this Contract is fully executed by all parties. [Remove this last sentence if Pre-Contract Clause is used]

5. TERMINATION

A. In the event any party fails to comply with any term or condition of this Contract, or fails to provide services in the manner agreed upon by the parties, including, but not limited to, the requirements of Attachment 1 – Statement of Work, this failure shall constitute a breach of this Contract. The non-breaching party shall notify the breaching party that it must cure this breach or provide written notification of its intention to terminate this contract. Notification shall be provided in the manner set forth in Clause 12. The non-breaching party reserves all rights under law and equity to enforce this contract and recover damages.

B. SCAQMD reserves the right to terminate this Contract, in whole or in part, without cause, upon thirty (30) days' written notice. Once such notice has been given, CONTRACTOR shall, except as and to the extent or directed otherwise by SCAQMD, discontinue any Work being performed under this Contract and cancel any of CONTRACTOR's orders for materials, facilities, and supplies in connection with such Work, and shall use its best efforts to procure termination of existing subcontracts upon terms satisfactory to SCAQMD. Thereafter, CONTRACTOR shall perform only such services as may be necessary to preserve and protect any Work already in progress and to dispose of any property as requested by SCAQMD.

C. CONTRACTOR shall be paid in accordance with this Contract for all Work performed before the effective date of termination under Clause 5.B. Before expiration of the thirty (30) days' written notice, CONTRACTOR shall promptly deliver to SCAQMD all copies of documents and other information and data prepared or developed by CONTRACTOR under this Contract with the exception of a record copy of such materials, which may be retained by CONTRACTOR.

6. STOP WORK – SCAQMD may, at any time, by written notice to CONTRACTOR, require CONTRACTOR to stop all or any part of the work tasks in this Contract. A stop work order may be issued for reasons including, but not limited to, the project exceeding the budget, out of scope work, delay in project schedule, or misrepresentations. Upon receipt of the stop work order, CONTRACTOR shall immediately take all necessary steps to comply with the order. CONTRACTOR shall resume the work only upon receipt of written instructions from SCAQMD cancelling the stop work order. CONTRACTOR agrees and understands that CONTRACTOR will not be paid for performing work while the stop work order is in effect, unless SCAQMD agrees to do so in its written cancellation of the stop work order.

7. INSURANCE

A. CONTRACTOR shall furnish evidence to SCAQMD of workers' compensation insurance for each of its employees, in accordance with either California or other states' applicable statutory requirements prior to commencement of any work on this Contract.

B. CONTRACTOR shall furnish evidence to SCAQMD of general liability insurance with a limit of at least \$1,000,000 per occurrence, and \$2,000,000 in a general aggregate prior to commencement of any work on this Contract. SCAQMD shall be named as an additional insured on any such liability policy, and thirty (30) days written notice prior to cancellation of any such insurance shall be given by CONTRACTOR to SCAQMD.

- C. CONTRACTOR shall furnish evidence to SCAQMD of automobile liability insurance with limits of at least \$100,000 per person and \$300,000 per accident for bodily injuries, and \$50,000 in property damage, or \$1,000,000 combined single limit for bodily injury or property damage, prior to commencement of any work on this Contract. SCAQMD shall be named as an additional insured on any such liability policy, and thirty (30) days written notice prior to cancellation of any such insurance shall be given by CONTRACTOR to SCAQMD.
 - D. CONTRACTOR shall furnish evidence to SCAQMD of Professional Liability Insurance with an aggregate limit of not less than \$5,000,000. [OPTIONAL]
 - E. If CONTRACTOR fails to maintain the required insurance coverage set forth above, SCAQMD reserves the right either to purchase such additional insurance and to deduct the cost thereof from any payments owed to CONTRACTOR or terminate this Contract for breach.
 - F. All insurance certificates should be mailed to: SCAQMD Risk Management, 21865 Copley Drive, Diamond Bar, CA 91765-4178. **The SCAQMD Contract Number must be included on the face of the certificate.**
 - G. CONTRACTOR must provide updates on the insurance coverage throughout the term of the Contract to ensure that there is no break in coverage during the period of contract performance. Failure to provide evidence of current coverage shall be grounds for termination for breach of Contract.
8. INDEMNIFICATION - CONTRACTOR agrees to hold harmless, defend and indemnify SCAQMD, its officers, employees, agents, representatives, and successors-in-interest against any and all loss, damage, costs, lawsuits, claims, demands, causes of action judgments, attorney's fees, or any other expenses arising from or related to any third party claim against SCAQMD, its officers, employees, agents, representatives, or successors in interest that arise or result in whole or in part, from any actual or alleged act or omission of CONTRACTOR, its employees, subcontractors, agents or representatives in the performance of this Contract. This Indemnification Clause shall survive the expiration or termination (for any reason) of the Contract and shall remain in full force and effect.
9. RECORDS RETENTION, ON-SITE INSPECTIONS AND AUDIT
- A. CONTRACTOR agrees to the following Records Retention Period: maintain records related to this Contract during the Contract term and continue to retain these records for a period of three years beyond the Contract term.
 - B. SCAQMD, or its designee(s), shall have the right to conduct on-site inspections of the project and to audit records related to this Contract during the Records Retention Period. CONTRACTOR agrees to include a similar right for SCAQMD to conduct on-site inspections and audits in any related subcontract.
 - C. If an amount is found to be inappropriately expended, SCAQMD may withhold payment, or seek reimbursement, from CONTRACTOR in the amount equal to the amount which was inappropriately expended. Such withholding or reimbursement shall not be construed as SCAQMD's sole remedy and shall not relieve CONTRACTOR of its obligation to perform under the terms of this Contract.
10. CO-FUNDING [USE IF REQUIRED]
- A. CONTRACTOR shall obtain co-funding as follows: ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); and ***, ***, Dollars (\$***).
 - B. If CONTRACTOR fails to obtain co-funding in the amount(s) referenced above, then SCAQMD reserves the right to renegotiate or terminate this Contract.
 - C. CONTRACTOR shall provide co-funding in the amount of ***, Dollars (\$***) for this project. If CONTRACTOR fails to provide this co-funding, then SCAQMD reserves the right to renegotiate or terminate this Contract.

11. PAYMENT

[FIXED PRICE]

- A. SCAQMD shall pay CONTRACTOR a fixed price of *** Dollars (\$***) for work performed under this Contract in accordance with Attachment 2 - Payment Schedule, attached here and included here by reference. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables as shown in Attachment 1 - Statement of Work, and the amount of charge claimed. Each invoice must be prepared in duplicate, on company letterhead, and list SCAQMD's Contract number, period covered by invoice, and CONTRACTOR's social security number or Employer Identification Number and submitted to: South Coast Air Quality Management District, Attn: ***.
- B. An amount equal to ten percent (10%) shall be withheld from all charges paid until satisfactory completion and final acceptance of work by SCAQMD. *[OPTIONAL]*
- C. SCAQMD reserves the right to disallow charges when the invoiced services are not performed satisfactorily in SCAQMD's sole judgment.

[T & M].

- A. SCAQMD shall pay CONTRACTOR a total not to exceed amount of *** Dollars (\$***), including any authorized travel-related expenses, for time and materials at rates in accordance with Attachment 2 – Cost Schedule, attached here and included here by this reference. Payment of charges shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an itemized invoice prepared and furnished by CONTRACTOR referencing line item expenditures as listed in Attachment 2 and the amount of charge claimed. Each invoice must be prepared in duplicate, on company letterhead, and list SCAQMD's Contract number, period covered by invoice, and CONTRACTOR's social security number or Employer Identification Number and submitted to: South Coast Air Quality Management District, Attn: ***.
- B. CONTRACTOR shall adhere to total tasks and/or cost elements (cost category) expenditures as listed in Attachment 2. Reallocation of costs between tasks and/or cost category expenditures is permitted up to One Thousand Dollars (\$1,000) upon prior written approval from SCAQMD. Reallocation of costs in excess of One Thousand Dollars (\$1,000) between tasks and/or cost category expenditures requires an amendment to this Contract.
- C. SCAQMD's payment of invoices shall be subject to the following limitations and requirements:
 - i) Charges for equipment, material, and supply costs, travel expenses, subcontractors, and other charges, as applicable, must be itemized by CONTRACTOR. Reimbursement for equipment, material, supplies, subcontractors, and other charges shall be made at actual cost. Supporting documentation must be provided for all individual charges (with the exception of direct labor charges provided by CONTRACTOR). SCAQMD's reimbursement of travel expenses and requirements for supporting documentation are listed below.
 - ii) CONTRACTOR's failure to provide receipts shall be grounds for SCAQMD's non-reimbursement of such charges. SCAQMD may reduce payments on invoices by those charges for which receipts were not provided.
 - iii) SCAQMD shall not pay interest, fees, handling charges, or cost of money on Contract.
- D. SCAQMD shall reimburse CONTRACTOR for travel-related expenses only if such travel is expressly set forth in Attachment 2 – Cost Schedule of this Contract or pre-authorized by SCAQMD in writing.
 - i) SCAQMD's reimbursement of travel-related expenses shall cover lodging, meals, other incidental expenses, and costs of transportation subject to the following limitations:
 - Air Transportation - Coach class rate for all flights. If coach is not available, business class rate is permissible.
 - Car Rental - A compact car rental. A mid-size car rental is permissible if car rental is shared by three or more individuals.

Lodging - Up to One Hundred Fifty Dollars (\$150) per night. A higher amount of reimbursement is permissible if pre-approved by SCAQMD.

Meals - Daily allowance is Fifty Dollars (\$50.00).

ii) Supporting documentation shall be provided for travel-related expenses in accordance with the following requirements:

Lodging, Airfare, Car Rentals - Bill(s) for actual expenses incurred.

Meals - Meals billed in excess of \$50.00 each day require receipts or other supporting documentation for the total amount of the bill and must be approved by SCAQMD.

Mileage - Beginning each January 1, the rate shall be adjusted effective February 1 by the Chief Financial Officer based on the Internal Revenue Service Standard Mileage Rate.

Other travel-related expenses - Receipts are required for all individual items.

E. SCAQMD reserves the right to disallow charges when the invoiced services are not performed satisfactorily in SCAQMD's sole judgment.

12. INTELLECTUAL PROPERTY RIGHTS - Title and full ownership rights to any software, documents, or reports developed under this Contract shall at all times remain with SCAQMD. Such material is agreed to be SCAQMD proprietary information.

A. Rights of Technical Data - SCAQMD shall have the unlimited right to use technical data, including material designated as a trade secret, resulting from the performance of services by CONTRACTOR under this Contract. CONTRACTOR shall have the right to use technical data for its own benefit.

B. Copyright - CONTRACTOR agrees to grant SCAQMD a royalty-free, nonexclusive, irrevocable license to produce, translate, publish, use, and dispose of all copyrightable material first produced or composed in the performance of this Contract.

13. NOTICES - Any notices from either party to the other shall be given in writing to the attention of the persons listed below, or to other such addresses or addressees as may hereafter be designated in writing for notices by either party to the other. Notice shall be given by certified, express, or registered mail, return receipt requested, and shall be effective as of the date of receipt indicated on the return receipt card.

SCAQMD: South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178
Attn: ***

CONTRACTOR: ***

Attn: ***

14. INDEPENDENT CONTRACTOR - CONTRACTOR is an independent contractor. CONTRACTOR, its officers, employees, agents, representatives, or subcontractors shall in no sense be considered employees or agents of SCAQMD, nor shall CONTRACTOR, its officers, employees, agents, representatives, or subcontractors be entitled to or eligible to participate in any benefits, privileges, or plans, given or extended by SCAQMD to its employees. SCAQMD will not supervise, direct, or have control over, or be responsible for, CONTRACTOR's or subcontractor's means, methods, techniques, work sequences or procedures or for the safety precautions and programs incident thereto, or for any failure by them to comply with any local, state, or federal laws, or rules or regulations, including state minimum wage laws and OSHA requirements.

CONTRACTOR shall promptly notify SCAQMD of any material changes to subcontracts that affect the Contract's scope of work, deliverable schedule, and/or payment/cost schedule.

15. CONFIDENTIALITY - It is expressly understood and agreed that SCAQMD may designate in a conspicuous manner the information which CONTRACTOR obtains from SCAQMD as confidential. CONTRACTOR agrees to:

- A. Observe complete confidentiality with respect to such information, including without limitation, agreeing not to disclose or otherwise permit access to such information by any other person or entity in any manner whatsoever, except that such disclosure or access shall be permitted to employees or subcontractors of CONTRACTOR requiring access in fulfillment of the services provided under this Contract.
- B. Ensure that CONTRACTOR's officers, employees, agents, representatives, and independent contractors are informed of the confidential nature of such information and to assure by agreement or otherwise that they are prohibited from copying or revealing, for any purpose whatsoever, the contents of such information or any part thereof, or from taking any action otherwise prohibited under this clause.
- C. Not use such information or any part thereof in the performance of services to others or for the benefit of others in any form whatsoever whether gratuitously or for valuable consideration, except as permitted under this Contract.
- D. Notify SCAQMD promptly and in writing of the circumstances surrounding any possession, use, or knowledge of such information or any part thereof by any person or entity other than those authorized by this clause.
- E. Take at CONTRACTOR expense, but at SCAQMD's option and in any event under SCAQMD's control, any legal action necessary to prevent unauthorized use of such information by any third party or entity which has gained access to such information at least in part due to the fault of CONTRACTOR.
- F. Take any and all other actions necessary or desirable to assure such continued confidentiality and protection of such information.
- G. Prevent access to such information by any person or entity not authorized under this Contract.
- H. Establish specific procedures in order to fulfill the obligations of this clause.
- I. Notwithstanding the above, nothing herein is intended to abrogate or modify the provisions of Government Code Section 6250 et.seq. (Public Records Act).

16. PUBLICATION

- A. SCAQMD shall have the right of prior written approval of any document which shall be disseminated to the public by CONTRACTOR in which CONTRACTOR utilized information obtained from SCAQMD in connection with performance under this Contract.
- B. Information, data, documents, or reports developed by CONTRACTOR for SCAQMD, pursuant to this Contract, shall be part of SCAQMD public record unless otherwise indicated. CONTRACTOR may use or publish, at its own expense, such information provided to SCAQMD. The following acknowledgment of support and disclaimer must appear in each publication of materials, whether copyrighted or not, based upon or developed under this Contract.

"This report was prepared as a result of work sponsored, paid for, in whole or in part, by the South Coast Air Quality Management District (SCAQMD). The opinions, findings, conclusions, and recommendations are those of the author and do not necessarily represent the views of SCAQMD. SCAQMD, its officers, employees, contractors, and subcontractors make no warranty, expressed or implied, and assume no legal liability for the information in this report. SCAQMD has not approved or disapproved this report, nor has SCAQMD passed upon the accuracy or adequacy of the information contained herein."

C. CONTRACTOR shall inform its officers, employees, and subcontractors involved in the performance of this Contract of the restrictions contained herein and require compliance with the above.

17. NON-DISCRIMINATION - In the performance of this Contract, CONTRACTOR shall not discriminate in recruiting, hiring, promotion, demotion, or termination practices on the basis of race, religious creed, color, national origin, ancestry, sex, age, or physical or mental disability and shall comply with the provisions of the California Fair Employment & Housing Act (Government Code Section 12900 et seq.), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), and all administrative rules and regulations issued pursuant to said Acts and Order.
18. SOLICITATION OF EMPLOYEES - CONTRACTOR expressly agrees that CONTRACTOR shall not, during the term of this Contract, nor for a period of six months after termination, solicit for employment, whether as an employee or independent contractor, any person who is or has been employed by SCAQMD during the term of this Contract without the consent of SCAQMD.
19. PROPERTY AND SECURITY - Without limiting CONTRACTOR obligations with regard to security, CONTRACTOR shall comply with all the rules and regulations established by SCAQMD for access to and activity in and around SCAQMD premises.
20. ASSIGNMENT - The rights granted hereby may not be assigned, sold, licensed, or otherwise transferred by either party without the prior written consent of the other, and any attempt by either party to do so shall be void upon inception.
21. NON-EFFECT OF WAIVER - The failure of CONTRACTOR or SCAQMD to insist upon the performance of any or all of the terms, covenants, or conditions of this Contract, or failure to exercise any rights or remedies hereunder, shall not be construed as a waiver or relinquishment of the future performance of any such terms, covenants, or conditions, or of the future exercise of such rights or remedies, unless otherwise provided for herein.
22. ATTORNEYS' FEES - In the event any action is filed in connection with the enforcement or interpretation of this Contract, each party shall bear its own attorneys' fees and costs.
23. FORCE MAJEURE - Neither SCAQMD nor CONTRACTOR shall be liable or deemed to be in default for any delay or failure in performance under this Contract or interruption of services resulting, directly or indirectly, from acts of God, civil or military authority, acts of public enemy, war, strikes, labor disputes, shortages of suitable parts, materials, labor or transportation, or any similar cause beyond the reasonable control of SCAQMD or CONTRACTOR.
24. SEVERABILITY - In the event that any one or more of the provisions contained in this Contract shall for any reason be held to be unenforceable in any respect by a court of competent jurisdiction, such holding shall not affect any other provisions of this Contract, and the Contract shall then be construed as if such unenforceable provisions are not a part hereof.
25. HEADINGS - Headings on the clauses of this Contract are for convenience and reference only, and the words contained therein shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Contract.
26. DUPLICATE EXECUTION - This Contract is executed in duplicate. Each signed copy shall have the force and effect of an original.

27. GOVERNING LAW - This Contract shall be construed and interpreted and the legal relations created thereby shall be determined in accordance with the laws of the State of California. Venue for resolution of any disputes under this Contract shall be Los Angeles County, California.
28. PRE-CONTRACT COSTS - Any costs incurred by CONTRACTOR prior to CONTRACTOR receipt of a fully executed Contract shall be incurred solely at the risk of the CONTRACTOR. In the event that a formal Contract is not executed, the SCAQMD shall not be liable for any amounts expended in anticipation of a formal Contract. If a formal Contract does result, pre-contract cost expenditures authorized by the Contract will be reimbursed in accordance with the Payment/Cost Schedule and payment provision of the Contract[OPTIONAL]
29. CITIZENSHIP AND ALIEN STATUS
- A. CONTRACTOR warrants that it fully complies with all laws regarding the employment of aliens and others, and that its employees performing services hereunder meet the citizenship or alien status requirements contained in federal and state statutes and regulations including, but not limited to, the Immigration Reform and Control Act of 1986 (P.L. 99-603). CONTRACTOR shall obtain from all covered employees performing services hereunder all verification and other documentation of employees' eligibility status required by federal statutes and regulations as they currently exist and as they may be hereafter amended. CONTRACTOR shall have a continuing obligation to verify and document the continuing employment authorization and authorized alien status of employees performing services under this Contract to insure continued compliance with all federal statutes and regulations. Notwithstanding the above, CONTRACTOR, in the performance of this Contract, shall not discriminate against any person in violation of 8 USC Section 1324b.
 - B. CONTRACTOR shall retain such documentation for all covered employees for the period described by law. CONTRACTOR shall indemnify, defend, and hold harmless SCAQMD, its officers and employees from employer sanctions and other liability which may be assessed against CONTRACTOR or SCAQMD, or both in connection with any alleged violation of federal statutes or regulations pertaining to the eligibility for employment of persons performing services under this Contract.
30. REQUIREMENT FOR FILING STATEMENT OF ECONOMIC INTERESTS - In accordance with the Political Reform Act of 1974 (Government Code Sec. 81000 et seq.) and regulations issued by the Fair Political Practices Commission (FPPC), SCAQMD has determined that the nature of the work to be performed under this Contract requires CONTRACTOR to submit a Form 700, Statement of Economic Interests for Designated Officials and Employees, for each of its employees assigned to work on this Contract. These forms may be obtained from SCAQMD's District Counsels' office.[OPTIONAL]
31. COMPLIANCE WITH SINGLE AUDIT ACT REQUIREMENTS [OPTIONAL - TO BE INCLUDED IN CONTRACTS WITH FOR-PROFIT CONTRACTORS WHICH HAVE FEDERAL PASS-THROUGH FUNDING] - During the term of the Contract, and for a period of three (3) years from the date of Contract expiration, and if requested in writing by the SCAQMD, CONTRACTOR shall allow the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency, access during normal business hours to all records and reports related to the work performed under this Contract. CONTRACTOR assumes sole responsibility for reimbursement to the Federal Agency funding the prime grant or contract, a sum of money equivalent to the amount of any expenditures disallowed should the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency rule through audit exception or some other appropriate means that expenditures from funds allocated to the CONTRACTOR were not made in compliance with the applicable cost principles, regulations of the funding agency, or the provisions of this Contract.

[OPTIONAL - TO BE INCLUDED IN CONTRACTS WITH NON-PROFIT CONTRACTORS WHICH HAVE FEDERAL PASS-THROUGH FUNDING] - Beginning with CONTRACTOR's current fiscal year and continuing through the term of this Contract, CONTRACTOR shall have a single or program-specific audit conducted in accordance with the requirements of the Office of Management and Budget (OMB) Circular A-133 (Audits of States, Local Governments and Non-Profit Organizations), if CONTRACTOR expended Five Hundred Thousand Dollars (\$500,000) or more in a year in Federal Awards. Such audit shall be conducted by a firm of independent accountants in accordance with Generally Accepted Government Audit Standards (GAGAS). Within thirty (30) days of Contract execution, CONTRACTOR shall forward to SCAQMD the most recent A-133 Audit Report issued by its independent auditors. Subsequent A-133 Audit Reports shall be submitted to the SCAQMD within thirty (30) days of issuance.

CONTRACTOR shall allow the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency, access during normal business hours to all records and reports related to the work performed under this Contract. CONTRACTOR assumes sole responsibility for reimbursement to the Federal Agency funding the prime grant or contract, a sum of money equivalent to the amount of any expenditures disallowed should the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency rule through audit exception or some other appropriate means that expenditures from funds allocated to the CONTRACTOR were not made in compliance with the applicable cost principles, regulations of the funding agency, or the provisions of this Contract.

32. OPTION TO EXTEND THE TERM OF THE CONTRACT - SCAQMD reserves the right to extend the contract for a one-year period commencing ***** (enter date) at the (option price or Not-to-Exceed Amount) set forth in Attachment 2. In the event that SCAQMD elects to extend the contract, a written notice of its intent to extend the contract shall be provided to CONTRACTOR no later than thirty (30) days prior to Contract expiration. **[OPTIONAL]**
33. PROPOSAL INCORPORATION – CONTRACTOR's Technical Proposal dated *** submitted in response to Request for Proposal (RFP) #***, is expressly incorporated herein by this reference and made a part hereof of this Contract. In the event of any conflict between the terms and conditions of this Contract and CONTRACTOR's Technical Proposal, this Contract shall govern and control. **[OPTIONAL]**
34. KEY PERSONNEL - *insert person's name* is deemed critical to the successful performance of this Contract. Any changes in key personnel by CONTRACTOR must be approved by SCAQMD. All substitute personnel must possess qualifications/experience equal to the original named key personnel and must be approved by SCAQMD. SCAQMD reserves the right to interview proposed substitute key personnel. **[OPTIONAL]**
35. PREVAILING WAGES – **[USE FOR INFRASTRUCTURE AND MAINTENANCE PROJECTS]** CONTRACTOR is alerted to the prevailing wage requirements of California Labor Code section 1770 et seq., and the compliance monitoring and enforcement of such requirements by the Department of Industrial Relations ("DIR"). CONTRACTOR and all of CONTRACTOR's subcontractors must comply with the California Public Works Contractor Registration Program and must be registered with the DIR to participate in public works projects. CONTRACTOR shall be responsible for determining the applicability of the provisions of California Labor Code and complying with the same, including, without limitation, obtaining from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work, making the same available to any interested party upon request, paying any applicable prevailing rates, posting copies thereof at the job site and flowing all applicable prevailing wage rate requirements to its subcontractors. Proof of compliance with these requirements must be provided to SCAQMD upon request. CONTRACTOR shall indemnify, defend and hold

harmless the South Coast Air Quality Management District against any and all claims, demands, damages, defense costs or liabilities based on failure to adhere to the above referenced statutes.

- 36. SUBCONTRACTOR APPROVAL – If CONTRACTOR intends to subcontract all or a portion of the work under this Contract, then CONTRACTOR must first obtain written approval from SCAQMD’s Executive Officer or designee prior to subcontracting any work. Any material changes to the subcontract(s) that affect the scope of work, deliverable schedule, and/or payment/cost schedule shall also require the prior written approval of the Executive Officer or designee. No subcontract charges will be reimbursed unless the required approvals have been obtained from SCAQMD.
- 37. ENTIRE CONTRACT - This Contract represents the entire agreement between the parties hereto related to CONTRACTOR providing services to SCAQMD and there are no understandings, representations, or warranties of any kind except as expressly set forth herein. No waiver, alteration, or modification of any of the provisions herein shall be binding on any party unless in writing and signed by the party against whom enforcement of such waiver, alteration, or modification is sought.

IN WITNESS WHEREOF, the parties to this Contract have caused this Contract to be duly executed on their behalf by their authorized representatives.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

By: _____
Barry R. Wallerstein, D.Env., Executive Officer
Dr. William A. Burke, Chairman, Governing Board

By: _____
Name:
Title:

Date: _____

Date: _____

ATTEST:
Saundra McDaniel, Clerk of the Board

By: _____

APPROVED AS TO FORM:
Kurt R. Wiese, General Counsel

By: _____

//Standard Boilerplate
Revised: December 16, 2014

ATTACHMENT A

CERTIFICATIONS AND REPRESENTATIONS



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Business Information Request

Dear SCAQMD Contractor/Supplier:

The South Coast Air Quality Management District (SCAQMD) is committed to ensuring that our contractor/supplier records are current and accurate. If your firm is selected for award of a purchase order or contract, it is imperative that the information requested herein be supplied in a timely manner to facilitate payment of invoices. In order to process your payments, we need the enclosed information regarding your account. **Please review and complete the information identified on the following pages, complete the enclosed W-9 form, remember to sign both documents for our files, and return them as soon as possible to the address below:**

**Attention: Accounts Payable, Accounting Department
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178**

If you do not return this information, we will not be able to establish you as a vendor. This will delay any payments and would still necessitate your submittal of the enclosed information to our Accounting department before payment could be initiated. Completion of this document and enclosed forms would ensure that your payments are processed timely and accurately.

If you have any questions or need assistance in completing this information, please contact Accounting at (909) 396-3777. We appreciate your cooperation in completing this necessary information.

Sincerely,

Michael B. O'Kelly
Chief Financial Officer

DH:tm

Enclosures: Business Information Request
Disadvantaged Business Certification
W-9
Form 590 Withholding Exemption Certificate
Federal Contract Debarment Certification
Campaign Contributions Disclosure
Direct Deposit Authorization

REV 1/15



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

BUSINESS INFORMATION REQUEST

Business Name	
Division of	
Subsidiary of	
Website Address	
Type of Business <i>Check One:</i>	<input type="checkbox"/> Individual <input type="checkbox"/> DBA, Name _____, County Filed in _____ <input type="checkbox"/> Corporation, ID No. _____ <input type="checkbox"/> LLC/LLP, ID No. _____ <input type="checkbox"/> Other _____

REMITTING ADDRESS INFORMATION

Address			
City/Town			
State/Province		Zip	
Phone	() - Ext	Fax	() -
Contact		Title	
E-mail Address			
Payment Name if Different			

All invoices must reference the corresponding Purchase Order Number(s)/Contract Number(s) if applicable and mailed to:

Attention: Accounts Payable, Accounting Department
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

DISADVANTAGED BUSINESS CERTIFICATION

Federal guidance for utilization of disadvantaged business enterprises allows a vendor to be deemed a small business enterprise (SBE), minority

business enterprise (MBE) or women business enterprise (WBE) if it meets the criteria below.

- is certified by the Small Business Administration or
- is certified by a state or federal agency or
- is an independent MBE(s) or WBE(s) business concern which is at least 51 percent owned and controlled by minority group member(s) who are citizens of the United States.

Statements of certification:

As a prime contractor to the SCAQMD, _____ (name of business) will engage in good faith efforts to achieve the fair share in accordance with 40 CFR Section 33.301, and will follow the six affirmative steps listed below **for contracts or purchase orders funded in whole or in part by federal grants and contracts.**

1. Place qualified SBEs, MBEs, and WBEs on solicitation lists.
2. Assure that SBEs, MBEs, and WBEs are solicited whenever possible.
3. When economically feasible, divide total requirements into small tasks or quantities to permit greater participation by SBEs, MBEs, and WBEs.
4. Establish delivery schedules, if possible, to encourage participation by SBEs, MBEs, and WBEs.
5. Use services of Small Business Administration, Minority Business Development Agency of the Department of Commerce, and/or any agency authorized as a clearinghouse for SBEs, MBEs, and WBEs.
6. If subcontracts are to be let, take the above affirmative steps.

Self-Certification Verification: Also for use in awarding additional points, as applicable, in accordance with SCAQMD Procurement Policy and Procedure:

Check all that apply:

- | | |
|---|--|
| <input type="checkbox"/> Small Business Enterprise/Small Business Joint Venture | <input type="checkbox"/> Women-owned Business Enterprise |
| <input type="checkbox"/> Local business | <input type="checkbox"/> Disabled Veteran-owned Business Enterprise/DVBE Joint Venture |
| <input type="checkbox"/> Minority-owned Business Enterprise | |

Percent of ownership: _____ %

Name of Qualifying Owner(s): _____

State of California Public Works Contractor Registration No. _____ . MUST BE INCLUDED IF BID PROPOSAL IS FOR PUBLIC WORKS PROJECT.

I, the undersigned, hereby declare that to the best of my knowledge the above information is accurate. Upon penalty of perjury, I certify information submitted is factual.

NAME

TITLE

TELEPHONE NUMBER

DATE

Definitions

Disabled Veteran-Owned Business Enterprise means a business that meets all of the following criteria:

- is a sole proprietorship or partnership of which is at least 51 percent owned by one or more disabled veterans, or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more disabled veterans; a subsidiary which is wholly owned by a parent corporation but only if at least 51 percent of the voting stock of the parent corporation is owned by one or more disabled veterans; or a joint venture in which at least 51 percent of the joint venture's management and control and earnings are held by one or more disabled veterans.
- the management and control of the daily business operations are by one or more disabled veterans. The disabled veterans who exercise management and control are not required to be the same disabled veterans as the owners of the business.
- is a sole proprietorship, corporation, partnership, or joint venture with its primary headquarters office located in the United States and which is not a branch or subsidiary of a foreign corporation, firm, or other foreign-based business.

Joint Venture means that one party to the joint venture is a DVBE and owns at least 51 percent of the joint venture. In the case of a joint venture formed for a single project this means that DVBE will receive at least 51 percent of the project dollars.

Local Business means a business that meets all of the following criteria:

- has an ongoing business within the boundary of the SCAQMD at the time of bid application.
- performs 90 percent of the work within SCAQMD's jurisdiction.

Minority-Owned Business Enterprise means a business that meets all of the following criteria:

- is at least 51 percent owned by one or more minority persons or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more minority persons.
- is a business whose management and daily business operations are controlled or owned by one or more minority person.
- is a business which is a sole proprietorship, corporation, partnership, joint venture, an association, or a cooperative with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign business.

“Minority” person means a Black American, Hispanic American, Native American (including American Indian, Eskimo, Aleut, and Native Hawaiian), Asian-Indian American (including a person whose origins are from India, Pakistan, or Bangladesh), Asian-Pacific American (including a person whose origins are from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the United States Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, or Taiwan).

Small Business Enterprise means a business that meets the following criteria:

- a. 1) an independently owned and operated business; 2) not dominant in its field of operation; 3) together with affiliates is either:
 - **A service, construction, or non-manufacturer with 100 or fewer employees, and average annual gross receipts of ten million dollars (\$10,000,000) or less over the previous three years, or**
 - A manufacturer with 100 or fewer employees.
- b. Manufacturer means a business that is both of the following:
 - 1) Primarily engaged in the chemical or mechanical transformation of raw materials or processed substances into new products.
 - 2) Classified between Codes 311000 to 339000, inclusive, of the North American Industrial Classification System (NAICS) Manual published by the United States Office of Management and Budget, 2007 edition.

Small Business Joint Venture means that one party to the joint venture is a Small Business and owns at least 51 percent of the joint venture. In the case of a joint venture formed for a single project this means that the Small Business will receive at least 51 percent of the project dollars.

Women-Owned Business Enterprise means a business that meets all of the following criteria:

- is at least 51 percent owned by one or more women or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more women.
- is a business whose management and daily business operations are controlled or owned by one or more women.
- is a business which is a sole proprietorship, corporation, partnership, or a joint venture, with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign business.

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.		
	2 Business name/disregarded entity name, if different from above		
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____		<input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate
	5 Address (number, street, and apt. or suite no.)		Requester's name and address (optional)
	6 City, state, and ZIP code		
	7 List account number(s) here (optional)		
	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number									

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

or

Employer identification number									

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶ _____	Date ▶ _____
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note. ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

- A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)
- B—The United States or any of its agencies or instrumentalities
- C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)
- E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)
- F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state
- G—A real estate investment trust
- H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940
 - I—A common trust fund as defined in section 584(a)
 - J—A bank as defined in section 581
 - K—A broker
 - L—A trust exempt from tax under section 664 or described in section 4947(a)(1)
 - M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.ssa.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/businesses and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee ¹ The actual owner ¹
5. Sole proprietorship or disregarded entity owned by an individual	The owner ¹
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor ¹
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity ¹
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

*Note. Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spam@uce.gov or contact them at www.ftc.gov/idtheft or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

2015 Withholding Exemption Certificate

590

The payee completes this form and submits it to the withholding agent.

Withholding Agent (Type or print)

Name _____

Payee

Name _____

SSN or ITIN FEIN CA Corp no. CA SOS file no.

Address (apt./ste., room, PO Box, or PMB no.) _____

City (If you have a foreign address, see instructions.) _____

State _____

ZIP Code _____

Exemption Reason

Check only one reason box below that applies to the payee.

By checking the appropriate box below, the Payee certifies the reason for the exemption from the California income tax withholding requirements on payment(s) made to the entity or individual.

Individuals — Certification of Residency:

I am a resident of California and I reside at the address shown above. If I become a nonresident at any time, I will promptly notify the withholding agent. See instructions for General Information D, Definitions.

Corporations:

The corporation has a permanent place of business in California at the address shown above or is qualified through the California Secretary of State (SOS) to do business in California. The corporation will file a California tax return. If this corporation ceases to have a permanent place of business in California or ceases to do any of the above, I will promptly notify the withholding agent. See instructions for General Information D, Definitions.

Partnerships or Limited Liability Companies (LLCs):

The partnership or LLC has a permanent place of business in California at the address shown above or is registered with the California SOS, and is subject to the laws of California. The partnership or LLC will file a California tax return. If the partnership or LLC ceases to do any of the above, I will promptly inform the withholding agent. For withholding purposes, a limited liability partnership (LLP) is treated like any other partnership.

Tax-Exempt Entities:

The entity is exempt from tax under California Revenue and Taxation Code (R&TC) Section 23701 _____ (insert letter) or Internal Revenue Code Section 501(c) _____ (insert number). If this entity ceases to be exempt from tax, I will promptly notify the withholding agent. Individuals cannot be tax-exempt entities.

Insurance Companies, Individual Retirement Arrangements (IRAs), or Qualified Pension/Profit Sharing Plans:

The entity is an insurance company, IRA, or a federally qualified pension or profit-sharing plan.

California Trusts:

At least one trustee and one noncontingent beneficiary of the above-named trust is a California resident. The trust will file a California fiduciary tax return. If the trustee or noncontingent beneficiary becomes a nonresident at any time, I will promptly notify the withholding agent.

Estates — Certification of Residency of Deceased Person:

I am the executor of the above-named person's estate or trust. The decedent was a California resident at the time of death. The estate will file a California fiduciary tax return.

Nonmilitary Spouse of a Military Servicemember:

I am a nonmilitary spouse of a military servicemember and I meet the Military Spouse Residency Relief Act (MSRRA) requirements. See instructions for General Information E, MSRRA.

CERTIFICATE OF PAYEE: Payee must complete and sign below.

Under penalties of perjury, I hereby certify that the information provided in this document is, to the best of my knowledge, true and correct. If conditions change, I will promptly notify the withholding agent.

Payee's name and title (type or print) _____ Telephone (____) _____

Payee's signature ► _____ Date _____

2015 Instructions for Form 590

Withholding Exemption Certificate

References in these instructions are to the California Revenue and Taxation Code (R&TC).

General Information

Registered Domestic Partners (RDP) – For purposes of California income tax, references to a spouse, husband, or wife also refer to a Registered Domestic Partner (RDP) unless otherwise specified. For more information on RDPs, get FTB Pub. 737, Tax Information for Registered Domestic Partners.

A Purpose

Use Form 590, Withholding Exemption Certificate, to certify an exemption from nonresident withholding.

Form 590 does not apply to payments of backup withholding. For information on California backup withholding, go to ftb.ca.gov and search for **backup withholding**.

Form 590 does not apply to payments for wages to employees. Wage withholding is administered by the California Employment Development Department (EDD). For more information, go to edd.ca.gov or call 888.745.3886.

Do not use Form 590 to certify an exemption from withholding if you are a Seller of California real estate. Sellers of California real estate use Form 593-C, Real Estate Withholding Certificate, to claim an exemption from real estate withholding.

The following are excluded from withholding and completing this form:

- The United States and any of its agencies or instrumentalities.
- A state, a possession of the United States, the District of Columbia, or any of its political subdivisions or instrumentalities.
- A foreign government or any of its political subdivisions, agencies, or instrumentalities.

B Income Subject to Withholding

California Revenue and Taxation Code (R&TC) Section 18662 requires withholding of income or franchise tax on payments of California source income made to nonresidents of California.

Withholding is required on the following, but is not limited to:

- Payments to nonresidents for services rendered in California.
- Distributions of California source income made to domestic nonresident partners, members, and S corporation shareholders and allocations of California source income made to foreign partners and members.
- Payments to nonresidents for rents if the payments are made in the course of the withholding agent's business.

- Payments to nonresidents for royalties from activities sourced to California.
- Distributions of California source income to nonresident beneficiaries from an estate or trust.
- Endorsement payments received for services performed in California.
- Prizes and winnings received by nonresidents for contests in California.

However, withholding is optional if the total payments of California source income are \$1,500 or less during the calendar year.

For more information on withholding get FTB Pub. 1017, Resident and Nonresident Withholding Guidelines. To get a withholding publication, see Additional Information.

C Who Certifies this Form

Form 590 is certified by the payee. California residents or entities exempt from the withholding requirement should complete Form 590 and submit it to the withholding agent before payment is made. The withholding agent is then relieved of the withholding requirements if the agent relies in good faith on a completed and signed Form 590 unless notified by the Franchise Tax Board (FTB) that the form should not be relied upon.

An incomplete certificate is invalid and the withholding agent should not accept it. If the withholding agent receives an incomplete certificate, the withholding agent is required to withhold tax on payments made to the payee until a valid certificate is received. In lieu of a completed certificate on the preprinted form, the withholding agent may accept as a substitute certificate a letter from the payee explaining why the payee is not subject to withholding. The letter must contain all the information required on the certificate in similar language, including the under penalty of perjury statement and the payee's taxpayer identification number. The withholding agent must retain a copy of the certificate or substitute for at least four years after the last payment to which the certificate applies, and provide it upon request to the FTB.

For example, if an entertainer (or the entertainer's business entity) is paid for a performance, the entertainer's information must be provided. **Do not** submit the entertainer's agent or promoter information.

The grantor of a grantor trust shall be treated as the payee for withholding purposes. Therefore, if the payee is a grantor trust and one or more of the grantors is a nonresident, withholding is required. If all of the grantors on the trust are residents, no withholding is required. Resident grantors can check the box on Form 590 labeled "Individuals — Certification of Residency."

D Definitions

For California non-wage withholding purposes, **nonresident** includes all of the following:

- Individuals who are not residents of California.
- Corporations not qualified through the California Secretary of State (CA SOS) to do business in California or having no permanent place of business in California.
- Partnerships or limited liability companies (LLCs) with no permanent place of business in California.
- Any trust without a resident grantor, beneficiary, or trustee, or estates where the decedent was not a California resident.

Foreign refers to non-U.S.

For more information about determining resident status, get FTB Pub. 1031, Guidelines for Determining Resident Status. Military servicemembers have special rules for residency. For more information, get FTB Pub. 1032, Tax Information for Military Personnel.

Permanent Place of Business:

A corporation has a permanent place of business in California if it is organized and existing under the laws of California or if it is a foreign corporation qualified to transact intrastate business by the CA SOS. A corporation that has not qualified to transact intrastate business (e.g., a corporation engaged exclusively in interstate commerce) will be considered as having a permanent place of business in California only if it maintains a permanent office in California that is permanently staffed by its employees.

E Military Spouse Residency Relief Act (MSRRA)

Generally, for tax purposes you are considered to maintain your existing residence or domicile. If a military servicemember and nonmilitary spouse have the same state of domicile, the MSRRA provides:

- A spouse shall not be deemed to have lost a residence or domicile in any state solely by reason of being absent to be with the servicemember serving in compliance with military orders.
- A spouse shall not be deemed to have acquired a residence or domicile in any other state solely by reason of being there to be with the servicemember serving in compliance with military orders.

Domicile is defined as the one place:

- Where you maintain a true, fixed, and permanent home.
- To which you intend to return whenever you are absent.

A military servicemember's nonmilitary spouse is considered a nonresident for tax purposes if the servicemember and spouse have the same domicile outside of California and the spouse is in California solely to be with the servicemember who is serving in compliance with Permanent Change of Station orders.

California may require nonmilitary spouses of military servicemembers to provide proof that they meet the criteria for California personal income tax exemption as set forth in the MSRRA.

Income of a military servicemember's nonmilitary spouse for services performed in California is not California source income subject to state tax if the spouse is in California to be with the servicemember serving in compliance with military orders, and the servicemember and spouse have the same domicile in a state other than California.

For additional information or assistance in determining whether the applicant meets the MSRRA requirements, get FTB Pub. 1032.

Specific Instructions

Payee Instructions

Enter the withholding agent's name.

Enter the payee's information, including the taxpayer identification number (TIN) and check the appropriate TIN box.

You must provide an acceptable TIN as requested on this form. The following are acceptable TINs: social security number (SSN); individual taxpayer identification number (ITIN); federal employer identification number (FEIN); California corporation number (CA Corp no.); or CA SOS file number.

Private Mail Box (PMB) – Include the PMB in the address field. Write "PMB" first, then the box number. Example: 111 Main Street PMB 123.

Foreign Address – Enter the information in the following order: City, Country, Province/Region, and Postal Code. Follow the country's practice for entering the postal code. **Do not** abbreviate the country's name.

Check the box that reflects the reason why the payee is exempt from the California income tax withholding requirement.

Withholding Agent Instructions

Keep Form 590 for your records. **Do not** send this form to the FTB unless it has been specifically requested.

For more information, contact Withholding Services and Compliance, see Additional Information.

The payee must notify the withholding agent if any of the following situations occur:

- The individual payee becomes a nonresident.
- The corporation ceases to have a permanent place of business in California or ceases to be qualified to do business in California.
- The partnership ceases to have a permanent place of business in California.
- The LLC ceases to have a permanent place of business in California.
- The tax-exempt entity loses its tax-exempt status.

If any of these situations occur, then withholding may be required. For more information, get Form 592, Resident and Nonresident Withholding Statement, Form 592-B, Resident and Nonresident Withholding Tax Statement, and Form 592-V, Payment Voucher for Resident and Nonresident Withholding.

Additional Information

For additional information or to speak to a representative regarding this form, call the Withholding Services and Compliance telephone service at:

Telephone: **888.792.4900**
916.845.4900

Fax: 916.845.9512

OR write to:

WITHHOLDING SERVICES AND
COMPLIANCE MS F182
FRANCHISE TAX BOARD
PO BOX 942867
SACRAMENTO CA 94267-0651

You can download, view, and print California tax forms and publications at ftb.ca.gov.

OR to get forms by mail write to:

TAX FORMS REQUEST UNIT
FRANCHISE TAX BOARD
PO BOX 307
RANCHO CORDOVA CA 95741-0307

For all other questions unrelated to withholding or to access the TTY/TDD numbers, see the information below.

Internet and Telephone Assistance

Website: ftb.ca.gov

Telephone: 800.852.5711 from within the United States
916.845.6500 from outside the United States

TTY/TDD: 800.822.6268 for persons with hearing or speech impairments

Asistencia Por Internet y Teléfono

Sitio web: ftb.ca.gov

Teléfono: 800.852.5711 dentro de los Estados Unidos
916.845.6500 fuera de los Estados Unidos

TTY/TDD: 800.822.6268 para personas con discapacidades auditivas o del habla

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and the principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them or commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statute or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative Date

I am unable to certify to the above statements. My explanation is attached.

EPA Form 5700-49 (11-88)



CAMPAIGN CONTRIBUTIONS DISCLOSURE

In accordance with California law, bidders and contracting parties are required to disclose, at the time the application is filed, information relating to any campaign contributions made to South Coast Air Quality Management District (SCAQMD) Board Members or members/alternates of the MSRC, including: the name of the party making the contribution (which includes any parent, subsidiary or otherwise related business entity, as defined below), the amount of the contribution, and the date the contribution was made. 2 C.C.R. §18438.8(b).

California law prohibits a party, or an agent, from making campaign contributions to SCAQMD Governing Board Members or members/alternates of the Mobile Source Air Pollution Reduction Review Committee (MSRC) of more than \$250 while their contract or permit is pending before the SCAQMD; and further prohibits a campaign contribution from being made for three (3) months following the date of the final decision by the Governing Board or the MSRC on a donor's contract or permit. Gov't Code §84308(d). For purposes of reaching the \$250 limit, the campaign contributions of the bidder or contractor plus contributions by its parents, affiliates, and related companies of the contractor or bidder are added together. 2 C.C.R. §18438.5.

In addition, SCAQMD Board Members or members/alternates of the MSRC must abstain from voting on a contract or permit if they have received a campaign contribution from a party or participant to the proceeding, or agent, totaling more than \$250 in the 12-month period prior to the consideration of the item by the Governing Board or the MSRC. Gov't Code §84308(c).

The list of current SCAQMD Governing Board Members can be found at the SCAQMD website (www.aqmd.gov). The list of current MSRC members/alternates can be found at the MSRC website (<http://www.cleantransportationfunding.org>).

SECTION I.

Contractor (Legal Name): _____

DBA, Name _____, County Filed in _____ Corporation, ID No. _____ LLC/LLP, ID No. _____
--

List any parent, subsidiaries, or otherwise affiliated business entities of Contractor:
(See definition below).

SECTION II.

Has Contractor and/or any parent, subsidiary, or affiliated company, or agent thereof, made a campaign contribution(s) totaling \$250 or more in the aggregate to a current member of the South Coast Air Quality Management Governing Board or member/alternate of the MSRC in the 12 months preceding the date of execution of this disclosure?

Yes No **If YES, complete Section II below and then sign and date the form.
If NO, sign and date below. Include this form with your submittal.**

Campaign Contributions Disclosure, *continued*:

Name of Contributor _____

_____	_____	_____
Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution

Name of Contributor _____

_____	_____	_____
Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution

Name of Contributor _____

_____	_____	_____
Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution

Name of Contributor _____

_____	_____	_____
Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution

I declare the foregoing disclosures to be true and correct.

By: _____

Title: _____

Date: _____

DEFINITIONS

Parent, Subsidiary, or Otherwise Related Business Entity (2 Cal. Code of Regs., §18703.1(d).)

- (1) Parent subsidiary. A parent subsidiary relationship exists when one corporation directly or indirectly owns shares possessing more than 50 percent of the voting power of another corporation.
- (2) Otherwise related business entity. Business entities, including corporations, partnerships, joint ventures and any other organizations and enterprises operated for profit, which do not have a parent subsidiary relationship are otherwise related if any one of the following three tests is met:
 - (A) One business entity has a controlling ownership interest in the other business entity.
 - (B) There is shared management and control between the entities. In determining whether there is shared management and control, consideration should be given to the following factors:
 - (i) The same person or substantially the same person owns and manages the two entities;
 - (ii) There are common or commingled funds or assets;
 - (iii) The business entities share the use of the same offices or employees, or otherwise share activities, resources or personnel on a regular basis;
 - (iv) There is otherwise a regular and close working relationship between the entities; or
 - (C) A controlling owner (50% or greater interest as a shareholder or as a general partner) in one entity also is a controlling owner in the other entity.



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Direct Deposit Authorization

STEP 1: Please check all the appropriate boxes

- | | |
|--|--|
| <input type="checkbox"/> Individual (Employee, Governing Board Member) | <input type="checkbox"/> New Request |
| <input type="checkbox"/> Vendor/Contractor | <input type="checkbox"/> Cancel Direct Deposit |
| <input type="checkbox"/> Changed Information | |

STEP 2: Payee Information

Last Name		First Name		Middle Initial	Title
Vendor/Contractor Business Name (if applicable)					
Address				Apartment or P.O. Box Number	
City		State	Zip	Country	
Taxpayer ID Number		Telephone Number		Email Address	

Authorization

- I authorize South Coast Air Quality Management District (SCAQMD) to direct deposit funds to my account in the financial institution as indicated below. I understand that the authorization may be rejected or discontinued by SCAQMD at any time. If any of the above information changes, I will promptly complete a new authorization agreement. If the direct deposit is not stopped before closing an account, funds payable to me will be returned to SCAQMD for distribution. This will delay my payment.
- This authorization remains in effect until SCAQMD receives written notification of changes or cancellation from you.
- I hereby release and hold harmless SCAQMD for any claims or liability to pay for any losses or costs related to insufficient fund transactions that result from failure within the Automated Clearing House network to correctly and timely deposit monies into my account.

STEP 3:

You must verify that your bank is a member of an Automated Clearing House (ACH). Failure to do so could delay the processing of your payment. You must attach a voided check or have your bank complete the bank information and the account holder must sign below.

To be Completed by your Bank

Staple Voided Check Here	Name of Bank/Institution		
	Account Holder Name(s)		
	<input type="checkbox"/> Saving <input type="checkbox"/> Checking	Account Number	Routing Number
	Bank Representative Printed Name	Bank Representative Signature	Date
	ACCOUNT HOLDER SIGNATURE:		Date

For SCAQMD Use Only

Input By _____

Date _____

[↑ Back to Agenda](#)

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 6

PROPOSAL: Issue RFP for Refurbishment of Pace Air Handlers at SCAQMD Headquarters

SYNOPSIS: The current Pace air handlers are over 24 years old and have been operating 365 days a year, 20 or more hours a day. With a life expectancy of 15 to 20 years, maintenance costs have risen and dependability of the handlers is declining rapidly. Staff is requesting to refurbish the air handlers, which provide filtered conditioned air to SCAQMD headquarters, and will also increase the efficiency and provide necessary back up. This action is to issue an RFP to solicit proposals from qualified contractors to refurbish various air handlers.

COMMITTEE: Administrative, May 8, 2015; Recommended for Approval

RECOMMENDED ACTION:

Issue RFP #P2015-32 to solicit proposals from qualified contractors to replace the air handler plug fans and other components on various air handlers at SCAQMD headquarters with new fan wall technology.

Barry R. Wallerstein, D.Env.
Executive Officer

WJ:BJ:tc

Background

The current Pace air handlers are used to provide conditioned air at SCAQMD headquarters. The air handlers are over 24 years old and have been operating at an average of 20 hours a day, 365 days a year. The typical life expectancy of air handlers are from 15 to 20 years. Over the past five years, maintenance costs for the air handlers have escalated while their dependability and energy efficiency continues to decline.

The existing air handlers operate with one or two large constant speed plug fans. Each air handler fan ranges in size from 30 inches to 44.5 inches in diameter and is operated

by electric motors from 10 to 75 horse power. Currently, should a fan fail, all conditioned air flow to the affected floor will cease until repairs can be made.

Replacement parts for Pace air handlers are no longer available. After extensive research, staff recommends replacing the large constant speed plug fans and other aging components with new energy efficient fan wall technology within the air handler units. Fan wall technology consists of a group of smaller fans and motors that run independently of each other, but collectively the fans will provide the same volume of conditioned air as the current plug fans. With this new technology, should a fan fail, the others will automatically increase in speed to compensate for the failed fan, allowing staff to make repairs without compromising the comfort of staff.

Proposal

This action is to issue RFP #P2015-32 to solicit proposals from qualified contractors to replace the air handler plug fans and various other components on various air handlers at SCAQMD headquarters with new fan wall technology.

Outreach

In accordance with SCAQMD’s Procurement Policy and Procedure, a public notice advertising the RFP and inviting bids will be published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County’s Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential bidders may be notified utilizing SCAQMD’s own electronic listing of certified minority vendors. Notice of the RFP will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on the Internet at SCAQMD’s website (<http://www.aqmd.gov>) where it can be viewed by making the selection “Grants & Bids.”

Proposal Evaluation

Proposals received will be evaluated by a diverse, technically qualified panel in accordance with criteria contained in the attached RFP.

Resource Impacts

Sufficient funds are available in the Infrastructure Improvement Special Fund (2).

Attachment

RFP #P2015-32

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

REQUEST FOR PROPOSALS

REFURBISHMENT OF PACE AIR HANDLERS

#P2015-32

The South Coast Air Quality Management District (SCAQMD) requests proposals for the following purpose according to terms and conditions attached. In the preparation of this Request for Proposals (RFP) the words "Proposer," "Contractor," and "Consultant" are used interchangeably.

PURPOSE

The purpose of this RFP is to solicit sealed bids/proposals from qualified "B" General Contractors and/or C-20 HVAC contractors for the fan wall installation project for SCAQMD.

Work will be performed on various SCAQMD's Pace Air Handler units. The work will consist of removing the existing fan assembly and water coils. New work shall consist of cabinet refurbishment and installation of a new fan wall and water coils. SCAQMD reserves the right to do the proposed project in its entirety or any part thereof.

INDEX - The following are contained in this RFP:

Section I	Background/Information
Section II	Contact Person
Section III	Schedule of Events
Section IV	Participation in the Procurement Process
Section V	Statement of Work/Schedule of Deliverables
Section VI	Required Qualifications
Section VII	Proposal Submittal Requirements
Section VIII	Proposal Submission
Section IX	Proposal Evaluation/Contractor Selection Criteria
Section X	Cost Proposal and References
Section XI	Draft Contract

Attachment A – Statement of Work
Attachment B - Certifications and Representations
Attachment C – Payment Schedule
Attachment D – Appendix

SECTION I: BACKGROUND/INFORMATION

SCAQMD is a regional governmental agency responsible for the regulation of sources of air contaminants in the South Coast Air Basin. SCAQMD's headquarters is located at 21865 Copley Drive, Diamond Bar, California 91765 and consists of four interconnected buildings designated as the North Office Tower, South Office Tower, Laboratory and Conference Center/Cafeteria.

SECTION II: CONTACT PERSON:

Questions regarding the content or intent of this RFP or on procedural matters should be addressed to:

Bruce Jacobson
Building Maintenance Manager
SCAQMD
21865 Copley Drive
Diamond Bar, CA 91765-4178
(909) 396-2289
(909) 396-3964 Fax
bjacobson@aqmd.gov

Doug Underwood
Building Supervisor
SCAQMD
21865 Copley Drive
Diamond Bar, Ca 91765-4178
(909) 396-2278
(909) 396-3964 Fax
dunderwood@aqmd.gov

SECTION III: SCHEDULE OF EVENTS

June 5, 2015	RFP Released
June 18, 2015	Mandatory Bidder's Conference
July 8, 2015	Proposals Due – No Later Than 2:00 pm
July 8– July 22, 2015	Proposal Evaluations
August 7, 2015	Anticipated Contract Execution

MANDATORY BIDDER'S CONFERENCE - A bidder's conference will be held on:

Date: June 18, 2015
Time: 10:00 AM
Location: 21865 Copley Dr
Diamond Bar, CA 91765
Room CC-2

Those interested in participating must make reservations to attend the Mandatory Bidder's Conference by calling Verna Negrete at (909) 396-2807.

Bids/proposals will not be accepted from businesses that do not send an authorized representative to the mandatory bidder's conference.

PRE BID INQUIRES

All pre-bid inquires regarding this RFP #P2015-32 must be received via fax or email no later than 3:00 p.m. on July 1, 2015. Questions received after this deadline will not be acknowledged.

SECTION IV: PARTICIPATION IN THE PROCUREMENT PROCESS

A. It is the policy of SCAQMD to ensure that all businesses including minority business enterprises, women business enterprises, disabled veteran business enterprises and

small businesses have a fair and equitable opportunity to compete for and participate in SCAQMD contracts.

B. Definitions:

The definition of minority, women or disadvantaged business enterprises set forth below is included for purposes of determining compliance with the affirmative steps requirement described in Paragraph G below on procurements funded in whole or in part with federal grant funds which involve the use of subcontractors. The definition provided for disabled veteran business enterprise, local business, small business enterprise, low-emission vehicle business and off-peak hour's delivery business are provided for purposes of determining eligibility for point or cost considerations in the evaluation process.

1. "Women business enterprise" (WBE) as used in this policy means a business enterprise that meets all of the following criteria:
 - a. a business that is at least 51 percent owned by one or more women, or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more or women.
 - b. a business whose management and daily business operations are controlled by one or more women.
 - c. a business which is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign-based business.
2. "Disabled veteran" as used in this policy is a United States military, naval, or air service veteran with at least 10 percent service-connected disability who is a resident of California.
3. "Disabled veteran business enterprise" (DVBE) as used in this policy means a business enterprise that meets all of the following criteria:
 - a. is a sole proprietorship or partnership of which at least 51 percent is owned by one or more disabled veterans or, in the case of a publicly owned business, at least 51 percent of its stock is owned by one or more disabled veterans; a subsidiary which is wholly owned by a parent corporation but only if at least 51 percent of the voting stock of the parent corporation is owned by one or more disabled veterans; or a joint venture in which at least 51 percent of the joint venture's management and control and earnings are held by one or more disabled veterans.
 - b. the management and control of the daily business operations are by one or more disabled veterans. The disabled veterans who exercise management and control are not required to be the same disabled veterans as the owners of the business.
 - c. is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, firm, or other foreign-based business.

4. "Local business" as used in this policy means a company that has an ongoing business within geographical boundaries of SCAQMD at the time of bid or proposal submittal and performs 90% of the work related to the contract within the geographical boundaries of SCAQMD and satisfies the requirements of subparagraph H below.
5. "Small business" as used in this policy means a business that meets the following criteria:
 - a. 1) an independently owned and operated business; 2) not dominant in its field of operation; 3) together with affiliates is either:
 - A service, construction, or non-manufacturer with 100 or fewer employees, and average annual gross receipts of ten million dollars (\$10,000,000) or less over the previous three years, or
 - A manufacturer with 100 or fewer employees.
 - b. Manufacturer means a business that is both of the following:
 - 1) Primarily engaged in the chemical or mechanical transformation of raw materials or processed substances into new products.
 - 2) Classified between Codes 311000 and 339000, inclusive, of the North American Industrial Classification System (NAICS) Manual published by the United States Office of Management and Budget, 2007 edition.
6. "Joint ventures" as defined in this policy pertaining to certification means that one party to the joint venture is a DVBE or small business and owns at least 51 percent of the joint venture.
7. "Low-Emission Vehicle Business" as used in this policy means a company or contractor that uses low-emission vehicles in conducting deliveries to SCAQMD. Low-emission vehicles include vehicles powered by electric, compressed natural gas (CNG), liquefied natural gas (LNG), liquefied petroleum gas (LPG), ethanol, methanol, hydrogen and diesel retrofitted with particulate matter (PM) traps.
8. "Off-Peak Hours Delivery Business" as used in this policy means a company or contractor that commits to conducting deliveries to SCAQMD during off-peak traffic hours defined as between 10:00 a.m. and 3:00 p.m.
9. "Benefits Incentive Business" as used in this policy means a company or contractor that provides janitorial, security guard or landscaping services to SCAQMD and commits to providing employee health benefits (as defined below in Section VIII.D.2.d) for full time workers with affordable deductible and co-payment terms.
10. "Minority Business Enterprise" as used in this policy means a business that is at least 51 percent owned by one or more minority person(s), or in the case of any business

whose stock is publicly held, at least 51 percent of the stock is owned by one or more or minority persons.

- a. a business whose management and daily business operations are controlled by one or more minority persons.
- b. a business which is a sole proprietorship, corporation, or partnership with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign-based business.
- c. "Minority person" for purposes of this policy, means a Black American, Hispanic American, Native-American (including American Indian, Eskimo, Aleut, and Native Hawaiian), Asian-Indian (including a person whose origins are from India, Pakistan, and Bangladesh), Asian-Pacific-American (including a person whose origins are from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the United States Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, and Taiwan).

11. "Disadvantaged Business Enterprise" as used in this policy means a business that is an entity owned and/or controlled by a socially and economically disadvantaged individual(s) as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note) (10% statute), and Public Law 102-389 (42 U.S.C. 4370d)(8% statute), respectively;

- a Small Business Enterprise (SBE);
- a Small Business in a Rural Area (SBRA);
- a Labor Surplus Area Firm (LSAF); or
- a Historically Underutilized Business (HUB) Zone Small Business Concern, or a concern under a successor program.

- C. Under Request for Quotations (RFQ), DVBEs, DVBE business joint ventures, small businesses, and small business joint ventures shall be granted a preference in an amount equal to 5% of the lowest cost responsive bid. Low-Emission Vehicle Businesses shall be granted a preference in an amount equal to 5 percent of the lowest cost responsive bid. Off-Peak Hours Delivery Businesses shall be granted a preference in an amount equal to 2 percent of the lowest cost responsive bid. Local businesses (if the procurement is not funded in whole or in part by federal grant funds) shall be granted a preference in an amount equal to 2% of the lowest cost responsive bid.
- D. Under Request for Proposals, DVBEs, DVBE joint ventures, small businesses, and small business joint ventures shall be awarded ten (10) points in the evaluation process. A non-DVBE or large business shall receive seven (7) points for subcontracting at least twenty-five (25%) of the total contract value to a DVBE and/or small business. Low-Emission Vehicle Businesses shall be awarded five (5) points in the evaluation process. On procurements which are not funded in whole or in part by federal grant funds local businesses shall receive five (5) points. Off-Peak Hours Delivery Businesses shall be awarded two (2) points in the evaluation process.
- E. SCAQMD will ensure that discrimination in the award and performance of contracts does not occur on the basis of race, color, sex, national origin, marital status, sexual

preference, creed, ancestry, medical condition, or retaliation for having filed a discrimination complaint in the performance of SCAQMD contractual obligations.

- F. SCAQMD requires Contractor to be in compliance with all state and federal laws and regulations with respect to its employees throughout the term of any awarded contract, including state minimum wage laws and OSHA requirements.
- G. When contracts are funded in whole or in part by federal funds, and if subcontracts are to be let, the Contractor must comply with the following, evidencing a good faith effort to solicit disadvantaged businesses. Contractor shall submit a certification signed by an authorized official affirming its status as a MBE or WBE, as applicable, at the time of contract execution. SCAQMD reserves the right to request documentation demonstrating compliance with the following good faith efforts prior to contract execution.
 - 1. Ensure Disadvantaged Business Enterprises (DBEs) are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 - 2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
 - 3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and Local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
 - 4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
 - 5. Using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.
 - 6. If the prime contractor awards subcontracts, require the prime contractor to take the above steps.
- H. To the extent that any conflict exists between this policy and any requirements imposed by federal and state law relating to participation in a contract by a certified MBE/WBE/DVBE as a condition of receipt of federal or state funds, the federal or state requirements shall prevail.
- I. When contracts are not funded in whole or in part by federal grant funds, a local business preference will be awarded. For such contracts that involve the purchase of commercial

off-the-shelf products, local business preference will be given to suppliers or distributors of commercial off-the-shelf products who maintain an ongoing business within the geographical boundaries of SCAQMD. However, if the subject matter of the RFP or RFQ calls for the fabrication or manufacture of custom products, only companies performing 90% of the manufacturing or fabrication effort within the geographical boundaries of SCAQMD shall be entitled to the local business preference.

J. In compliance with federal fair share requirements set forth in 40 CFR Part 33, SCAQMD shall establish a fair share goal annually for expenditures with federal funds covered by its procurement policy.

SECTION V: STATEMENT OF WORK/SCHEDULE OF DELIVERABLES

Statement of Work ---See Attachment "A"

SECTION VI: REQUIRED QUALIFICATIONS

SCAQMD will enter into a contract agreement with a "B" GENERAL CONTRACTOR and/or C-20 HVAC CONTRACTOR only. Should the prime CONTRACTOR substitute a subcontractor for any of the responsibilities or obligations covered under this agreement without SCAQMD's prior written approval, it will result in termination of the prime contract.

The successful CONTRACTOR must furnish evidence of workers' compensation insurance in accordance with California statutory requirements, general liability insurance, and automobile liability insurance in accordance with provision 7 of the attached Draft Contract.

SECTION VII: PROPOSAL SUBMITTAL REQUIREMENTS

Submitted proposals must follow the format outlined below and all requested information must be supplied. Failure to submit proposals in the required format will result in elimination from proposal evaluation.

Each proposal must be submitted in three separate volumes:

- Volume I - Technical Proposal
- Volume II - Cost Proposal
- Volume III - Certifications and Representations included in Attachment B to this RFP, should be executed by an authorized official of the Contractor.

A separate cover letter signed by the person or persons authorized to represent the CONTRACTOR shall accompany the proposal. The cover letter shall include the CONTRACTOR's business name, address, telephone number, CONTRACTOR's license number, and DIR Registration number.

CONTRACTOR'S contact information as follows shall be included in the cover letter:

1. Address and telephone number of office in, or nearest to, Diamond Bar, California.

2. Name and title of firm's representative designated as contact.

A separate Table of Contents shall be provided for Volumes I and II.

VOLUME I - TECHNICAL PROPOSAL

DO NOT INCLUDE ANY COST INFORMATION IN THE TECHNICAL VOLUME

Summary (Section A) - State overall approach to meeting the objectives and satisfying the statement of work to be performed, the sequence of activities, and a description of methodology or techniques to be used.

Program Schedule (Section B) - Provide projected milestones and/or benchmarks for submitting reports within the total time allowed.

Qualifications (Section C) - Describe the technical capabilities of the firm. Provide references of other similar projects performed during the last five years demonstrating ability to successfully complete the project on the attached form. Include contact name, title, and telephone number for any references listed.

Assigned Personnel (Section D) - Provide the following information on the staff to be assigned to this project:

List all key personnel assigned to the project by level and name. Provide a resume or similar statement of the qualifications of the lead person and all key personnel assigned to the project. Substitution of the lead person or key personnel once contract is executed and project is started will not be permitted without prior written approval of SCAQMD.

Subcontractors (Section E) - This project may require expertise in multiple technical areas. List all subcontractors that may be used and the work to be performed by them on the form provided.

Additional Data (Section F) - All CONTRACTOR's and Subcontractors shall possess a current contractor's license issued by the Contractors State License Board (CSLB) specific to the required trade and shall be registered PWC-100 with the Department of Industrial Relations (DIR).

VOLUME II - COST PROPOSAL

Name and Address - The Cost Proposal shall list the name and complete address including CONTRACTOR's license number of the Proposer on the provided forms or in a similar format.

Cost Proposal – SCAQMD anticipates awarding a fixed price contract. Cost information must be provided as listed below.

1. Detail information must be provided by the following categories:
 - A. Labor Costs - List the hourly billing rate for each level of staff. A breakdown of the proposed billing rates must identify the direct labor rate, overhead rate and amount, fringe benefit rate and amount, General and Administrative rate and amount, and proposed profit.
 - B. Subcontractor Costs - Identify subcontractors by name, and list subcontractor project costs. Substitution of the subcontractors once proposal is submitted will not be permitted without written approval of SCAQMD.
 - C. Parts and Materials Costs – Identify costs for all parts and materials for each air handler.

VOLUME III - CERTIFICATIONS AND REPRESENTATIONS (see Attachment B to this RFP)

SECTION VIII: PROPOSAL SUBMISSION

All proposals must be submitted according to specifications set forth in Section VII above. Failure to adhere to these specifications may be cause for rejection of proposal. **It is the responsibility of each bidder to frequently check SCAQMD's website at for all updates and addendums prior to submitting a bid for the project.**

Signature - All proposals should be signed by an authorized representative of the Proposer.

Due Date - The Proposer shall submit five (5) complete copies of the proposal in a sealed envelope, plainly marked in the upper left-hand corner with the name and address of the Proposer and the words "Request for Proposals #2015-32." **All proposals are due no later than 2:00 p.m., July 8, 2015, and should be directed to:**

Procurement Unit
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178
(909) 396-3520

Late bids/proposals will not be accepted under any circumstances.

Grounds for Rejection - A proposal may be immediately rejected if:

- It is not prepared in the format described, or
- It is signed by an individual not authorized to represent the firm.

Modification or Withdrawal - Once submitted, proposals cannot be altered without the prior written consent of SCAQMD. All proposals shall constitute firm offers and may not be withdrawn for a period of ninety (90) days following the last day to accept proposals.

SECTION IX: PROPOSAL EVALUATION/CONTRACTOR SELECTION CRITERIA

- A. Proposals will be evaluated by a panel of three to five SCAQMD staff members familiar with the subject matter of the project. The panel shall be appointed by the Executive Officer or his designee. In addition, the evaluation panel may include such outside public sector or academic community expertise as deemed desirable by the Executive Officer. The panel will make a recommendation to the Executive Officer and/or the Governing Board of SCAQMD for final selection of a contractor and negotiation of a contract.
- B. Each member of the evaluation panel shall be accorded equal weight in his or her rating of proposals. The evaluation panel members shall evaluate the proposals according to the specified criteria and numerical weightings set forth below.

1. Proposal Evaluation Criteria

<u>Projects Requiring Unique Knowledge or Abilities</u>	
Understanding of Requirement	20
Technical Approach	20
Contractor Qualifications	20
Previous Experience on Similar Projects	10
Cost	<u>30</u>
TOTAL	100

Additional Points

Small Business or Small Business Joint Venture	10
DVBE or DVBE Joint Venture	10
Use of DVBE or Small Business Subcontractors	7
Low-Emission Vehicle Business	5
Local Business (Non-Federally Funded Projects Only)	5
Off-Peak Hours Delivery Business	2

The cumulative points awarded for small business, DVBE, use of small business or DVBE subcontractors, low-emission vehicle business, local business, and off-peak hours delivery business shall not exceed 15 points.

Self-Certification for Additional Points

The award of these additional points shall be contingent upon Proposer completing the Self-Certification section of Attachment A – Certifications and Representations and/or inclusion of a statement in the proposal self-certifying that Proposer qualifies for additional points as detailed above.

- 2. To receive additional points in the evaluation process for the categories of Small Business or Small Business Joint Venture, DVBE or DVBE Joint Venture or Local Business (for non-federally funded projects), the proposer must submit a self-certification or certification from the State of California Office of Small Business Certification and Resources at the time of proposal submission certifying that the proposer meets the requirements set forth in Section III. To

receive points for the use of DVBE and/or Small Business subcontractors, at least 25 percent of the total contract value must be subcontracted to DVBEs and/or Small Businesses. To receive points as a Low-Emission Vehicle Business, the proposer must demonstrate to the Executive Officer, or designee, that supplies and materials delivered to SCAQMD are delivered in vehicles that operate on either clean-fuels or if powered by diesel fuel, that the vehicles have particulate traps installed. To receive points as an Off-Peak Hours Delivery Business, the proposer must submit, at proposal submission, certification of its commitment to delivering supplies and materials to SCAQMD between the hours of 10:00 a.m. and 3:00 p.m. The cumulative points awarded for small business, DVBE, use of Small Business or DVBE Subcontractors, Local Business, Low-Emission Vehicle Business and Off-Peak Hour Delivery Business shall not exceed 15 points.

The Procurement Section will be responsible for monitoring compliance of suppliers awarded purchase orders based upon use of low-emission vehicles or off-peak traffic hour delivery commitments through the use of vendor logs which will identify the contractor awarded the incentive. The purchase order shall incorporate terms which obligate the supplier to deliver materials in low-emission vehicles or deliver during off-peak traffic hours. The Receiving department will monitor those qualified supplier deliveries to ensure compliance to the purchase order requirements. Suppliers in non-compliance will be subject to a two percent of total purchase order value penalty. The Procurement Manager will adjudicate any disputes regarding either low-emission vehicle or off-peak hour deliveries.

3. For procurement of projects requiring technical or unique knowledge and abilities, technical factors including past experience shall be weighted at 70 points and cost shall be weighted at 30 points. A proposal must receive at least 56 out of 70 points for projects requiring technical expertise or special projects requiring unique knowledge and abilities, in order to be deemed qualified for award.
 4. The lowest-cost proposal will be awarded the maximum cost points available and all other cost proposals will receive points on a prorated basis. For example, if the lowest-cost proposal is \$1,000 and the maximum points available are 30 points, this proposal would receive the full 30 points. If the next lowest-cost proposal is \$1,100, it would receive 27 points reflecting the fact that it is 10% higher than the lowest cost (90% of 30 points = 27 points).
- C. During the selection process, the evaluation panel may wish to interview some proposers for clarification purposes only. No new material will be permitted at this time. Additional information provided during the bid review process is limited to clarification by the Proposer of information presented in his/her proposal, upon request by SCAQMD.
- D. The Executive Officer or Governing Board may award the contract to a Proposer other than the Proposer receiving the highest rating in the event the Governing Board determines that another Proposer from among those technically qualified would

provide the best value to SCAQMD considering cost and technical factors. The determination shall be based solely on the Evaluation Criteria contained in the RFP, on evidence provided in the proposal and on any other evidence provided during the bid review process.

- E. Selection will be made based on the above-described criteria and rating factors. The selection will be made by and is subject to Executive Officer or Governing Board approval. Proposers may be notified of the results by letter.
- F. The Governing Board has approved a Bid Protest Procedure which provides a process for a bidder or prospective bidder to submit a written protest to SCAQMD's Procurement Manager in recognition of two types of protests: Protest Regarding Solicitation and Protest Regarding Award of a Contract. Copies of the Bid Protest Policy can be secured through a request to SCAQMD's Procurement Department.
- G. The Executive Officer or Governing Board may award contracts to more than one proposer if in (his or their) sole judgment the purposes of the (contract or award) would best be served by selecting multiple proposers.
- H. If additional funds become available, the Executive Officer or Governing Board may increase the amount awarded. The Executive Officer or Governing Board may also select additional proposers for a grant or contract if additional funds become available.
- I. Disposition of Proposals – Pursuant to SCAQMD's Procurement Policy and Procedure, SCAQMD reserves the right to reject any or all proposals. All proposals become the property of SCAQMD, and are subject to the California Public Records Act. One copy of the proposal shall be retained for SCAQMD files. Additional copies and materials will be returned only if requested and at the proposer's expense.
- J. **If proposal submittal is for a Public Works project as defined by State of California Labor Code Section 1720, Proposer is required to include Contractor Registration No. in Attachment A. Proposal submittal will be deemed as non-responsive and bidder will be disqualified if Contractor Registration No. is not included in Attachment A. Proposer is alerted to changes to California Prevailing Wage compliance requirements as defined in Senate Bill 854 (Stat. 2014, Chapter 28).**

SECTION X: Cost Proposal and References

Name: _____

Address: _____

City, State, ZipCode: _____

Contractor License Number: _____

Please fill in the following cost breakdown. Include any other costs that may not be listed, in order to provide an accurate total bid amount.

AIR HANDLER #1 NEW EQUIPMENT DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System			
B. CHW Cold Deck Coil cu/cu (Refer to Coil Schedule)			
C. HW Pre-Heat Coil cu/cu (Refer to Coil Schedule)			
D. HW Hot Deck Coil cu/cu (Refer to Coil Schedule)			
E. Three (3) Access Doors 21" x 60" (WxH)			
F. Hot Deck Damper 96" x 24" (WxH) with DDC Actuator			
G. Cold Deck Damper 96" x 24" (WxH) with DDC Actuator			
H. DDC Valve /Actuator – HW Reheat Coil			
I. DDC Valve /Actuator – CHW Cold Deck Coili			
J. DDC Valve Actuator – HW Hot Deck Coil			
K. Duct Static Pressure Sensors (QTY 2) – Hot & Cold Deck			
L. Integration of fan wall PLC controller via BAC net IP			
M. Extended 5-Year Warranty			
Total			

AIR HANDLER #1 DEMOLITION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Existing Fan and Motor Assembly			
B. Removal of Existing Coils			
C. Removal of Existing Access Doors and Frames			
D. Removal of Existing Dampers and Actuators			
F. Removal of CHW Cold Deck Coil DDC Valve and Actuator			
G. Removal of HW Reheat Coil DDC Valve and Actuator			
H. Removal of HW Hot Deck Coil DDC Valve and Actuator			
Total			

AIR HANDLER #1 NEW EQUIPMENT INSTALLATION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System			
B. Electrical Control Panel			
C. CHW Cold Deck Coil with Stainless Steel Drain Pan			
D. HW Pre-Heat Coil			
E. HW Hot Deck Coil			
F. Three (3) Access Doors			
G. Hot Deck Damper with DDC actuator			
H. Cold Deck Damper with DDC actuator			
I. DDC Valve /Actuator – HW Reheat Coil			
J. DDC Valve /Actuator – CHW Cold Deck Coli			
K. DDC Valve Actuator – HW Hot Deck Coil			
L. Duct Static Pressure Sensors (QTY 2) – Hot & Cold Deck			
M. Integration of Fan wall PLC Controller via BAC net IP			
N. Audit and Energy Analysis			
O. Contingency 10% Total Air Handler #1 Amount			
Total			

AIR HANDLER #2 NEW EQUIPMENT DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
A. Fan wall System			
B. CHW Cold Deck Coil cu/cu			
C. HW Pre-Heat Coil cu/cu			
D. HW Hot Deck cu/cu			
E. Two (2) Access Doors - 21" x 60" (WXH)			
F. One (1) Access Door - 21" x 48" (WXH)			
G. One (1) Access Door - 26" x 60" (WXH)			
H. Hot Deck Damper 120" x 24" (WXH) with DDC actuator			
I. Cold Deck Damper 120" x 24" (WXH) with DDC actuator			
J. DDC Valve /Actuator – HW Reheat Coil			
K. DDC Valve /Actuator – CHW Cold Deck Coli			
L. DDC Valve Actuator – HW Hot Deck Coil			
M. Duct Static Pressure Sensors (QTY 2) – Hot & Cold Deck			
N. Integration of fan wall PLC controller via BAC net IP			
O. Extended 5-year warranty			
Total			

AIR HANDLER #2 DEMOLITION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Existing Fan and Motor Assembly			
B. Removal of Existing Coils			
C. Removal of Existing Access Doors and Frames			
D. Removal of Existing Dampers and Actuators			
F. Removal of CHW Cold Deck Coil DDC Valve and Actuator			
G. Removal of HW Reheat Coil DDC Valve and Actuator			
H. Removal of HW Hot Deck Coil DDC Valve and Actuator			
Total			

AIR HANDLER #2 NEW EQUIPMENT INSTALLATION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System			
B. Electrical Control Panel			
C. CHW Cold Deck Coil with Stainless Steel Drain Pan			
D. HW Pre-Heat Coil			
E. HW Hot Deck Coil			
F. Four (4) Access Doors			
G. Hot Deck Damper with DDC Actuator			
H. Cold Deck Damper with DDC Actuator			
I. DDC Valve/Actuator – HW Preheat Coil			
J. DDC Valve /Actuator – CHW Cold Deck Coli			
K. DDC Valve Actuator – HW Hot Deck Coil			
L. Duct Static Pressure Sensors (QTY 2) – Hot & Cold Deck			
M. Integration of fan wall PLC controller via BAC net IP			
N. Audit and Energy Analysis			
O. Contingency 10% Total Air Handler #2 Amount			
Total			

AIR HANDLER #10 NEW EQUIPMENT DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System			
B. CHW Coil cu/cu			
C. HW Coil cu/cu			
D. Two (2) Access Doors - 21" x 60" (WxH)			
E. Two (2) Access Doors - 21" x 54" (WxH)			
F. Outside air Damper 77" x 56" DDC Actuator			
G. DDC Valve/Actuator – CHW Coils			
H. DDC Valve/Actuator – HW Coil			
I. Duct Static Pressure Sensor (QTY 1) – Supply Duct			
J. Integration of Fan Wall PLC Controller via BAC net IP			
K. Extended 5-Year Warranty			
Total			

AIR HANDLER #10 DEMOLITION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Existing Fan and Motor Assembly			
B. Removal of Existing Coils			
C. Removal of Existing Access Doors and Frames			
D. Removal of Existing Dampers and Actuator			
F. Removal of CHW Cold Deck Coil DDC Valve and Actuator			
G. Removal of HW Reheat Coil DDC Valve and Actuator			
H. Removal of HW Hot Deck Coil DDC Valve and Actuator			
Total			

AIR HANDLER #10 NEW EQUIPMENT INSTALLATION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System			
B. Electrical Control Panel			
C. CHW Coil cu/cu with Stainless Steel Drain Pan			
D. HW Coil cu/cu			
E. Four (4) Access Doors			
F. Outside Damper 77" X 56: (WxH) with DDC Actuator			
G. DDC Valve/Actuator – HW Coil			
H. DDC Valve/Actuator – CHW Coil			
I. Duct Static Pressure Sensors (QTY 1)			
J. Integration of fan wall PLC controller via BAC Net IP			
K. Audit and Energy Analysis			
Total			

AIR HANDLER #10 Refinish Interior and Exterior Air Handler	QUANTITY	UNIT COST	TOTAL COST
A. Preparation Of Equipment For Paint			
B. Application of Primer and Paint			
C. Contingency 10% Total Air Handler #10 Amount			

AIR HANDLER #14 NEW EQUIPMENT DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System (Supply and Return)			
B. CHW Coil cu/cu With Stainless Steel Drain Pan			
C. Seven (7) Access Doors - 21" X 60" (WxH)			
D. Exhaust Damper 60" X 36" (WxH) With DDC Actuator			
E. Make Up Air Damper 24" X 24" (WxH) With DDC Actuator			
F. Outside Air Damper 42" X 61" (WxH) With DDC Actuator			
G. Return Air Damper 54" X 61" (WxH) With DDC Actuator			
H. DDC Valve/Actuator – CHW Coil			
I. Duct Static Pressure Sensor (Qty 1) – Supply Air			
J. Integration of fan wall PLC controller via BAC Net IP			
K. Extended 5-Year Warranty			
Total			

AIR HANDLER #14 DEMOLITION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Existing Fan and Motor Assembly			
B. Removal of Existing Coil			
C. Removal of Existing Access Doors and Frames			
D. Removal of Existing Dampers and Actuators			
F. Removal of CHW Coil DDC Valve and Actuator			
Total			

AIR HANDLER #14 NEW EQUIPMENT INSTALLATION (LABOR)	QUANTITY	UNIT COST	TOTAL COST
A. Fan Wall System (Supply and Return)			
B. Electrical Control Panel			
C. CHW Coil with Stainless Steel Drain Pan			
D. Seven (7) Access Doors			
E. Exhaust Damper With DDC Actuator			
F. Make Up Air Damper With DDC Actuator			
G. Outside Air Damper With DDC Actuator			
H. Return Air Damper With DDC Actuator			
I. DDC Valve /Actuator – CHW Coli			
J. Duct Static Pressure Sensors (QTY 2) – (Supply and Return)			
K. Audit and Energy Analysis			
L. Contingency 10% Total Air Handler #14 Amount			
Total			

GRAND TOTAL ALL AIR HANDLERS			
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July 8, 2015

To: South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
Attention: Procurement Department

SUBJECT: REFURBISHMENT OF PACE AIR HANDLERS VARIOUS AREAS

Based on the GRAND TOTAL cost breakdown provided above, the undersigned, having carefully examined SCAQMD's specification attached hereto, hereby propose and agrees to furnish all necessary labor, materials, equipment, and any other incidentals necessary for the refurbishment of pace air handlers various areas in strict conformity with SCAQMD's specification for the stipulated sum of:

\$ _____

_____ Dollars \$ _____

The above pricing is all inclusive. If this proposal is accepted by SCAQMD, the undersigned agrees to execute a contract for work to be accomplished under this proposal and to provide evidence of required workers' compensation insurance and general and auto liability insurance as described in provision 7 of the attached draft contract. SCAQMD reserves the right to do the proposed project in its entirety or any part thereof.

Proposer's Name: _____

Proposer's Address: _____

Authorized Signature: _____

Title: _____

REFERENCES

Please provide information on minimum of five clients for whom your company provided services, within the past five years, which are similar in scope and size to those described in this RFP #P2015-32 so we may contact them for references.

1. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____
2. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____
3. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____
4. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____
5. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____
6. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____
7. Company Name: _____
Address: _____
Contact Person: _____
Phone Number: _____
Project Description: _____

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT DESIGNATED SUBCONTRACTOR LIST

Subcontractor Name: _____ **Contact Person:** _____

Address: _____

Description of work: _____

License & DIR Number: _____ **Amount of Subcontract:** _____

Subcontractor Name: _____ **Contact Person:** _____

Address: _____

Description of work: _____

License & DIR Number: _____ **Amount of Subcontract:** _____

Subcontractor Name: _____ **Contact Person:** _____

Address: _____

Description of work: _____

License & DIR Number: _____ **Amount of Subcontract:** _____

Subcontractor Name: _____ **Contact Person:** _____

Address: _____

Description of work: _____

License & DIR Number: _____ **Amount of Subcontract:** _____

Subcontractor Name: _____ **Contact Person:** _____

Address: _____

Description of work: _____

License & DIR Number: _____ **Amount of Subcontract:** _____

Subcontractor Name: _____ **Contact Person:** _____

Address: _____

Description of work: _____

License & DIR Number: _____ **Amount of Subcontract:** _____

SECTION XI: DRAFT CONTRACT (Provided as a sample only)



**South Coast
Air Quality Management District**

This Contract consists of *** pages.

1. PARTIES - The parties to this Contract are the South Coast Air Quality Management District (referred to here as "SCAQMD") whose address is 21865 Copley Drive, Diamond Bar, California 91765-4178, and *** (referred to here as "CONTRACTOR") whose address is ***.
2. RECITALS
 - A. SCAQMD is the local agency with primary responsibility for regulating stationary source air pollution within the geographical boundaries of the South Coast Air Quality Management District in the State of California. SCAQMD desires to contract with CONTRACTOR for services described in Attachment 1 - Statement of Work, attached here and made a part here by this reference. CONTRACTOR warrants that it is well-qualified and has the experience to provide such services on the terms set forth here.
 - B. CONTRACTOR is authorized to do business in the State of California and attests that it is in good tax standing with the California Franchise Tax Board.
 - C. All parties to this Contract have had the opportunity to have this Contract reviewed by their attorney.
3. PERFORMANCE REQUIREMENTS
 - A. CONTRACTOR agrees to obtain and maintain the required licenses, permits, and all other appropriate legal authorizations from all applicable federal, state and local jurisdictions and pay all applicable fees. CONTRACTOR further agrees to immediately notify SCAQMD in writing of any change in its licensing status which has a material impact on the CONTRACTOR's performance under this Contract.
 - B. CONTRACTOR shall submit reports to SCAQMD as outlined in Attachment 1 - Statement of Work. All reports shall be submitted in an environmentally friendly format: recycled paper; stapled, not bound; black and white, double-sided print; and no three-ring, spiral, or plastic binders or cardstock covers. SCAQMD reserves the right to review, comment, and request changes to any report produced as a result of this Contract.
 - C. CONTRACTOR shall perform all tasks set forth in Attachment 1 - Statement of Work, and shall not engage, during the term of this Contract, in any performance of work that is in direct or indirect conflict with duties and responsibilities set forth in Attachment 1 - Statement of Work.
 - D. CONTRACTOR shall be responsible for exercising the degree of skill and care customarily required by accepted professional practices and procedures subject to SCAQMD's final approval which SCAQMD will not unreasonably withhold. Any costs incurred due to the failure to meet the foregoing standards, or otherwise defective services which require re-performance, as directed by SCAQMD, shall be the responsibility of CONTRACTOR. CONTRACTOR's failure to achieve the performance goals and objectives stated in Attachment 1- Statement of Work, is not a basis for requesting re-performance unless work conducted by CONTRACTOR is deemed by SCAQMD to have failed the foregoing standards of performance.
 - E. CONTRACTOR shall post a performance bond in the amount of *** Dollars (\$***) from a surety authorized to issue such bonds within the State. [OPTIONAL]
 - F. SCAQMD has the right to review the terms and conditions of the performance bond and to request modifications thereto which will ensure that SCAQMD will be compensated in the event CONTRACTOR fails to perform and also provides SCAQMD with the opportunity to review the qualifications of the entity

designated by the issuer of the performance bond to perform in CONTRACTOR's absence and, if necessary, the right to reject such entity. [OPTIONAL]

G. CONTRACTOR shall require its subcontractors to abide by the requirements set forth in this Contract.

4. TERM - The term of this Contract is from the date of execution by both parties (or insert date) to ***, unless further extended by amendment of this Contract in writing. No work shall commence until this Contract is fully executed by all parties. [Remove this last sentence if Pre-Contract Clause is used]

5. TERMINATION

A. In the event any party fails to comply with any term or condition of this Contract, or fails to provide services in the manner agreed upon by the parties, including, but not limited to, the requirements of Attachment 1 – Statement of Work, this failure shall constitute a breach of this Contract. The non-breaching party shall notify the breaching party that it must cure this breach or provide written notification of its intention to terminate this contract. Notification shall be provided in the manner set forth in Clause 12. The non-breaching party reserves all rights under law and equity to enforce this contract and recover damages.

B. SCAQMD reserves the right to terminate this Contract, in whole or in part, without cause, upon thirty (30) days' written notice. Once such notice has been given, CONTRACTOR shall, except as and to the extent or directed otherwise by SCAQMD, discontinue any Work being performed under this Contract and cancel any of CONTRACTOR's orders for materials, facilities, and supplies in connection with such Work, and shall use its best efforts to procure termination of existing subcontracts upon terms satisfactory to SCAQMD. Thereafter, CONTRACTOR shall perform only such services as may be necessary to preserve and protect any Work already in progress and to dispose of any property as requested by SCAQMD.

C. CONTRACTOR shall be paid in accordance with this Contract for all Work performed before the effective date of termination under Clause 5.B. Before expiration of the thirty (30) days' written notice, CONTRACTOR shall promptly deliver to SCAQMD all copies of documents and other information and data prepared or developed by CONTRACTOR under this Contract with the exception of a record copy of such materials, which may be retained by CONTRACTOR.

6. STOP WORK – SCAQMD may, at any time, by written notice to CONTRACTOR, require CONTRACTOR to stop all or any part of the work tasks in this Contract. A stop work order may be issued for reasons including, but not limited to, the project exceeding the budget, out of scope work, delay in project schedule, or misrepresentations. Upon receipt of the stop work order, CONTRACTOR shall immediately take all necessary steps to comply with the order. CONTRACTOR shall resume the work only upon receipt of written instructions from SCAQMD cancelling the stop work order. CONTRACTOR agrees and understands that CONTRACTOR will not be paid for performing work while the stop work order is in effect, unless SCAQMD agrees to do so in its written cancellation of the stop work order.

7. INSURANCE

A. CONTRACTOR shall furnish evidence to SCAQMD of workers' compensation insurance for each of its employees, in accordance with either California or other states' applicable statutory requirements prior to commencement of any work on this Contract.

B. CONTRACTOR shall furnish evidence to SCAQMD of general liability insurance with a limit of at least \$1,000,000 per occurrence, and \$2,000,000 in a general aggregate prior to commencement of any work on this Contract. SCAQMD shall be named as an additional insured on any such liability policy, and thirty (30) days written notice prior to cancellation of any such insurance shall be given by CONTRACTOR to SCAQMD.

- C. CONTRACTOR shall furnish evidence to SCAQMD of automobile liability insurance with limits of at least \$100,000 per person and \$300,000 per accident for bodily injuries, and \$50,000 in property damage, or \$1,000,000 combined single limit for bodily injury or property damage, prior to commencement of any work on this Contract. SCAQMD shall be named as an additional insured on any such liability policy, and thirty (30) days written notice prior to cancellation of any such insurance shall be given by CONTRACTOR to SCAQMD.
 - D. CONTRACTOR shall furnish evidence to SCAQMD of Professional Liability Insurance with an aggregate limit of not less than \$5,000,000. [OPTIONAL]
 - E. If CONTRACTOR fails to maintain the required insurance coverage set forth above, SCAQMD reserves the right either to purchase such additional insurance and to deduct the cost thereof from any payments owed to CONTRACTOR or terminate this Contract for breach.
 - F. All insurance certificates should be mailed to: SCAQMD Risk Management, 21865 Copley Drive, Diamond Bar, CA 91765-4178. **The SCAQMD Contract Number must be included on the face of the certificate.**
 - G. CONTRACTOR must provide updates on the insurance coverage throughout the term of the Contract to ensure that there is no break in coverage during the period of contract performance. Failure to provide evidence of current coverage shall be grounds for termination for breach of Contract.
8. INDEMNIFICATION - CONTRACTOR agrees to hold harmless, defend and indemnify SCAQMD, its officers, employees, agents, representatives, and successors-in-interest against any and all loss, damage, costs, lawsuits, claims, demands, causes of action judgments, attorney's fees, or any other expenses arising from or related to any third party claim against SCAQMD, its officers, employees, agents, representatives, or successors in interest that arise or result in whole or in part, from any actual or alleged act or omission of CONTRACTOR, its employees, subcontractors, agents or representatives in the performance of this Contract. This Indemnification Clause shall survive the expiration or termination (for any reason) of the Contract and shall remain in full force and effect.
9. RECORDS RETENTION, ON-SITE INSPECTIONS AND AUDIT
- A. CONTRACTOR agrees to the following Records Retention Period: maintain records related to this Contract during the Contract term and continue to retain these records for a period of three years beyond the Contract term.
 - B. SCAQMD, or its designee(s), shall have the right to conduct on-site inspections of the project and to audit records related to this Contract during the Records Retention Period. CONTRACTOR agrees to include a similar right for SCAQMD to conduct on-site inspections and audits in any related subcontract.
 - C. If an amount is found to be inappropriately expended, SCAQMD may withhold payment, or seek reimbursement, from CONTRACTOR in the amount equal to the amount which was inappropriately expended. Such withholding or reimbursement shall not be construed as SCAQMD's sole remedy and shall not relieve CONTRACTOR of its obligation to perform under the terms of this Contract.
10. CO-FUNDING [USE IF REQUIRED]
- A. CONTRACTOR shall obtain co-funding as follows: ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); ***, ***, Dollars (\$***); and ***, ***, Dollars (\$***).
 - B. If CONTRACTOR fails to obtain co-funding in the amount(s) referenced above, then SCAQMD reserves the right to renegotiate or terminate this Contract.
 - C. CONTRACTOR shall provide co-funding in the amount of ***, Dollars (\$***) for this project. If CONTRACTOR fails to provide this co-funding, then SCAQMD reserves the right to renegotiate or terminate this Contract.

11. PAYMENT

[FIXED PRICE]

- A. SCAQMD shall pay CONTRACTOR a fixed price of *** Dollars (\$***) for work performed under this Contract in accordance with Attachment 2 - Payment Schedule, attached here and included here by reference. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables as shown in Attachment 1 - Statement of Work, and the amount of charge claimed. Each invoice must be prepared in duplicate, on company letterhead, and list SCAQMD's Contract number, period covered by invoice, and CONTRACTOR's social security number or Employer Identification Number and submitted to: South Coast Air Quality Management District, Attn: ***.
- B. An amount equal to ten percent (10%) shall be withheld from all charges paid until satisfactory completion and final acceptance of work by SCAQMD. *[OPTIONAL]*
- C. SCAQMD reserves the right to disallow charges when the invoiced services are not performed satisfactorily in SCAQMD's sole judgment.

[T & M].

- A. SCAQMD shall pay CONTRACTOR a total not to exceed amount of *** Dollars (\$***), including any authorized travel-related expenses, for time and materials at rates in accordance with Attachment 2 – Cost Schedule, attached here and included here by this reference. Payment of charges shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an itemized invoice prepared and furnished by CONTRACTOR referencing line item expenditures as listed in Attachment 2 and the amount of charge claimed. Each invoice must be prepared in duplicate, on company letterhead, and list SCAQMD's Contract number, period covered by invoice, and CONTRACTOR's social security number or Employer Identification Number and submitted to: South Coast Air Quality Management District, Attn: ***.
- B. CONTRACTOR shall adhere to total tasks and/or cost elements (cost category) expenditures as listed in Attachment 2. Reallocation of costs between tasks and/or cost category expenditures is permitted up to One Thousand Dollars (\$1,000) upon prior written approval from SCAQMD. Reallocation of costs in excess of One Thousand Dollars (\$1,000) between tasks and/or cost category expenditures requires an amendment to this Contract.
- C. SCAQMD's payment of invoices shall be subject to the following limitations and requirements:
 - i) Charges for equipment, material, and supply costs, travel expenses, subcontractors, and other charges, as applicable, must be itemized by CONTRACTOR. Reimbursement for equipment, material, supplies, subcontractors, and other charges shall be made at actual cost. Supporting documentation must be provided for all individual charges (with the exception of direct labor charges provided by CONTRACTOR). SCAQMD's reimbursement of travel expenses and requirements for supporting documentation are listed below.
 - ii) CONTRACTOR's failure to provide receipts shall be grounds for SCAQMD's non-reimbursement of such charges. SCAQMD may reduce payments on invoices by those charges for which receipts were not provided.
 - iii) SCAQMD shall not pay interest, fees, handling charges, or cost of money on Contract.
- D. SCAQMD shall reimburse CONTRACTOR for travel-related expenses only if such travel is expressly set forth in Attachment 2 – Cost Schedule of this Contract or pre-authorized by SCAQMD in writing.
 - i) SCAQMD's reimbursement of travel-related expenses shall cover lodging, meals, other incidental expenses, and costs of transportation subject to the following limitations:
 - Air Transportation - Coach class rate for all flights. If coach is not available, business class rate is permissible.
 - Car Rental - A compact car rental. A mid-size car rental is permissible if car rental is shared by three or more individuals.

Lodging - Up to One Hundred Fifty Dollars (\$150) per night. A higher amount of reimbursement is permissible if pre-approved by SCAQMD.

Meals - Daily allowance is Fifty Dollars (\$50.00).

ii) Supporting documentation shall be provided for travel-related expenses in accordance with the following requirements:

Lodging, Airfare, Car Rentals - Bill(s) for actual expenses incurred.

Meals - Meals billed in excess of \$50.00 each day require receipts or other supporting documentation for the total amount of the bill and must be approved by SCAQMD.

Mileage - Beginning each January 1, the rate shall be adjusted effective February 1 by the Chief Financial Officer based on the Internal Revenue Service Standard Mileage Rate.

Other travel-related expenses - Receipts are required for all individual items.

E. SCAQMD reserves the right to disallow charges when the invoiced services are not performed satisfactorily in SCAQMD's sole judgment.

12. INTELLECTUAL PROPERTY RIGHTS - Title and full ownership rights to any software, documents, or reports developed under this Contract shall at all times remain with SCAQMD. Such material is agreed to be SCAQMD proprietary information.

A. Rights of Technical Data - SCAQMD shall have the unlimited right to use technical data, including material designated as a trade secret, resulting from the performance of services by CONTRACTOR under this Contract. CONTRACTOR shall have the right to use technical data for its own benefit.

B. Copyright - CONTRACTOR agrees to grant SCAQMD a royalty-free, nonexclusive, irrevocable license to produce, translate, publish, use, and dispose of all copyrightable material first produced or composed in the performance of this Contract.

13. NOTICES - Any notices from either party to the other shall be given in writing to the attention of the persons listed below, or to other such addresses or addressees as may hereafter be designated in writing for notices by either party to the other. Notice shall be given by certified, express, or registered mail, return receipt requested, and shall be effective as of the date of receipt indicated on the return receipt card.

SCAQMD: South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178
Attn: ***

CONTRACTOR: ***

Attn: ***

14. INDEPENDENT CONTRACTOR - CONTRACTOR is an independent contractor. CONTRACTOR, its officers, employees, agents, representatives, or subcontractors shall in no sense be considered employees or agents of SCAQMD, nor shall CONTRACTOR, its officers, employees, agents, representatives, or subcontractors be entitled to or eligible to participate in any benefits, privileges, or plans, given or extended by SCAQMD to its employees. SCAQMD will not supervise, direct, or have control over, or be responsible for, CONTRACTOR's or subcontractor's means, methods, techniques, work sequences or procedures or for the safety precautions and programs incident thereto, or for any failure by them to comply with any local, state, or federal laws, or rules or regulations, including state minimum wage laws and OSHA requirements. CONTRACTOR shall promptly notify SCAQMD of any material changes to subcontracts that affect the Contract's scope of work, deliverable schedule, and/or payment/cost schedule.

15. CONFIDENTIALITY - It is expressly understood and agreed that SCAQMD may designate in a conspicuous manner the information which CONTRACTOR obtains from SCAQMD as confidential. CONTRACTOR agrees to:
- A. Observe complete confidentiality with respect to such information, including without limitation, agreeing not to disclose or otherwise permit access to such information by any other person or entity in any manner whatsoever, except that such disclosure or access shall be permitted to employees or subcontractors of CONTRACTOR requiring access in fulfillment of the services provided under this Contract.
 - B. Ensure that CONTRACTOR's officers, employees, agents, representatives, and independent contractors are informed of the confidential nature of such information and to assure by agreement or otherwise that they are prohibited from copying or revealing, for any purpose whatsoever, the contents of such information or any part thereof, or from taking any action otherwise prohibited under this clause.
 - C. Not use such information or any part thereof in the performance of services to others or for the benefit of others in any form whatsoever whether gratuitously or for valuable consideration, except as permitted under this Contract.
 - D. Notify SCAQMD promptly and in writing of the circumstances surrounding any possession, use, or knowledge of such information or any part thereof by any person or entity other than those authorized by this clause.
 - E. Take at CONTRACTOR expense, but at SCAQMD's option and in any event under SCAQMD's control, any legal action necessary to prevent unauthorized use of such information by any third party or entity which has gained access to such information at least in part due to the fault of CONTRACTOR.
 - F. Take any and all other actions necessary or desirable to assure such continued confidentiality and protection of such information.
 - G. Prevent access to such information by any person or entity not authorized under this Contract.
 - H. Establish specific procedures in order to fulfill the obligations of this clause.
 - I. Notwithstanding the above, nothing herein is intended to abrogate or modify the provisions of Government Code Section 6250 et.seq. (Public Records Act).
16. PUBLICATION
- A. SCAQMD shall have the right of prior written approval of any document which shall be disseminated to the public by CONTRACTOR in which CONTRACTOR utilized information obtained from SCAQMD in connection with performance under this Contract.
 - B. Information, data, documents, or reports developed by CONTRACTOR for SCAQMD, pursuant to this Contract, shall be part of SCAQMD public record unless otherwise indicated. CONTRACTOR may use or publish, at its own expense, such information provided to SCAQMD. The following acknowledgment of support and disclaimer must appear in each publication of materials, whether copyrighted or not, based upon or developed under this Contract.

"This report was prepared as a result of work sponsored, paid for, in whole or in part, by the South Coast Air Quality Management District (SCAQMD). The opinions, findings, conclusions, and recommendations are those of the author and do not necessarily represent the views of SCAQMD. SCAQMD, its officers, employees, contractors, and subcontractors make no warranty, expressed or implied, and assume no legal liability for the information in this report. SCAQMD has not approved or disapproved this report, nor has SCAQMD passed upon the accuracy or adequacy of the information contained herein."
 - C. CONTRACTOR shall inform its officers, employees, and subcontractors involved in the performance of this Contract of the restrictions contained herein and require compliance with the above.

17. NON-DISCRIMINATION - In the performance of this Contract, CONTRACTOR shall not discriminate in recruiting, hiring, promotion, demotion, or termination practices on the basis of race, religious creed, color, national origin, ancestry, sex, age, or physical or mental disability and shall comply with the provisions of the California Fair Employment & Housing Act (Government Code Section 12900 et seq.), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), and all administrative rules and regulations issued pursuant to said Acts and Order.
18. SOLICITATION OF EMPLOYEES - CONTRACTOR expressly agrees that CONTRACTOR shall not, during the term of this Contract, nor for a period of six months after termination, solicit for employment, whether as an employee or independent contractor, any person who is or has been employed by SCAQMD during the term of this Contract without the consent of SCAQMD.
19. PROPERTY AND SECURITY - Without limiting CONTRACTOR obligations with regard to security, CONTRACTOR shall comply with all the rules and regulations established by SCAQMD for access to and activity in and around SCAQMD premises.
20. ASSIGNMENT - The rights granted hereby may not be assigned, sold, licensed, or otherwise transferred by either party without the prior written consent of the other, and any attempt by either party to do so shall be void upon inception.
21. NON-EFFECT OF WAIVER - The failure of CONTRACTOR or SCAQMD to insist upon the performance of any or all of the terms, covenants, or conditions of this Contract, or failure to exercise any rights or remedies hereunder, shall not be construed as a waiver or relinquishment of the future performance of any such terms, covenants, or conditions, or of the future exercise of such rights or remedies, unless otherwise provided for herein.
22. ATTORNEYS' FEES - In the event any action is filed in connection with the enforcement or interpretation of this Contract, each party shall bear its own attorneys' fees and costs.
23. FORCE MAJEURE - Neither SCAQMD nor CONTRACTOR shall be liable or deemed to be in default for any delay or failure in performance under this Contract or interruption of services resulting, directly or indirectly, from acts of God, civil or military authority, acts of public enemy, war, strikes, labor disputes, shortages of suitable parts, materials, labor or transportation, or any similar cause beyond the reasonable control of SCAQMD or CONTRACTOR.
24. SEVERABILITY - In the event that any one or more of the provisions contained in this Contract shall for any reason be held to be unenforceable in any respect by a court of competent jurisdiction, such holding shall not affect any other provisions of this Contract, and the Contract shall then be construed as if such unenforceable provisions are not a part hereof.
25. HEADINGS - Headings on the clauses of this Contract are for convenience and reference only, and the words contained therein shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Contract.
26. DUPLICATE EXECUTION - This Contract is executed in duplicate. Each signed copy shall have the force and effect of an original.

27. GOVERNING LAW - This Contract shall be construed and interpreted and the legal relations created thereby shall be determined in accordance with the laws of the State of California. Venue for resolution of any disputes under this Contract shall be Los Angeles County, California.
28. PRE-CONTRACT COSTS - Any costs incurred by CONTRACTOR prior to CONTRACTOR receipt of a fully executed Contract shall be incurred solely at the risk of the CONTRACTOR. In the event that a formal Contract is not executed, the SCAQMD shall not be liable for any amounts expended in anticipation of a formal Contract. If a formal Contract does result, pre-contract cost expenditures authorized by the Contract will be reimbursed in accordance with the Payment/Cost Schedule and payment provision of the Contract[**OPTIONAL**]
29. CITIZENSHIP AND ALIEN STATUS
- A. CONTRACTOR warrants that it fully complies with all laws regarding the employment of aliens and others, and that its employees performing services hereunder meet the citizenship or alien status requirements contained in federal and state statutes and regulations including, but not limited to, the Immigration Reform and Control Act of 1986 (P.L. 99-603). CONTRACTOR shall obtain from all covered employees performing services hereunder all verification and other documentation of employees' eligibility status required by federal statutes and regulations as they currently exist and as they may be hereafter amended. CONTRACTOR shall have a continuing obligation to verify and document the continuing employment authorization and authorized alien status of employees performing services under this Contract to insure continued compliance with all federal statutes and regulations. Notwithstanding the above, CONTRACTOR, in the performance of this Contract, shall not discriminate against any person in violation of 8 USC Section 1324b.
- B. CONTRACTOR shall retain such documentation for all covered employees for the period described by law. CONTRACTOR shall indemnify, defend, and hold harmless SCAQMD, its officers and employees from employer sanctions and other liability which may be assessed against CONTRACTOR or SCAQMD, or both in connection with any alleged violation of federal statutes or regulations pertaining to the eligibility for employment of persons performing services under this Contract.
30. REQUIREMENT FOR FILING STATEMENT OF ECONOMIC INTERESTS - In accordance with the Political Reform Act of 1974 (Government Code Sec. 81000 et seq.) and regulations issued by the Fair Political Practices Commission (FPPC), SCAQMD has determined that the nature of the work to be performed under this Contract requires CONTRACTOR to submit a Form 700, Statement of Economic Interests for Designated Officials and Employees, for each of its employees assigned to work on this Contract. These forms may be obtained from SCAQMD's District Counsels' office.[**OPTIONAL**]
31. COMPLIANCE WITH SINGLE AUDIT ACT REQUIREMENTS [**OPTIONAL - TO BE INCLUDED IN CONTRACTS WITH FOR-PROFIT CONTRACTORS WHICH HAVE FEDERAL PASS-THROUGH FUNDING**] - During the term of the Contract, and for a period of three (3) years from the date of Contract expiration, and if requested in writing by the SCAQMD, CONTRACTOR shall allow the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency, access during normal business hours to all records and reports related to the work performed under this Contract. CONTRACTOR assumes sole responsibility for reimbursement to the Federal Agency funding the prime grant or contract, a sum of money equivalent to the amount of any expenditures disallowed should the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency rule through audit exception or some other appropriate means that expenditures from funds allocated to the CONTRACTOR were not made in compliance with the applicable cost principles, regulations of the funding agency, or the provisions of this Contract.

[OPTIONAL - TO BE INCLUDED IN CONTRACTS WITH NON-PROFIT CONTRACTORS WHICH HAVE FEDERAL PASS-THROUGH FUNDING] - Beginning with CONTRACTOR's current fiscal year and continuing through the term of this Contract, CONTRACTOR shall have a single or program-specific audit conducted in accordance with the requirements of the Office of Management and Budget (OMB) Circular A-133 (Audits of States, Local Governments and Non-Profit Organizations), if CONTRACTOR expended Five Hundred Thousand Dollars (\$500,000) or more in a year in Federal Awards. Such audit shall be conducted by a firm of independent accountants in accordance with Generally Accepted Government Audit Standards (GAGAS). Within thirty (30) days of Contract execution, CONTRACTOR shall forward to SCAQMD the most recent A-133 Audit Report issued by its independent auditors. Subsequent A-133 Audit Reports shall be submitted to the SCAQMD within thirty (30) days of issuance.

CONTRACTOR shall allow the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency, access during normal business hours to all records and reports related to the work performed under this Contract. CONTRACTOR assumes sole responsibility for reimbursement to the Federal Agency funding the prime grant or contract, a sum of money equivalent to the amount of any expenditures disallowed should the SCAQMD, its designated representatives and/or the cognizant Federal Audit Agency rule through audit exception or some other appropriate means that expenditures from funds allocated to the CONTRACTOR were not made in compliance with the applicable cost principles, regulations of the funding agency, or the provisions of this Contract.

32. OPTION TO EXTEND THE TERM OF THE CONTRACT - SCAQMD reserves the right to extend the contract for a one-year period commencing ***** (enter date) at the (option price or Not-to-Exceed Amount) set forth in Attachment 2. In the event that SCAQMD elects to extend the contract, a written notice of its intent to extend the contract shall be provided to CONTRACTOR no later than thirty (30) days prior to Contract expiration. **[OPTIONAL]**
33. PROPOSAL INCORPORATION – CONTRACTOR's Technical Proposal dated *** submitted in response to Request for Proposal (RFP) #****, is expressly incorporated herein by this reference and made a part hereof of this Contract. In the event of any conflict between the terms and conditions of this Contract and CONTRACTOR's Technical Proposal, this Contract shall govern and control. **[OPTIONAL]**
34. KEY PERSONNEL - *insert person's name* is deemed critical to the successful performance of this Contract. Any changes in key personnel by CONTRACTOR must be approved by SCAQMD. All substitute personnel must possess qualifications/experience equal to the original named key personnel and must be approved by SCAQMD. SCAQMD reserves the right to interview proposed substitute key personnel. **[OPTIONAL]**
35. PREVAILING WAGES – **[USE FOR INFRASTRUCTURE AND MAINTENANCE PROJECTS]** CONTRACTOR is alerted to the prevailing wage requirements of California Labor Code section 1770 et seq., and the compliance monitoring and enforcement of such requirements by the Department of Industrial Relations ("DIR"). CONTRACTOR and all of CONTRACTOR's subcontractors must comply with the California Public Works Contractor Registration Program and must be registered with the DIR to participate in public works projects. CONTRACTOR shall be responsible for determining the applicability of the provisions of California Labor Code and complying with the same, including, without limitation, obtaining from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work, making the same available to any interested party upon request, paying any applicable prevailing rates, posting copies thereof at the job site and flowing all applicable prevailing wage rate requirements to its subcontractors. Proof of compliance with these requirements must be provided to SCAQMD upon request. CONTRACTOR shall indemnify, defend and hold

harmless the South Coast Air Quality Management District against any and all claims, demands, damages, defense costs or liabilities based on failure to adhere to the above referenced statutes.

- 36. SUBCONTRACTOR APPROVAL – If CONTRACTOR intends to subcontract all or a portion of the work under this Contract, then CONTRACTOR must first obtain written approval from SCAQMD’s Executive Officer or designee prior to subcontracting any work. Any material changes to the subcontract(s) that affect the scope of work, deliverable schedule, and/or payment/cost schedule shall also require the prior written approval of the Executive Officer or designee. No subcontract charges will be reimbursed unless the required approvals have been obtained from SCAQMD.
- 37. ENTIRE CONTRACT - This Contract represents the entire agreement between the parties hereto related to CONTRACTOR providing services to SCAQMD and there are no understandings, representations, or warranties of any kind except as expressly set forth herein. No waiver, alteration, or modification of any of the provisions herein shall be binding on any party unless in writing and signed by the party against whom enforcement of such waiver, alteration, or modification is sought.

IN WITNESS WHEREOF, the parties to this Contract have caused this Contract to be duly executed on their behalf by their authorized representatives.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

By: _____	By: _____
-----------	-----------

Barry R. Wallerstein, D.Env., Executive Officer
Dr. William A. Burke, Chairman, Governing Board

Name:
Title:

Date: _____

Date: _____

ATTEST:

Sandra McDaniel, Clerk of the Board

By: _____

APPROVED AS TO FORM:
Kurt R. Wiese, General Counsel

By: _____

//Standard Boilerplate
Revised: December 16, 2014

ATTACHMENT A
STATEMENT OF WORK

STATEMENT OF WORK

REFURBISHMENT OF PACE AIR HANDLERS

The objective of this Statement of Work is to specify requirements for the refurbishment of Pace air handlers at SCAQMD Headquarters.

The CONTRACTOR shall examine SCAQMD's specifications attached hereto. CONTRACTOR shall propose and agrees to furnish all necessary labor, specified materials, tools, equipment, transportation, recycling, and any other incidentals necessary in strict conformity to SCAQMD's specifications for the project.

1.00 GENERAL REQUIREMENTS

1.01 Statement of Work

CONTRACTOR shall provide all labor, materials, tools, equipment, transportation, and any other incidentals required for the project completion.

1.02 Contract Bonds

Before execution of the Contract, the Contractor shall file surety bonds in the amounts and for the purpose specified in the Request for Proposal (RFP). Bonds shall be issued by a surety who is listed in the latest version of U.S. Department of Treasury Circular 570, who is authorized to issue bonds in California, and whose bonding limitations shown in said circular is sufficient to provides bonds in the amount required by the Contract shall be deemed to be approved unless specifically rejected by SCAQMD. Bonds from all other sureties shall be accompanied by all of the documents enumerated in the Code of Civil Procedure, Section 995.660a).

Each bond incorporated, by reference, the Contract and be signed by both the Bidder and Surety. The signature of the authorized agent of the Surety shall be notarized. The Contractor shall provide 2 good and sufficient surety bonds

Payment Bond

The Payment Bond (material and labor bond) shall be not for less than 100 percent of the Contract price, to satisfy claims of material suppliers and mechanics and laborers employed on the Project. The Bond shall be maintained by the Contractor in full force and effect until the performance of the Contract is accepted by SCAQMD and until all claims for materials and labor are paid, and otherwise comply with the Civil Code. Contractor shall provide to SCAQMD Conditional Lien Releases with each payment requisition and Unconditional Lien Releases for the final Project Close Out payment for all material suppliers, mechanics and laborers employed on the Project.

Performance Bond

The Performance Bond shall be for 100 percent of the Contract Price to guaranty faithful performance of all work, within the time prescribed, in a manner satisfactory to

SCAQMD, and that all materials and workmanship will be free from original or developed defects. The bond must remain in effect until the end of all warranty periods as set forth in the Contract Documents

The Contractor shall pay all bond premiums, costs and incidentals.

Should any bond become insufficient, the Contractor shall renew the bond within 10 Days after receiving notice from SCAQMD.

Should any surety at any time be unsatisfactory to SCAQMD, notice to the effect will be given to the Contractor. No further payments shall be deemed due or will be made under the Contract until a new surety qualifies and is accepted by SCAQMD.

Changes in the Project or extension of time, made pursuant to the Contract, shall in no way release the Contractor or Surety from the obligation. Notice of such changes or extensions shall be waived by the Surety.

1.03 Permits

Unless otherwise provided in the Contract Documents, CONTRACTOR shall obtain and pay for all construction permits and licenses. SCAQMD may assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Project which are applicable at the time of opening of bids

1.04 Identification

SCAQMD requires the CONTRACTOR and all sub-contractor personnel working on SCAQMD's premises to wear uniforms with company logo or some type of company identification. SCAQMD also requires all personnel to sign in upon arrival and sign out upon departure in the Contractor Log Book located at the Main Security Desk.

1.05 Contractors Representative

CONTRACTOR shall designate a person to act as its representative during the performance of the project. CONTRACTORS' representative shall have full authority to represent and act on behalf of the CONTRACTOR for all purposes under this project. The CONTRACTOR's representative shall supervise and direct the project, using his best skill, attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the services under this project.

1.06 Work Hours

CONTRACTOR shall work within the following specified times to minimize business disruptions and SCAQMD operations. The work shall commence Friday 6:00 pm and be completed by the following Monday at 4:00 pm. The affected air handling unit shall be in full operation at that time.

1.07 Project Inspections

Periodically CONTRACTORS representative will be requested to walk the project with SCAQMD's representative for the purpose of determining compliance with the specifications listed in this Request for Proposal. SCAQMD will provide CONTRACTORS representative a list of items not in compliance with these specifications. Items on the list must be corrected by CONTRACTOR prior to the next scheduled inspection.

1.08 Licensing –

CONTRACTOR shall have and maintain for the duration of the project, a valid California “B”, general and/or “C-20” HVAC contractor's license necessary to perform work under this RFP in compliance with all governmental regulations.

1.09 Contractor Experience –

CONTRACTOR shall have at least five (5) years experience retrofitting air handlers of similar capacity. All work shall be done by qualified and experienced installers working under the CONTRACTORS supervision. CONTRACTOR shall have on staff or employ a California licensed Professional Engineer (PE) to perform the required energy pay back analysis.

1.10 Contractor Supplied Materials

CONTRACTOR shall furnish to SCAQMD submittals for all materials to be used on the project for SCAQMD approval prior to starting the project.

1.11 Project Damages

CONTRACTOR will be required at their expense to repair or replace any damage to include but not limited to wall surfaces, flooring, or elevator interiors damaged during the performance of the work or any remedial damage identified by SCAQMD.

1.12 Product Handling

Materials provided by the CONTRACTOR shall be delivered to the project site unopened in the manufacturer's sealed containers and shall be clearly marked.

1.13 Equipment Maintenance

CONTRACTOR shall be responsible for the care and maintenance of all the new equipment installed during this project for a period not to exceed one year from the date of acceptance of the completed project by SCAQMD.

1.14 Equipment Recycling

CONTRACTOR shall furnish proof that it is using a certified reclamation and processing facility to recycle old equipment and other materials removed from the SCAQMD facility.

2.00 VOC-RESTRICTED PRODUCTS

2.01 SECTION INCLUDES

- A. VOC restrictions for product categories listed below under "DEFINITIONS."
- B. All products of each category that are installed on the project must comply with VOC restrictions. SCAQMD does not allow for partial compliance.

2.02 RELATED REQUIREMENTS

- A. Product Substitutions: Any product substitutions shall be approved by SCAQMD prior to use.

2.03 DEFINITIONS

- A. VOC-Restricted Products: All products in each of the following categories when installed or applied on-site shall comply with all applicable SCAQMD rules:
 - 1. Adhesives, sealants, and sealer coatings.
 - 2. Paints and architectural coatings.
 - 3. Insulation.
- B. Adhesives: All gun-able, trowel-able, liquid-applied, and aerosol adhesives, specified or not; including, and pipe jointing adhesives shall comply with all applicable SCAQMD rules.
- C. Sealants: All gun-able, trowel-able, and liquid-applied joint sealants and sealant primers, specified or not; including fire-stopping sealants and duct joint sealers shall comply with all applicable SCAQMD rules.

2.04 REFERENCE STANDARDS

- A. CAL (VOC) - Standard Practice for the Testing of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers (including Addendum 2004-01); State of California Department of Health Services; 2004
- B. GreenSeal GS-36 - Commercial Adhesives; Green Seal, Inc.; 2011.
- C. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition; www.aqmd.gov.
- D. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

2.05 SUBMITTALS

- A. Evidence of Compliance: Submit for each different product in each applicable category, evidence of compliance to the Building Maintenance manager or his disagree for approval prior to use.
- B. Product Data: For each VOC-restricted product used on the project, submit product data showing compliance, and MSDS Sheets for each product.

2.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

3.00 PRODUCTS

3.01 MATERIALS

- A. Adhesives and Joint Sealants: Provide only products having volatile organic compound (VOC) content not greater than required by South Coast Air Quality Management District Rule No.1168.
 - 1. Evidence of Compliance: Acceptable type of evidence are:
 - a. Report of laboratory testing performed in accordance with requirements.

- B. Aerosol Adhesives: Provide only products having volatile organic compound (VOC) content not greater than required by GreenSeal GS-36.
 - 1. Evidence of Compliance: Acceptable type of evidence are:
 - a. Current Green Seal Certification.

- C. Paints and Coatings:
 - 1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Architectural coatings VOC limits of state in which the project is located.
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
 - 3. Evidence of Compliance: Acceptable types of evidence are:
 - a. Report of laboratory testing performed in accordance with requirements.
 - b. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition; www.aqmd.gov.
 - c. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov..

4.00 Extra Work

In the event CONTRACTOR is requested and agrees to perform extra work not otherwise specified, the following procedure will govern.

4.01 New or Unforeseen Work

Work not identified in the Statement of Work will be classified as Extra Work. In the event the CONTRACTOR is requested and agrees to perform Extra Work, the following procedure will govern. CONTRACTOR shall submit an itemized written estimate for all labor and materials proposed for the Extra Work. Extra Work shall not commence prior to receiving written authorization by SCAQMD's Building Maintenance Manager or his designee. Extra Work will be executed on a lump sum price, unless a basis for time-and-material is agreed upon. Extra Work may include, but is not limited to unforeseen damages, repairs or replacements due to vandalism or acts of God.

CONTRACTOR will not be granted the exclusive right to said Extra Work.

SPECIFICATIONS

1. FANWALL

1.1. Fans

- a. Fans shall be aluminum airfoil, Class III, direct drive arrangement and shall be individually housed. Fans shall be certified by AMCA for performance. Fan shall be housed in a "cell".
- b. Fan housing or "cell" shall be constructed of aluminum or stainless steel with perforated inner liner, melamine insulation, with either solid or perforated outer panels as required by applications.
- c. Fan/motor shall be mounted within the housing on an adjustable slide rail base. Fan/motor assembly must be capable of either horizontal or vertical application.
- d. Each fan/motor assembly shall be dynamically balanced to meet AMCA standard 204-96, for fan application class BV-5, to meet or exceed a rotational imbalance Grade .55, producing a maximum rotational imbalance of .022" per second peak, filter in (.55mm per second peak, filter in). "Filter in" measurement indicates that the specified balance grade must be achieved at the submitted design operating speed for the fan(s). Fan and motor assemblies submitted for approval incorporating larger than 215T frame shall be balanced in three orthogonal planes to demonstrate compliance with the G.55 requirement with a maximum rotational imbalance of .022" per second peak filter in (.55 mm per second peak, filter in).
- e. Fan and motor assemblies shall be designed for application in multiple fan arrays.

1.2. Fan Back Draft Dampers

- a. Each fan applied in multiple fan applications shall be provided with an integral back flow prevention device that prohibits recirculation of air in the event a fan, or multiple fans, becomes disabled. The system effect for the submitted back flow prevention device shall be included in the calculation to determine the fan TSP for fan selection purposes, and shall be indicated as a separate line item SP loss in the submitted fan selection data. Manufacturers other than the basis of design being submitted must provide independent lab certification of fan testing that indicates the system effects attributed to the submitted back flow prevention device in the submitted close coupled mounting arrangement at the inlet of the fan. Fans submitted with discharge dampers will not be approved.
- b. Back Draft Damper performance data that is based on an AMCA ducted inlet and ducted discharge mounting configuration will not be accepted. Submitted Back flow prevention device data must be reflective of close coupled mounting at the intake of the fan(s) per the project design documents. Motorized dampers or other motorized devices submitted for back flow prevention are not acceptable.
- c. Zero pressure drop back draft damper

1.3. Fan Airflow Monitoring

- a. Fans shall have non invasive, zero pressure drop flow a/o pressure sensing taps installed in the fan inlet cone for airflow monitoring capability as specified.

1.4. Motors

- a. All motors shall be standard AC motors, foot mounted type, TEFC or TEAO motors selected at the specified operating voltage, RPM, and efficiency as specified or as scheduled elsewhere.
- b. Motors shall meet the requirements of NEMA MG-1 Part 30 and 31, section 4.4.2.
- c. Motors shall be manufactured by Baldor, or Toshiba. Motor requirements for each fan wall are listed below. Fan Array's with motor sizes and/or quantities different than what is shown below shall not be acceptable.
 - a. AH-1: 3 W x 2 H Array with (6) 6 hp Motors
 - b. AH-2: 4 W x 3 H Array with (12) 6 hp Motors
 - c. AH-10: 3 W x 2 H Array with (6) 3 hp Motors
 - d. AH-14-SF: 3 W x 2 H Array with (6) 6 hp Motors
 - e. AH-14-RF: 2 W x 2 H Array with (4) 3 hp Motors
- d. All motors shall include permanently sealed bearings and shaft grounding means to protect the motor bearings from electrical discharge machining due to stray shaft current. Motors, provided with hybrid ceramic bearings, when specified, do not require shaft grounding devices.

1.5. Multiple Fan Array

- a. The fan array shall consist of multiple housed fans or "cells", spaced in the air way tunnel cross section to provide a uniform air flow and velocity profile across the entire air tunnel cross section and components therein for all points in operating range.
- b. Each fan and motor assembly shall be removable through a 24" wide, free area, access door located on the discharge side of the fan wall array without removing the fan wheel from the motor.
- c. All fans in multiple fan arrays shall be AMCA certified for performance per AMCA arrangement "A" testing configuration. The submitted fan performance shall be inclusive of system effects attributed to the fan mounting arrangement, fan enclosures, back draft dampers, and other fan appurtenances not considered when AMCA certified performance per AMCA arr. "A" is determined. Submitted AHU/fan performance that does not indicate allowances for system effects for the back flow prevention device(s), wheel enclosures, safety screens, bearing pedestals, belt guards, or the fan and motor enclosure in which each fan is mounted, will be returned to the contractor disapproved and will need to be resubmitted with all of the requested information included for approval. Added system effects for acoustic attenuators, or other devices required to met specified fan

performance and sound power levels must be indicated in the submitted fan selection data.

- d. Fan system power requirements or sound power levels that fail to meet specified performance levels will not be acceptable. Any proposed corrections for power or sound deviations from the specified values must be submitted to the engineer for approval prior to implementation of any proposed corrective procedure.
- e. FANWALL shall be capable of individually isolating, disconnecting and servicing individual or multiple fans, VFDs, or motors without affecting the performance of the remaining fans or require the need to shut down the entire fan array.
- f. Manufacturers that do not manufacture their own fans for the specific purpose of use in multiple fan arrays are not acceptable.

2. Electrical:

2.1. Overview:

- a. Provide a complete electrical and control system required to run the FANWALL system including all equipment, material, electrical enclosures, electrical components and electrical labor.
- b. Controls contractor shall provide all low voltage wiring and conduit required for a complete and operable system.
- c. FANWALL designs shall be in accordance with specific requirements. Please see system requirements before electrical design of FANWALL system is to commence.
- d. FANWALL Electrical designs shall be in accordance with the NEC, UL 508A and local codes.

2.2. Motor Circuit Protection:

- a. All motors in the FANWALL array shall be provided with individual Motor Protection for thermal overload protection. All motor circuit protectors shall be located in main enclosure.
- b. In required by design, all motor circuit protectors shall be mounted and located in a remote motor circuit protector panel as needed that is separate from the main enclosure. Motor circuit protector enclosure must be located and mounted at a minimal distance from the motors in the FANWALL array.

2.3. Variable Frequency Drive Control and VAV optimization:

- a. As required by system design, provide individual multiple Micro Variable Frequency Drives for each fan to start and run all motors in the FANWALL array. The Variable Frequency Drives shall be sized accordingly to start and hold each motor in the FANWALL.
- b. Each Variable Frequency Drive shall be provided with an electrical disconnect to isolate each VFD/Fan/Motor assembly.
- c. FANWALL systems with a single VFD controlling all fans are not acceptable.
- d. FANWALL systems with a redundant VFD package are not acceptable.

2.4. Programmable Logic controller (PLC):

- a. As required by system design, provide a Programmable Logic Controller (PLC) to control all functions of the FANWALL array system. The Programmable Logic Controller system will be designed and programmed to control Auto and Manual Functions, provide CFM totalizing, CFM control, By-pass operation, and control redundant drive operation and all functions required by the FANWALL system. Provide Operator Interface Unit for communication with PLC. PLC shall communicate BMS via BACnet IP.
- b. The Programmable Logic Controller and all other PLC related equipment shall be mounted in a dedicated NEMA 3R enclosure for connection to single point power. The enclosure shall be provided with a main disconnecting means. Provide appropriate cooling of the enclosure. Controller will be provided with a 5.7 inch color touch screen display.
- c. PLC shall provide FANWALL optimization which shall optimize the control of each individual fan independently as to minimize energy consumption at any given condition. Optimization shall have the capability to selectively shut off fans and increase the fan speed of the remaining fans to maintain fan operation at peak efficiency at part load conditions. Optimization controls package shall have the capability to show energy savings over a FANWALL system using only a single VFD.
- d. PLC shall provide FANWALL redundancy controls. FANWALL redundancy controls shall include the ability to increase the fan speed of the remaining fans in the event of a single fan failure to maintain consistent airflow.

2.5. Input Line Filters:

- a. As required by electrical design, when using variable frequency drives provide input Line Reactors with three percent impedance externally if not already internal to the variable frequency drive.

2.6. Output Line Filters:

- a. As required by electrical design, when using variable frequency drives where distance and filtering is an issue, provide output line reactors as required. Size output filter accordingly to manufacturers' recommendations.
- b.

2.7. Shaft Grounding – Isolated Bearings:

- a. As required by system design, when using variable frequency drives provide either a shaft grounding system or Isolated bearings for each AC motor to prevent electrical damage to motor bearings and extend motor life by safely channeling harmful shaft currents to ground.

2.8. Acoustical Performance

- a. Coplanar silencer(s) shall be provided for each individual fan. Losses from sound attenuating devices must be included in the fan performance selection.
- b. Listed or alternate manufacturers, other than basis of design, providing fan arrays that incorporate fans which are not manufactured by the basis of design manufacturer, must provide modeled acoustical performance of the entire fan array.

- c. Sound and performance data for approval showing only single fan performance for multiple fan array supplication will not be acceptable.

2.9. **Serviceability**

- a. Coplanar silencer(s) shall be provided for each individual fan. Losses from sound attenuating devices must be included in the fan performance selection.

2.10. **Acceptable Manufacturers**

- a. Huntair (Base of Design)
- b. Temtroll
- c. Governair

1. **Pre-Bid Analysis of FANWALL System**

- 1.1. A site analysis shall be performed prior to bid to assess the logistics of removing the existing fans and installation of FANWALL. Assessment shall include a report on the general summary of the work to be performed and shall address ingress and egress to the AHUs for the retrofit work.
- 1.2. A submittal of the proposed FANWALL shall be provided at the time of bid.
- 1.3. A preliminary energy calculation shall be provided at the time of bid. Energy calculation shall include a estimated energy consumption of the current fan system and a calculation of projected energy savings for the FANWALL system. All calculations shall be fully disclosed and explained in full detail.
- 1.4. Pre/Post bid Investment Grade Audit and Report of Existing System
Bid Package will include a detailed preliminary energy analysis report demonstrating estimated savings with ample evidence to support any assumptions made.
Full test and air balance report (TAB) prior and post retrofit work
Assistance with energy analysis for any utilities rebate incentives

2. **Post-Bid Support of FANWALL System**

- 2.1. Factory authorized support shall be local to jobsite and available at any time during the FANWALL retrofit process for technical information and support.
- 2.2. Factory authorized support shall provide controls integration assistance to integrate the FANWALL system to the existing building management system.

2. **COILS**

- 2.1. Chilled and Hot Water shall be of the copper plate ripple fin 0.008" copper, extended surface rated in accordance with ARI 410 for water, steam or ethylene/propylene glycol water mixture. The tubes shall have a 0.020" wall thickness of seamless copper expanded into the fin collars to provide a permanent mechanical bond. No metallic or thermal bonding materials are acceptable. Return Bends shall be a minimum of one tube thickness greater than the main tubes brazed replaceable copper. "U" type shaped tubes is not

acceptable. Coil headers shall be non-ferrous seamless Copper (cast iron headers are not acceptable), and provided with Schedule 40 Red Brass male pipe connections. Pipe connections shall be same end connections. Each Coils supply & return connections shall be raised / lowered a minimum 6" from the bottom / top of the coil to allow room for piping connection hookup especially between stacked coils, coils near floors & coils near roofs. Each coil shall be provided with capped 1/2" brass vent & drain connections extended to the exterior of the cabinet. All coils shall be fully drainable with no trapped tubes. Coils shall be counter flow design with connections either left or right hand as specified. The use of internal restrictive devices such as turbo-later springs or ribbons to obtain turbulent construction is not acceptable.

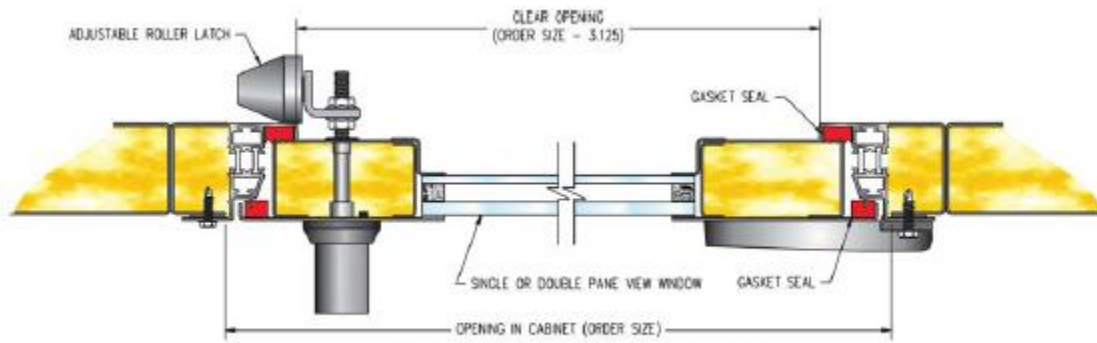
- 2.2. Coil casings shall be minimum 304 16 ga stainless steel, with formed 3/4" flanges (or 1-1/2", 2" or custom) on all sides of the coil with the tube sheets having pressed or extruded tube holes. The coil casing shall be reinforced so that the maximum unsupported length is 60". The reinforcements shall be of the same material as the casing. Both ends of the coil to be sealed off from the main air stream by full height blank off's on both the entering air and leaving air sides. Blank off's to be the same material as the coil casing. Headers and return bends to be further insulated with a closed cell neoprene gasket the full height & width of the coil casing to reduce condensation.
- 2.3. All coils are tested and rated in accordance with the Air Conditioning and Refrigeration Institute (ARI) Standard 410 and certified in accordance with the ARI certification program. All tubes shall be tested at a minimum 450 PSIG and all assemblies tested under water at 450 PSIG for a minimum of 5 minutes and rated for 450 PSIG working pressures. Individual tube and core tests before installation of header are not considered satisfactory. Hydrostatic tests alone will not be acceptable.
- 2.4. Coil Supply & Return piping connections extending through the cabinet wall shall be sealed by (caulking) (Rubber Grommets with caulking) (double escutcheon plate) on the exterior of the casing. The escutcheon plate shall have a rolled collar around the pipe opening to protect the pipe and be equipped with an "O" ring rubber gasket between the collar and the pipe to prevent chaffing and provide an air tight seal around the opening. All new piping and connections shall be reinsulated per title 24.
- 2.5. A site survey and measurement shall be performed and full submittals of exact sizing and fitment shall be provided prior to installation

3. ACCESS DOORS

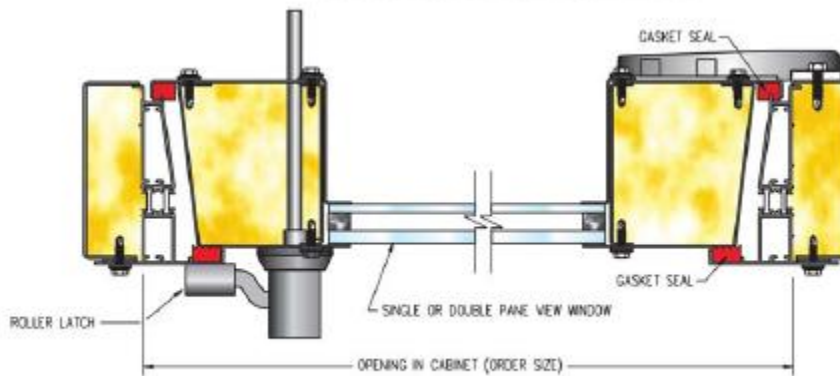
- 3.1. Access doors shall be (2") double wall, thermal break construction with powder coated G-90 galvanized exterior panels and G-90 galvanized interior panel. Door jam & frame shall be constructed of extruded aluminum with continuously welded corners for rigidity. Door panels shall be insulated with 2" expandable urethane foam insulation completely encapsulated and sealed between the door panels and frame. Provide doors located and sized to allow for routine

maintenance including motor replacement, electrical components and any other sections or components requiring access or maintenance.

- 3.2. Doors shall be provided with a minimum (2) dual acting heavy duty key locking non-locking composite latches through 48" high, (3) latches through 72" high. Latches shall be operable from both the interior and exterior of the unit. Door hinge shall be Stainless Steel heavy duty self aligning 3-way adjustable and removable.
- 3.3. Doors to be provided with a dual high performance closed cell replaceable EPDM Sponge Rubber Seal around the entire perimeter of the door / frame.
- 3.4. Doors shall open against static pressure unless obstructed by internal components. If obstructed by internal components on the positive sections requiring access, the doors shall open with pressure and shall be provided with a safety restraining mechanism. Doors used to access rotating equipment shall be provided with an OSHA approved safety latching mechanism requiring a tool to open and shall also have a highly visible, permanently fixed, caution sign on the exterior of the door. Doors with access to moving parts must also have locking hardware and meet current UL mechanical protection guidelines.
- 3.5. Doors shall be provided with double pane wire reinforced glass viewing windows as called out for on the unit drawings in the specifications. Minimum window size to be 9" x 9" with 12" x 12" provided door size permitting.
- 3.6. Door and frame must be provided by the same manufacturer and matched to insure proper fitment.
- 3.7. A site survey and measurement shall be performed and full submittals of exact sizing and fitment shall be provided prior to installation.
- 3.8. Coordination with door vendor and installing contractor at the jobsite shall be performed prior to installation to minimize unit downtime.
- 3.9. **Acceptable Manufacturers**
 - a. Huntair (Base of Design)
 - b. Temtrol
 - c. Governair



OUT SWING DOOR SAMPLE



IN SWING DOOR SAMPLE

DAMPERS

3.10. Control Dampers:

- a. Damper blades shall be 16 ga galvanized steel 3V type with three longitudinal grooves for reinforcement. Blades shall be completely symmetrical relative to their axle pivot point, presenting identical resistance to airflow and operation in either direction through the damper (blades that are non-symmetrical relative to their axle pivot point or utilize blade stops larger than 0.500 in. are unacceptable). Blade seals shall be TPE. Linkage shall be blade-to-blade concealed in jamb (out of the airstream) to protect linkage and reduce pressure drop and noise.
- b. Damper frame shall be 16 ga galvanized steel formed into a structural hat channel shape with reinforced corners to meet 11 ga criteria. Bearings shall be corrosion resistant, permanently lubricated, synthetic (acetal) sleeve type rotating in extruded holes in the damper frame for maximum service. Axles shall be square and positively locked into the damper blade. Jamb seals shall be flexible stainless steel compression type to prevent leakage between blade end and damper frame.
- c. The Damper Manufacturer's submittal data shall certify all air leakage and air performance pressure drop data is licensed in accordance with the AMCA Certified Ratings Program for Test Figures 5.2, 5.3 and 5.5. Damper air performance data shall be developed in accordance with the latest edition of AMCA Standard 500-D.

3.11. Acceptable Manufacturers

- a. Greenheck Model VCD-23
- b. Ruskin
- c. Tamco

4. Controls Section

Currently, the AH-1, 2, 10, and 14 are programmed for a constant volume application and will remain constant volume through the end of this project. At a later date, the space and Air Handling Unit will be converted to VAV. All existing controls including but not limited to valves, actuators, and sensors will be upgraded to DDC and tied into the BMS through the existing BMS controller. The new Air Handling Unit FANWALL section will be provided with a BACnet controller (for the FANWALL section only) from the manufacturer's factory which will be integrated into the BMS by Siemens. Siemens shall update graphics to reflect new FANWALL system as well as assist with all milestones including start up and commissioning. The controls contractor shall provide all wiring and conduit as required for a complete and operable system.

PAINT SPECIFICATIONS FOR AIR HANDLER 10

PARTS 1 – GENERAL

1.01 SUMMARY:

- A. Section Includes: Painting and finishing of all interior and exterior items and surfaces, unless otherwise indicated or listed under exclusions below:
 - 1. Paint all exposed surfaces, except as otherwise indicated, whether or not colors are designated. Include field painting of exposed exterior and interior plumbing, mechanical and electrical work.

- B. Work Included:
 - 1. The intent and requirements of this Section is that all work, items and surfaces which are normally painted and finished on an air handler of this type, shall be so included in this contract, whether or not said work, item or surface is specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications.

- C. The following general categories of work and items that are included under other sections shall not be a part of this section:
 - 1. Shop prime painting of structural and miscellaneous iron or steel.
 - 2. Shop prime painting of hollow metal work.
 - 3. Shop finished items.

- D. The air handler finish schedules indicated in the specifications indicates the location of the surfaces to be painted or finished. The scheduled indications are general and do not necessarily define the detail requirements. Include all detailed refinements and further instructions as may be given for the required complete finishing of all surfaces.

- E. Related Sections:

Section 05 70 00 – Ornamental Metal
Section 07 17 50 - Water Repellent Coatings
Section 09 96 00 – High Performance Coatings

1.02 SUBMITTALS:

- A. Product Data: Submit complete manufacturer's descriptive literature and specifications.
 - 1. Materials List: Submit complete lists of materials proposed for use, giving the manufacturer's name, catalog number, and catalog cut for each item when applicable. When required, provide a list of paint and coating materials

proposed for use, which equates such materials with the design-basis products specified.

- B. Samples: Submit, on 8-1/2 inch by 11 inch hardboard, samples of each color, gloss, texture and material selected by the SCAQMD from standard colors available for the coatings required.
- C. Manufacturer's Instructions: Submit the manufacturer's current recommended methods of installation, including relevant limitations, safety and environmental cautions, application rates, and composition analysis.

1.03 QUALITY ASSURANCE:

- A. Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this Specification, comply with the more stringent provisions.

Regulatory changes may affect the formulation, availability, or use of specified coatings. Confirm availability of coatings to be used prior start of the air handler painting project.

- a. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).
 - b. Comply with South Coast Air Quality Management District (SCAQMD) Rule 1113. A copy of this regulation can be obtained from <http://www.aqmd.gov/rules/reg/reg11/r1113.pdf>.
- B. Field Sample: When and as directed by the SCAQMD, apply one complete coating system for each color, gloss and texture required. When approved, the sample panel areas will be deemed incorporated into the Work and will serve as the standards by which the subsequent Work of this Section will be judged.

1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Storage and Protection: Use all means necessary to protect the materials of this Section before, during, and after installation.
- B. Deliver materials to job site in new, original, and unopened containers bearing manufacturer's name and trade name. Store where directed in accordance with manufacturer's instructions.

1.05 PROJECT CONDITIONS:

- A. Do not apply exterior materials during fog, rain or mist, or when inclement weather is expected within the dry time specified by the manufacturer. No exterior or interior painting shall be done until the surfaces are thoroughly dry and cured. Do not apply paint when temperature is below 50° F. Avoid painting surfaces when exposed to direct sunlight.

PART 2 – PRODUCTS

2.01 MANUFACTURERS:

- A. Manufacturer's catalog names and number of paint types in this Section herein are based on products manufactured or distributed by the Dunn-Edwards Corporation www.dunnedwards.com and are the basis of design against which the SCAQMD will judge equivalency. The quantity of titanium dioxide, the use of clays, aluminum silicate, talc and the purity of acrylic materials are a few of the criteria which will be used by the SCAQMD in determining equivalency of materials.
- B. Substitutions: Requests for substitutions will be considered. When submitting request for substitution, provide complete product data specified above under Submittals, for each substitute product.
- C. Acceptable manufacturers to include but not limited to:
 - 1. Carboline www.carboline.com
 - 2. Deft www.deftfinishes.com
 - 3. Dumond Chemicals www.dumondchemicals.com
 - 4. Okon www.okoninc.com
 - 5. Rustoleum www.rustoleumibg.com
 - 6. Valspar www.valsparwood.com

2.02 MATERIALS:

- A. Paints: Provide ready-mixed, except field catalyzed coatings. Pigments shall be fully ground maintaining soft paste consistency, capable of being readily and uniformly dispersed to complete homogeneous mixture. Paints shall have good flowing and brushing properties and be capable of drying or curing free of streaks and sags.
- B. Accessory Materials: Linseed oil, shellac, solvents, and other materials not specified but required to achieve required finishes shall be of high quality and approved by manufacturer.
- C. Colors shall be selected from color chip samples provided by manufacturer of paint system approved for use.
Match approved samples for color, texture and coverage.

D. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).

E. Restricted Components: Paints and coatings shall not contain any of the following.

1. Acrolein.
2. Acrylonitrile.
3. Antimony.
4. Benzene.
5. Butyl benzyl phthalate.
6. Cadmium.
7. Di (2-ethylhexyl) phthalate.
8. Di-n-butyl phthalate.
9. Di-n-octyl phthalate.
10. 1,2-dichlorobenzene.
11. Diethyl phthalate.
12. Dimethyl phthalate.
13. Ethylbenzene.
14. Ethylene Glycol.
15. Formaldehyde.
16. Hexavalent chromium.
17. Isophorone.
18. Lead.
19. Mercury.
20. Methyl ethyl ketone.
21. Methyl isobutyl ketone.
22. Methylene chloride.
23. Naphthalene.
24. Toluene (methylbenzene).
25. 1,1,1-trichloroethane.
26. Vinyl chloride.

2.04 MIXES:

- A. Mix, prepare, and store painting and finishing materials in accordance with manufacturer's directions.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine surfaces to be painted before beginning painting work. Work of other trades that has been left or installed in a condition not suitable to receive paint or other specified finish shall be repaired or corrected by the applicable trade

before painting. Painting of defective or unsuitable surface implies acceptance of the surfaces.

3.02 PROTECTION:

- A. Protect previously installed work and materials, which may be affected by work of this Section:
 - 1. Protect prefinished surfaces and adjacent surfaces against paint and damage.
 - 2. Furnish sufficient drop cloths, shields, and protective equipment to prevent spray or splatter from fouling surfaces not being painted.
 - 3. Protect surfaces, equipment, and fixtures from damage resulting from use of fixed, movable and hanging scaffolding, planking, and staging.
- B. Provide wet paint signs, barricades, and other devices required to protect newly finished surfaces. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.03 PREPARATION:

- A. Perform preparation and cleaning procedures in strict accordance with coating manufacturer's instructions for each substrate condition.
- B. Sand and scrape metal to remove loose primer and rust.
- C. Non-Ferrous Metal: Chemically or solvent clean and then treat with an etching-type solution if recommended by the finish manufacturer. Cleaned and retreated Non-Ferrous Metal shall be primed the same day that cleaning has been performed.
- D. Remove hardware and accessories, machined surfaces, plates, lighting fixtures and similar items in place and not-to-be-finish painted, or provide surface-applied protection. Reinstall removed items upon completion of work in each area.
- E. Existing surfaces to be recoated shall be thoroughly cleaned and de-glossed by sanding or other means prior to painting. Patched and bare areas shall be spot primed with same primer as specified for new work.
- F. Thoroughly back paint all surfaces with the priming coat. Use a clear sealer for back priming where transparent finish is required.
- G. Bare and covered pipes, ducts, hangers, exposed steel and ironwork, and primed metal surfaces of equipment installed under mechanical and electrical work shall be cleaned prior to priming.

- H. Preparation of other surfaces shall be performed following specific recommendations of the coatings manufacturer.
- I. Bond breakers and curing agents shall be removed and the surface cleaned before primers, sealers or finish paints can be applied.

3.04 APPLICATION:

- A. Apply painting and finishing materials in accordance with the manufacturer's recommendations.
 - 1. The number of coats specified is the minimum that shall be applied. Apply additional coats when undercoats or other conditions show through final paint coat, until paint film is of uniform finish, color and appearance.
- B. Apply each material at not less than the manufacturer's recommended spreading rate:
- C. Apply prime coat to surface which is required to be painted or finished.
- D. Sand lightly and dust clean between succeeding coats.

3.05 CLEANING, TOUCH-UP AND REFINISHING:

- A. Carefully remove all spattering, spots and blemishes caused by work under this section from surfaces throughout the project.
- B. Upon completion of painting work remove all rubbish, paint cans, and accumulated materials resulting from work in each space or room. All areas shall be left in a clean, orderly condition.
- C. Runs, sags, misses, holidays, stains and other defects in the painted surfaces, including inadequate coverage and mil thickness shall be satisfactorily touched up, or refinished, or repainted as necessary to the approval of SCAQMD.

3.06 FINISH SCHEDULE

- A. Apply the following finishes to the surfaces specified. Apply all materials in accordance with manufacturer's instructions on properly prepared surfaces and foundation coats. All intermediate undercoats must be tinted to approximate the final color.
 - 1. SCAQMD will issue a color schedule prior to start of painting to designate the various colors and locations required for the work.
- B. Exterior and Interior of Air Handler 10:

Non-Ferrous Metal:

a. Flat -

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	GALV-ALUM Premium, Non Ferrous Metal Primer (GAPR00)
Second Coat	EVERSHIELD, Exterior Flat Paint (EVSH10)
Third Coat	EVERSHIELD, Exterior Flat Paint (EVSH10)

b. Velvet Sheen -

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	GALV-ALUM Premium, Non Ferrous Metal Primer (GAPR00)
Second Coat	EVERSHIELD, Exterior Velvet Paint (EVSH20)
Third Coat	EVERSHIELD, Exterior Velvet Paint (EVSH20)

c. Eggshell -

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	GALV-ALUM Premium, Non Ferrous Metal Primer (GAPR00)
Second Coat	EVERSHIELD, Exterior Eggshell Paint (EVSH30)
Third Coat	EVERSHIELD, Exterior Eggshell Paint (EVSH30)

d. Low Sheen -

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	GALV-ALUM Premium, Non Ferrous Metal Primer (GAPR00)
Second Coat	EVERSHIELD, Exterior Low Sheen Paint (EVSH40)
Third Coat	EVERSHIELD, Exterior Low Sheen Paint (EVSH40)

e. Semi-Gloss -

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	GALV-ALUM Premium, Non Ferrous Metal Primer (GAPR00)
Second Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)
Third Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)

f. Semi-Gloss – High Performance

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	CARBOLINE, CORBOMASTIC EPOXY 15
Second Coat	CARBOLINE, CARBOTHANE, Acrylic Polyurethane 133 Series
Third Coat	CARBOLINE, CARBOTHANE, Acrylic Polyurethane 133 Series

g. Gloss -

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	GALV-ALUM Premium, Non Ferrous Metal Primer (GAPR00)
Second Coat	EVERSHIELD, Exterior Gloss Paint (EVSH60)
Third Coat	EVERSHIELD, Exterior Gloss Paint (EVSH60)

h. Gloss – High Performance

Pretreatment	SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
First Coat	CARBOLINE, CARBOLINE, CORBOMASTIC EPOXY 15
Second Coat	CARBOLINE, CARBOTHANE, Acrylic Polyurethane 134 Series
Third Coat	CARBOLINE, CARBOTHANE, Acrylic Polyurethane 134 Series

NOTICE

Availability of products listed in this specification may be affected by local, state, or federal regulatory requirements for architectural coatings. Consult your paint manufacturer representative for information on current product availability. Submittals prepared by paint manufacturer in accordance with this specification may include product codes that are modified with a suffix to indicate the specific product formulation currently available to meet applicable requirements.

PROJECT CLOSEOUT PROCEDURES

SECTION INCLUDES:

1. Contract closeout, including final cleaning, preparation, and submittal of closeout documents, warranties, and final completion certification.
2. Closeout submittals and submittal forms in both hard copy and electronic format.

CLOSEOUT DOCUMENTS

- A. CONTRACTOR shall submit the following closeout submittals prior to making a written request for Final Completion.
 1. Evidence of compliance with requirements of governing authorities.
 2. As-built documents
 3. Final Operation and Maintenance Manuals
 4. Spare parts
 5. Warranties

EVIDENCE OF COMPLIANCE WITH REQUIREMENTS OF GOVERNING AUTHORTIES

- A. CONTRACTOR shall submit the following:
 1. Release from each Agency indication final acceptance

AS-BUILT DOCUMENTS

- A. Contractor shall maintain at the Site for SCAQMD, 1 as-built copy of the Drawings and Specifications, Operation Maintenance manuals, coordination drawings, and Shop Drawings that are clearly marked with a red felt-tip pen to indicate all changes and or revisions resulting from the following:
 1. Actual Project as constructed by CONTRACTOR.
 2. Addenda.
 3. Change Orders and other modifications.
 4. Field Revisions.
 5. Request for Information (RFI)
 6. All other changes
- B. Section includes:
 1. Maintenance of Documents and Samples
 2. Marking Devices
 3. Recording
 4. Submittal Delivery
 5. Close-out Submittal Delivery

MAINTANANCE OF DOCUMENTS AND SAMPLES

- A. Contractor shall store and maintain documents and samples at their office apart from documents used for construction

- B. CONTRACTOR shall file documents and samples in accordance with Construction Specifications Institute (CSI) format.
- C. CONTRACTOR shall maintain documents in clean, dry, legible condition and in good order. CONTRACTOR shall keep as-built documents separate from those used for construction.
- D. CONTRACTOR shall make documents and samples available at all times for reference by SCAQMD.
- E. CONTRACTOR shall keep documents current.
- F. CONTRACTOR shall record required information at the times the Material and Equipment is installed and before permanently concealing.
- G. During progress meetings, as-built documents may be reviewed to ascertain that changes have been recorded.
 - 1. Prior to submission of progress payment, CONTRACTOR shall update the Contract Drawings using a red felt tip pen and submit the Drawing updates showing all changes occurring prior to that date including all previous changes.
 - 2. The Drawing markups will be provided as a PDF document through the submittal process.
 - 3. Submittal shall consist of 2 CD's with every Drawing in pdf format.
 - 4. Updated Drawings, when provided by CONTRACTOR, will be substituted for the hand markups.
- H. If determined by SCAQMD that the as-built drawings are inadequate or incomplete, the next scheduled progress payment shall be withheld until as-built documents are acceptable to SCAQMD.

MARKING DEVICES

- A. CONTRACTOR shall use a red color for recording all information to all documents.

RECORDING

- A. CONTRACTOR shall label each document "AS-BUILT RECORD" in neat large red printed letters.
- B. CONTRACTOR shall record information concurrently with construction progress. CONTRACTOR shall not conceal any work until required information is recorded.
- C. Drawings shall be legibly marked to record actual construction, CONTRACTOR shall:
 - 1. Record actual schedules lists, drawings and wire diagrams.
 - 2. Record field changes of dimensions and detail.
 - 3. Record changes made by instruction to CONTRACTOR or by change order.

4. Record details not on original Contract Drawings.
- D. Specifications and Addenda shall be legibly marked to record.
 1. Manufacturer, trade name, catalog number, and supplier for each product and item of equipment actually installed.
 2. Changes made by instruction to CONTRACTOR or by Change Order.

AS-BUILT SUBMITTAL

- A. As condition precedent to payment progressing, CONTRACTOR shall deliver and as-built record to SCAQMD.
- B. CONTRACTOR shall accompany submittal with transmitting letter containing:
 1. Date
 2. Project title and number
 3. CONTRACTOR'S name and address
 4. Title and number of each record as-built
 5. Signature of CONTRACTOR or CONTRACTORS' authorized representative and a statement that certifies the as-built documents are accurate and reflect what was actually installed during the Project.

CLOSE-OUT SUBMITTAL DELIVERY

- A. At Contract close-out CONTRACTOR shall deliver complete as-built records to SCAQMD.
 1. This submittal shall include the record paper with (1) sepia or velum,(4) 30"x42" blue line copies, (1) compact disk (.pdf format), (1) compact disk (CAD Format)
- B. CONTRACTOR shall accompany submittal with transmittal letter containing:
 1. Date.
 2. Project title and number.
 3. CONTRACTOR'S name and address.
 4. Title and number of each record as-built.
 5. Signature of CONTRACTOR or CONTRACTOR's authorized representative and statement that certifies that the as-built documents are accurate and reflect what was actually installed during on Project.

FINAL OPERATION AND MAINTENANCE (O&M) MANUAL SUBMITTAL

- A. Preliminary O&M Manuals shall be submitted prior to notice to proceed from SCAQMD.
- B. Technical submittals shall be separate from CONTRACTOR submittal and shall be approved prior to submitting Preliminary O&M Manual.
- C. CONTRACTOR's submittal of O&M manuals shall be delivered directly to the Building Maintenance Manager.
- D. After approval of the submittals, the CONTRACTOR shall submit the required number of identical sets of O&M manuals as follows:
 1. Preliminary O&M Manuals: 3 copies.

2. Final O&M Manuals: 4 copies
- E. Each set shall consist of 1 or more volumes, each of which shall be bound in an 8 ½ inch by 11-inch, 3-ring, loose-leaf, vinyl plastic hard cover binder suitable for bookshelf storage.
1. Binder ring size shall not exceed 2.5 inches.
 2. A table of contents shall be provided which indicates all Equipment in the O&M Manuals.
 3. Number of final copies of each set shall be submitted to SCAQMD for review.
- F. When specified in the individual Equipment Specification section, each item of Equipment shall have a separate submittal and separate O&M manual for each Specification section and the first 2 pages of the O&M manual for each item of Equipment shall consist of a table of contents and a completed summary of pertinent data, entered on copies of the Equipment Maintenance Summary Sheet to be provided by the CONTRACTOR.
- G. CONTRACTOR shall include in the O&M manuals, for each item of mechanical, electrical, plumbing equipment and instrumentation the following:
1. Complete operating instructions, including location of controls, special tools or other Equipment required, related instrumentation, and other Equipment needed for operation. Include Equipment function, normal operating characteristics, and limiting conditions.
 2. Lubrication schedules, including the lubricant SAE grade and type, temperature range of the lubricants, and frequency of required lubrication.
 3. Preventive maintenance procedures and schedules.
 4. Assembly, installation, alignment, adjustment, and checking instructions.
 5. Parts list by generic title, and identification number, complete with exploded views of each assembly. Include predicted life of spare parts subject to wear.
 6. Disassembly and assembly instructions.
 7. Operating instructions for start-up, routine and normal operation, regulation and control, shut down and emergency conditions.
 8. Recommended troubleshooting and start-up procedures.
 9. Test data and performance data where applicable.
 10. Reproducible prints of the as-built drawings, including diagrams and schematics on all Equipment.
 11. A list of 3 manufactures' local representatives where the OWNER can purchase parts or obtain maintenance assistance and repairs. Include name of contact, telephone number, and address.
 12. Outline, cross section, and assembly drawings, engineering data, and wiring diagrams.
- H. O&M manuals shall be in addition to any instructions or parts lists packed with or attached to the equipment when delivered or which may be required by CONTRACTOR.

1. Final manuals and other data shall be printed on heavy, highest quality paper, 8 ½ inch by 11-inch size, with standard 3-hole punching.
2. Drawings and diagrams shall be reduced to 8 ½ inch by 11-inchs or 11 inches by 17 inches.
 - a. Where reduction is not practicable, larger drawings shall be folded separately and placed in envelopes which are bound into manuals.
 - b. Each envelope shall bear suitable identification on the outside.
3. Preliminary O&M manuals shall be temporarily bound in heavy paper covers bearing suitable identification shall be submitted as specified sufficiently in advance of the planned date of shipment of the Equipment.
4. Final O&M manuals and all parts lists and information shall be assembled in 8 ½ inch by 11-inch, 3-ring, loose-leaf, vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.
 - a. Material shall be assembled and bound in the same order as specified.
 - b. In addition to a master index for all volumes, each volume shall have a table of contents and suitable index tabs.
5. All material shall be marked with project identification, and inapplicable information shall be marked out or deleted.
6. All volumes shall be indexed in accordance with the index of the Specifications.

SPARE PARTS SUBMITTAL

- A. All spare parts shall be packaged separately in accordance with Specifications Sections with a separate and complete itemized list of spare parts for each spare part package.
- B. CONTRACTOR shall contact SCAQMD to meet and check the spare parts list against the spare parts received to ensure the parts meet the requirements of the specifications.
- C. If spare parts are missing, SCAQMD will make note on the transmittal form of what parts are missing. CONTRACTOR and SCAQMD staff member receiving the items will sign the Parts List/Invoice for spare parts received.
- D. CONTRACTOR shall use the signed parts list for preparation of the submittal which shall be transferred electronically to SCAQMD if all parts were received. CONTRACTOR shall deliver a hard copy to the Building Maintenance Manager.
- E. If spare parts are missing, the same process will be followed to turn over the remainder of the spare parts for that specification section or piece of equipment, a resubmitted of spare parts for that specification section or piece of equipment will be required for each occurrence until all of the spare parts are received.

- F. If any spare parts were delivered to the Building Maintenance Office, those parts shall be retrieved and turned over following the above procedure for turnover of spare parts.

OPERATION AND MAINTENANCE MAUNALS

- A. CONTRACTOR shall provide Operation and Maintenance manuals for each piece of equipment and/or system.

CONTRACTORS WARRANTY AMD GUARANTEE SUBMITTALS

- A. CONTRACTOR warrants and guarantees SCAQMD that all work on the Project shall be in accordance with the manufactures recommendations, RFP and Contract Documents and shall be free of defects. All extended new equipment warranties shall be an additional 5 years beyond the original equipment manufacturers warranty period.
- B. CONTRACTORS warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. Abuse, modification or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers or any other individual or entity for whom CONTRACTOR is responsible, or normal wear and tear under normal usage or operation.
- C. CONTRACTOR's obligation to perform and complete the Project in accordance with the RFP and Contract Documents shall be absolute. None of the following shall constitute an acceptance of the Project that is not in accordance with the RFP or Contract Documents or a release of the CONTRACTOR's obligation to perform the work for the project in accordance with the RFP and Contract Documents;
 - 1. Observation by SCAQMD or Design Consultant or their consultants.
 - 2. Recommendation by SCAQMD or payment by SCAQMD of any progress or final payment.
 - 3. The issuance of a certificate of Substantial Completion by SCAQMD or any payment related thereto by SCAQMD.
 - 4. Use or occupancy of the Project or any part thereof by SCAQMD.
 - 5. Any acceptance by SCAQMD or SCAQMD's Consultant and failure to do so;
 - 6. Any review and approval of Shop Drawings or Sample submittal by Consultant or the issuance of a notice of acceptability by SCAQMD.
 - 7. Any test, inspection, or approval by others or correction of defective work by SCAQMD.
- D. CONTRACTOR shall:
 - 1. Provide specified additional warranties from manufactures and suppliers and submit as specified below

- E. Assemble warranties and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- F. Number of original signed copies required shall be four (4)
- G. CONTRACTOR's initial submittal of warranties and service and maintenance contract shall be delivered to the Building Maintenance Manager.
- H. Table of Contents: Neatly typed, orderly in sequence. Provide complete information for each item.
 - 1. Product or work item
 - 2. Firm, with name of principal, address, and telephone number.
 - 3. Scope
 - 4. Date of beginning of warranty, service maintenance contract.
 - 5. Duration of warranty, or service maintenance contract.
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty.
 - c. Contractor, name of responsible principal address and telephone number.
- I. Format:
 - 1. Size 8-1/2 by 11-inch
 - 2. Punch sheets for standard ring binder.
 - 3. Fold larger sheets to fit into binder.
 - 4. Cover:
 - a. Identify each packet with typed "WARRANTIES".
 - b. List the following:
 - 1) Title of project.
 - 2) Name of Contractor
- J. Binders: Commercial quality, 3-ring, shall be a 2.5-inch with durable and cleanable covers, white.

CERTIFICATE OF FINAL COMPLETION

- A. When operational testing has been successfully completed, CONTRACTOR's Professional Engineer will certify the new equipment is fully operational and complete. SCAQMD will submit a punch list of known items still to be completed or corrected prior to contract completion.
- B. The punch list of items to be completed or corrected will be amended as items are resolved by CONTRACTOR.

- C. When all items have been completed or corrected, CONTRACTOR shall submit written documentation that the entire Project is complete in accordance with the RFP and Contract Documents and request a final inspection.
- D. Upon completion of the entire Project, SCAQMD will advise CONTRACTOR of work not complete. If necessary, inspection procedures will be repeated.

FINAL CLEANING

- A. CONTRACTOR shall:
 - 1. Perform final cleaning prior to inspections for final acceptance.
 - 2. Employ skilled workers who are experienced in cleaning operations.
 - 3. Use cleaning materials that are recommended by manufacturers of surfaces to be cleaned and approved by SCAQMD prior to use.
 - 4. Avoid scratching, discoloring, and otherwise damaging surfaces being cleaned.
 - 5. Broom clean and power wash if necessary air handler rooms and all work areas.
 - 6. Remove dust, cobwebs, and traces of insects and dirt.
 - 7. Clean grease, mastic, adhesives, and other foreign materials from exposed surfaces, fixtures, and equipment.
 - 8. Remove nonpermanent protection and labels.
 - 9. Clean ducts, blowers, and coils when units were operated without filters during construction.

WASTE DISPOSAL

- A. CONTRACTOR shall:
 - 1. Arrange to recycle to the greatest extent possible the old equipment and surplus materials. Provide SCAQMD proof of recycling of old equipment identified above. Properly dispose of all waste products, and debris.
 - 2. Maintain disposal site in safe condition and good appearance.

ATTACHMENT B

CERTIFICATIONS AND REPRESENTATIONS



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Business Information Request

Dear SCAQMD Contractor/Supplier:

The South Coast Air Quality Management District (SCAQMD) is committed to ensuring that our contractor/supplier records are current and accurate. If your firm is selected for award of a purchase order or contract, it is imperative that the information requested herein be supplied in a timely manner to facilitate payment of invoices. In order to process your payments, we need the enclosed information regarding your account. **Please review and complete the information identified on the following pages, complete the enclosed W-9 form, remember to sign both documents for our files, and return them as soon as possible to the address below:**

**Attention: Accounts Payable, Accounting Department
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178**

If you do not return this information, we will not be able to establish you as a vendor. This will delay any payments and would still necessitate your submittal of the enclosed information to our Accounting department before payment could be initiated. Completion of this document and enclosed forms would ensure that your payments are processed timely and accurately.

If you have any questions or need assistance in completing this information, please contact Accounting at (909) 396-3777. We appreciate your cooperation in completing this necessary information.

Sincerely,

Michael B. O'Kelly
Chief Financial Officer

DH:tm

Enclosures: Business Information Request
Disadvantaged Business Certification
W-9
Form 590 Withholding Exemption Certificate
Federal Contract Debarment Certification
Campaign Contributions Disclosure
Direct Deposit Authorization

REV 1/15



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

BUSINESS INFORMATION REQUEST

Business Name	
Division of	
Subsidiary of	
Website Address	
Type of Business <i>Check One:</i>	<input type="checkbox"/> Individual <input type="checkbox"/> DBA, Name _____, County Filed in _____ <input type="checkbox"/> Corporation, ID No. _____ <input type="checkbox"/> LLC/LLP, ID No. _____ <input type="checkbox"/> Other _____

REMITTING ADDRESS INFORMATION

Address			
City/Town			
State/Province		Zip	
Phone	() - Ext	Fax	() -
Contact		Title	
E-mail Address			
Payment Name if Different			

All invoices must reference the corresponding Purchase Order Number(s)/Contract Number(s) if applicable and mailed to:

**Attention: Accounts Payable, Accounting Department
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178**

DISADVANTAGED BUSINESS CERTIFICATION

Federal guidance for utilization of disadvantaged business enterprises allows a vendor to be deemed a small business enterprise (SBE), minority

business enterprise (MBE) or women business enterprise (WBE) if it meets the criteria below.

- is certified by the Small Business Administration or
- is certified by a state or federal agency or
- is an independent MBE(s) or WBE(s) business concern which is at least 51 percent owned and controlled by minority group member(s) who are citizens of the United States.

Statements of certification:

As a prime contractor to the SCAQMD, _____ (name of business) will engage in good faith efforts to achieve the fair share in accordance with 40 CFR Section 33.301, and will follow the six affirmative steps listed below **for contracts or purchase orders funded in whole or in part by federal grants and contracts.**

1. Place qualified SBEs, MBEs, and WBEs on solicitation lists.
2. Assure that SBEs, MBEs, and WBEs are solicited whenever possible.
3. When economically feasible, divide total requirements into small tasks or quantities to permit greater participation by SBEs, MBEs, and WBEs.
4. Establish delivery schedules, if possible, to encourage participation by SBEs, MBEs, and WBEs.
5. Use services of Small Business Administration, Minority Business Development Agency of the Department of Commerce, and/or any agency authorized as a clearinghouse for SBEs, MBEs, and WBEs.
6. If subcontracts are to be let, take the above affirmative steps.

Self-Certification Verification: Also for use in awarding additional points, as applicable, in accordance with SCAQMD Procurement Policy and Procedure:

Check all that apply:

- | | |
|---|--|
| <input type="checkbox"/> Small Business Enterprise/Small Business Joint Venture | <input type="checkbox"/> Women-owned Business Enterprise |
| <input type="checkbox"/> Local business | <input type="checkbox"/> Disabled Veteran-owned Business Enterprise/DVBE Joint Venture |
| <input type="checkbox"/> Minority-owned Business Enterprise | |

Percent of ownership: _____ %

Name of Qualifying Owner(s): _____

State of California Public Works Contractor Registration No. _____ MUST BE INCLUDED IF BID PROPOSAL IS FOR PUBLIC WORKS PROJECT.

I, the undersigned, hereby declare that to the best of my knowledge the above information is accurate. Upon penalty of perjury, I certify information submitted is factual.

A. NAME TITLE

B. TELEPHONE NUMBER DATE

Definitions

Disabled Veteran-Owned Business Enterprise means a business that meets all of the following criteria:

- is a sole proprietorship or partnership of which is at least 51 percent owned by one or more disabled veterans, or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more disabled veterans; a subsidiary which is wholly owned by a parent corporation but only if at least 51 percent of the voting stock of the parent corporation is owned by one or more disabled veterans; or a joint venture in which at least 51 percent of the joint venture's management and control and earnings are held by one or more disabled veterans.
- the management and control of the daily business operations are by one or more disabled veterans. The disabled veterans who exercise management and control are not required to be the same disabled veterans as the owners of the business.
- is a sole proprietorship, corporation, partnership, or joint venture with its primary headquarters office located in the United States and which is not a branch or subsidiary of a foreign corporation, firm, or other foreign-based business.

Joint Venture means that one party to the joint venture is a DVBE and owns at least 51 percent of the joint venture. In the case of a joint venture formed for a single project this means that DVBE will receive at least 51 percent of the project dollars.

Local Business means a business that meets all of the following criteria:

- has an ongoing business within the boundary of the SCAQMD at the time of bid application.
- performs 90 percent of the work within SCAQMD's jurisdiction.

Minority-Owned Business Enterprise means a business that meets all of the following criteria:

- is at least 51 percent owned by one or more minority persons or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more minority persons.
- is a business whose management and daily business operations are controlled or owned by one or more minority person.
- is a business which is a sole proprietorship, corporation, partnership, joint venture, an association, or a cooperative with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign business.

“Minority” person means a Black American, Hispanic American, Native American (including American Indian, Eskimo, Aleut, and Native Hawaiian), Asian-Indian American (including a person whose origins are from India, Pakistan, or Bangladesh), Asian-Pacific American (including a person whose origins are from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the United States Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, or Taiwan).

Small Business Enterprise means a business that meets the following criteria:

- a. 1) an independently owned and operated business; 2) not dominant in its field of operation; 3) together with affiliates is either:
 - **A service, construction, or non-manufacturer with 100 or fewer employees, and average annual gross receipts of ten million dollars (\$10,000,000) or less over the previous three years, or**
 - A manufacturer with 100 or fewer employees.
- b. Manufacturer means a business that is both of the following:
 - 1) Primarily engaged in the chemical or mechanical transformation of raw materials or processed substances into new products.
 - 2) Classified between Codes 311000 to 339000, inclusive, of the North American Industrial Classification System (NAICS) Manual published by the United States Office of Management and Budget, 2007 edition.

Small Business Joint Venture means that one party to the joint venture is a Small Business and owns at least 51 percent of the joint venture. In the case of a joint venture formed for a single project this means that the Small Business will receive at least 51 percent of the project dollars.

Women-Owned Business Enterprise means a business that meets all of the following criteria:

- is at least 51 percent owned by one or more women or in the case of any business whose stock is publicly held, at least 51 percent of the stock is owned by one or more women.
- is a business whose management and daily business operations are controlled or owned by one or more women.
- is a business which is a sole proprietorship, corporation, partnership, or a joint venture, with its primary headquarters office located in the United States, which is not a branch or subsidiary of a foreign corporation, foreign firm, or other foreign business.

Request for Taxpayer Identification Number and Certification

**Give Form to the
requester. Do not
send to the IRS.**

Print or type See Specific instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	
	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>	
	5 Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number	
OR	
Employer identification number	

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note. ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.ssa.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/businesses and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee* code earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee ¹ The actual owner ¹
5. Sole proprietorship or disregarded entity owned by an individual	The owner ³
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor ⁴
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity ⁴
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

***Note.** Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, *Identity Theft Prevention and Victim Assistance*.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spam@uce.gov or contact them at www.ftc.gov/idtheft or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

2015 Withholding Exemption Certificate

590

The payee completes this form and submits it to the withholding agent.

Withholding Agent (Type or print)

Name _____

Payee

Name _____

SSN or ITIN FEIN CA Corp no. CA SOS file no.

Address (apt./ste., room, PO Box, or PMB no.) _____

City (if you have a foreign address, see instructions.) _____

State _____

ZIP Code _____

Exemption Reason

Check only one reason box below that applies to the payee.

By checking the appropriate box below, the Payee certifies the reason for the exemption from the California income tax withholding requirements on payment(s) made to the entity or individual.

Individuals — Certification of Residency:

I am a resident of California and I reside at the address shown above. If I become a nonresident at any time, I will promptly notify the withholding agent. See instructions for General Information D, Definitions.

Corporations:

The corporation has a permanent place of business in California at the address shown above or is qualified through the California Secretary of State (SOS) to do business in California. The corporation will file a California tax return. If this corporation ceases to have a permanent place of business in California or ceases to do any of the above, I will promptly notify the withholding agent. See instructions for General Information D, Definitions.

Partnerships or Limited Liability Companies (LLCs):

The partnership or LLC has a permanent place of business in California at the address shown above or is registered with the California SOS, and is subject to the laws of California. The partnership or LLC will file a California tax return. If the partnership or LLC ceases to do any of the above, I will promptly inform the withholding agent. For withholding purposes, a limited liability partnership (LLP) is treated like any other partnership.

Tax-Exempt Entities:

The entity is exempt from tax under California Revenue and Taxation Code (R&TC) Section 23701 _____ (insert letter) or Internal Revenue Code Section 501(c) _____ (insert number). If this entity ceases to be exempt from tax, I will promptly notify the withholding agent. Individuals cannot be tax-exempt entities.

Insurance Companies, Individual Retirement Arrangements (IRAs), or Qualified Pension/Profit Sharing Plans:

The entity is an insurance company, IRA, or a federally qualified pension or profit-sharing plan.

California Trusts:

At least one trustee and one noncontingent beneficiary of the above-named trust is a California resident. The trust will file a California fiduciary tax return. If the trustee or noncontingent beneficiary becomes a nonresident at any time, I will promptly notify the withholding agent.

Estates — Certification of Residency of Deceased Person:

I am the executor of the above-named person's estate or trust. The decedent was a California resident at the time of death. The estate will file a California fiduciary tax return.

Nonmilitary Spouse of a Military Servicemember:

I am a nonmilitary spouse of a military servicemember and I meet the Military Spouse Residency Relief Act (MSRRA) requirements. See instructions for General Information E, MSRRA.

CERTIFICATE OF PAYEE: Payee must complete and sign below.

Under penalties of perjury, I hereby certify that the information provided in this document is, to the best of my knowledge, true and correct. If conditions change, I will promptly notify the withholding agent.

Payee's name and title (type or print) _____ Telephone (____) _____

Payee's signature ► _____ Date _____

2015 Instructions for Form 590

Withholding Exemption Certificate

References in these instructions are to the California Revenue and Taxation Code (R&TC).

General Information

Registered Domestic Partners (RDP) – For purposes of California income tax, references to a spouse, husband, or wife also refer to a Registered Domestic Partner (RDP) unless otherwise specified. For more information on RDPs, get FTB Pub. 737, Tax Information for Registered Domestic Partners.

A Purpose

Use Form 590, Withholding Exemption Certificate, to certify an exemption from nonresident withholding.

Form 590 does not apply to payments of backup withholding. For information on California backup withholding, go to ftb.ca.gov and search for **backup withholding**.

Form 590 does not apply to payments for wages to employees. Wage withholding is administered by the California Employment Development Department (EDD). For more information, go to edd.ca.gov or call 888.745.3886.

Do not use Form 590 to certify an exemption from withholding if you are a **Seller of California real estate**. Sellers of California real estate use Form 593-C, Real Estate Withholding Certificate, to claim an exemption from real estate withholding.

The following are excluded from withholding and completing this form:

- The United States and any of its agencies or instrumentalities.
- A state, a possession of the United States, the District of Columbia, or any of its political subdivisions or instrumentalities.
- A foreign government or any of its political subdivisions, agencies, or instrumentalities.

B Income Subject to Withholding

California Revenue and Taxation Code (R&TC) Section 18662 requires withholding of income or franchise tax on payments of California source income made to nonresidents of California.

Withholding is required on the following, but is not limited to:

- Payments to nonresidents for services rendered in California.
- Distributions of California source income made to domestic nonresident partners, members, and S corporation shareholders and allocations of California source income made to foreign partners and members.
- Payments to nonresidents for rents if the payments are made in the course of the withholding agent's business.

- Payments to nonresidents for royalties from activities sourced to California.
- Distributions of California source income to nonresident beneficiaries from an estate or trust.
- Endorsement payments received for services performed in California.
- Prizes and winnings received by nonresidents for contests in California.

However, withholding is optional if the total payments of California source income are \$1,500 or less during the calendar year.

For more information on withholding get FTB Pub. 1017, Resident and Nonresident Withholding Guidelines. To get a withholding publication, see Additional Information.

C Who Certifies this Form

Form 590 is certified by the payee. California residents or entities exempt from the withholding requirement should complete Form 590 and submit it to the withholding agent before payment is made. The withholding agent is then relieved of the withholding requirements if the agent relies in good faith on a completed and signed Form 590 unless notified by the Franchise Tax Board (FTB) that the form should not be relied upon.

An incomplete certificate is invalid and the withholding agent should not accept it. If the withholding agent receives an incomplete certificate, the withholding agent is required to withhold tax on payments made to the payee until a valid certificate is received. In lieu of a completed certificate on the preprinted form, the withholding agent may accept as a substitute certificate a letter from the payee explaining why the payee is not subject to withholding. The letter must contain all the information required on the certificate in similar language, including the under penalty of perjury statement and the payee's taxpayer identification number. The withholding agent must retain a copy of the certificate or substitute for at least four years after the last payment to which the certificate applies, and provide it upon request to the FTB.

For example, if an entertainer (or the entertainer's business entity) is paid for a performance, the entertainer's information must be provided. **Do not** submit the entertainer's agent or promoter information.

The grantor of a grantor trust shall be treated as the payee for withholding purposes. Therefore, if the payee is a grantor trust and one or more of the grantors is a nonresident, withholding is required. If all of the grantors on the trust are residents, no withholding is required. Resident grantors can check the box on Form 590 labeled "Individuals — Certification of Residency."

D Definitions

For California non-wage withholding purposes, **nonresident** includes all of the following:

- Individuals who are not residents of California.
- Corporations not qualified through the California Secretary of State (CA SOS) to do business in California or having no permanent place of business in California.
- Partnerships or limited liability companies (LLCs) with no permanent place of business in California.
- Any trust without a resident grantor, beneficiary, or trustee, or estates where the decedent was not a California resident.

Foreign refers to non-U.S.

For more information about determining resident status, get FTB Pub. 1031, Guidelines for Determining Resident Status. Military servicemembers have special rules for residency. For more information, get FTB Pub. 1032, Tax Information for Military Personnel.

Permanent Place of Business:

A corporation has a permanent place of business in California if it is organized and existing under the laws of California or if it is a foreign corporation qualified to transact intrastate business by the CA SOS. A corporation that has not qualified to transact intrastate business (e.g., a corporation engaged exclusively in interstate commerce) will be considered as having a permanent place of business in California only if it maintains a permanent office in California that is permanently staffed by its employees.

E Military Spouse Residency Relief Act (MSRRA)

Generally, for tax purposes you are considered to maintain your existing residence or domicile. If a military servicemember and nonmilitary spouse have the same state of domicile, the MSRRA provides:

- A spouse shall not be deemed to have lost a residence or domicile in any state solely by reason of being absent to be with the servicemember serving in compliance with military orders.
- A spouse shall not be deemed to have acquired a residence or domicile in any other state solely by reason of being there to be with the servicemember serving in compliance with military orders.

Domicile is defined as the one place:

- Where you maintain a true, fixed, and permanent home.
- To which you intend to return whenever you are absent.

A military servicemember's nonmilitary spouse is considered a nonresident for tax purposes if the servicemember and spouse have the same domicile outside of California and the spouse is in California solely to be with the servicemember who is serving in compliance with Permanent Change of Station orders.

California may require nonmilitary spouses of military servicemembers to provide proof that they meet the criteria for California personal income tax exemption as set forth in the MSRRA.

Income of a military servicemember's nonmilitary spouse for services performed in California is not California source income subject to state tax if the spouse is in California to be with the servicemember serving in compliance with military orders, and the servicemember and spouse have the same domicile in a state other than California.

For additional information or assistance in determining whether the applicant meets the MSRRA requirements, get FTB Pub. 1032.

Specific Instructions

Payee Instructions

Enter the withholding agent's name.

Enter the payee's information, including the taxpayer identification number (TIN) and check the appropriate TIN box.

You must provide an acceptable TIN as requested on this form. The following are acceptable TINs: social security number (SSN); individual taxpayer identification number (ITIN); federal employer identification number (FEIN); California corporation number (CA Corp no.); or CA SOS file number.

Private Mail Box (PMB) – Include the PMB in the address field. Write "PMB" first, then the box number. Example: 111 Main Street PMB 123.

Foreign Address – Enter the information in the following order: City, Country, Province/Region, and Postal Code. Follow the country's practice for entering the postal code. **Do not** abbreviate the country's name.

Check the box that reflects the reason why the payee is exempt from the California income tax withholding requirement.

Withholding Agent Instructions

Keep Form 590 for your records. **Do not** send this form to the FTB unless it has been specifically requested.

For more information, contact Withholding Services and Compliance, see Additional Information.

The payee must notify the withholding agent if any of the following situations occur:

- The individual payee becomes a nonresident.
- The corporation ceases to have a permanent place of business in California or ceases to be qualified to do business in California.
- The partnership ceases to have a permanent place of business in California.
- The LLC ceases to have a permanent place of business in California.
- The tax-exempt entity loses its tax-exempt status.

If any of these situations occur, then withholding may be required. For more information, get Form 592, Resident and Nonresident Withholding Statement, Form 592-B, Resident and Nonresident Withholding Tax Statement, and Form 592-V, Payment Voucher for Resident and Nonresident Withholding.

Additional Information

For additional information or to speak to a representative regarding this form, call the Withholding Services and Compliance telephone service at:

Telephone: **888.792.4900**
916.845.4900

Fax: 916.845.9512

OR write to:

WITHHOLDING SERVICES AND
COMPLIANCE MS F182
FRANCHISE TAX BOARD
PO BOX 942867
SACRAMENTO CA 94267-0651

You can download, view, and print California tax forms and publications at ftb.ca.gov.

OR to get forms by mail write to:

TAX FORMS REQUEST UNIT
FRANCHISE TAX BOARD
PO BOX 307
RANCHO CORDOVA CA 95741-0307

For all other questions unrelated to withholding or to access the TTY/TDD numbers, see the information below.

Internet and Telephone Assistance

Website: ftb.ca.gov

Telephone: 800.852.5711 from within the United States
916.845.6500 from outside the United States

TTY/TDD: 800.822.6268 for persons with hearing or speech impairments

Asistencia Por Internet y Teléfono

Sitio web: ftb.ca.gov

Teléfono: 800.852.5711 dentro de los Estados Unidos
916.845.6500 fuera de los Estados Unidos

TTY/TDD: 800.822.6268 para personas con discapacidades auditivas o del habla

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and the principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them or commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statute or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative Date

I am unable to certify to the above statements. My explanation is attached.

EPA Form 5700-49 (11-88)



CAMPAIGN CONTRIBUTIONS DISCLOSURE

In accordance with California law, bidders and contracting parties are required to disclose, at the time the application is filed, information relating to any campaign contributions made to South Coast Air Quality Management District (SCAQMD) Board Members or members/alternates of the MSRC, including: the name of the party making the contribution (which includes any parent, subsidiary or otherwise related business entity, as defined below), the amount of the contribution, and the date the contribution was made. 2 C.C.R. §18438.8(b).

California law prohibits a party, or an agent, from making campaign contributions to SCAQMD Governing Board Members or members/alternates of the Mobile Source Air Pollution Reduction Review Committee (MSRC) of more than \$250 while their contract or permit is pending before the SCAQMD; and further prohibits a campaign contribution from being made for three (3) months following the date of the final decision by the Governing Board or the MSRC on a donor's contract or permit. Gov't Code §84308(d). For purposes of reaching the \$250 limit, the campaign contributions of the bidder or contractor plus contributions by its parents, affiliates, and related companies of the contractor or bidder are added together. 2 C.C.R. §18438.5.

In addition, SCAQMD Board Members or members/alternates of the MSRC must abstain from voting on a contract or permit if they have received a campaign contribution from a party or participant to the proceeding, or agent, totaling more than \$250 in the 12-month period prior to the consideration of the item by the Governing Board or the MSRC. Gov't Code §84308(c).

The list of current SCAQMD Governing Board Members can be found at the SCAQMD website (www.aqmd.gov). The list of current MSRC members/alternates can be found at the MSRC website (<http://www.cleantransportationfunding.org>).

SECTION I.

Contractor (Legal Name): _____

DBA, Name _____, County Filed in _____ Corporation, ID No. _____ LLC/LLP, ID No. _____
--

List any parent, subsidiaries, or otherwise affiliated business entities of Contractor:
(See definition below).

SECTION II.

Has Contractor and/or any parent, subsidiary, or affiliated company, or agent thereof, made a campaign contribution(s) totaling \$250 or more in the aggregate to a current member of the South Coast Air Quality Management Governing Board or member/alternate of the MSRC in the 12 months preceding the date of execution of this disclosure?

Yes No **If YES, complete Section II below and then sign and date the form. If NO, sign and date below. Include this form with your submittal.**

Campaign Contributions Disclosure, *continued*:

Name of Contributor _____

Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution
---	------------------------	----------------------

Name of Contributor _____

Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution
---	------------------------	----------------------

Name of Contributor _____

Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution
---	------------------------	----------------------

Name of Contributor _____

Governing Board Member or MSRC Member/Alternate	Amount of Contribution	Date of Contribution
---	------------------------	----------------------

I declare the foregoing disclosures to be true and correct.

By: _____

Title: _____

Date: _____

DEFINITIONS

Parent, Subsidiary, or Otherwise Related Business Entity (2 Cal. Code of Regs., §18703.1(d).)

- (1) Parent subsidiary. A parent subsidiary relationship exists when one corporation directly or indirectly owns shares possessing more than 50 percent of the voting power of another corporation.
- (2) Otherwise related business entity. Business entities, including corporations, partnerships, joint ventures and any other organizations and enterprises operated for profit, which do not have a parent subsidiary relationship are otherwise related if any one of the following three tests is met:
 - (A) One business entity has a controlling ownership interest in the other business entity.
 - (B) There is shared management and control between the entities. In determining whether there is shared management and control, consideration should be given to the following factors:
 - (i) The same person or substantially the same person owns and manages the two entities;
 - (ii) There are common or commingled funds or assets;
 - (iii) The business entities share the use of the same offices or employees, or otherwise share activities, resources or personnel on a regular basis;
 - (iv) There is otherwise a regular and close working relationship between the entities; or
 - (C) A controlling owner (50% or greater interest as a shareholder or as a general partner) in one entity also is a controlling owner in the other entity.



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Direct Deposit Authorization

STEP 1: Please check all the appropriate boxes

- | | |
|--|--|
| <input type="checkbox"/> Individual (Employee, Governing Board Member) | <input type="checkbox"/> New Request |
| <input type="checkbox"/> Vendor/Contractor | <input type="checkbox"/> Cancel Direct Deposit |
| <input type="checkbox"/> Changed Information | |

STEP 2: Payee Information

Last Name		First Name		Middle Initial	Title
Vendor/Contractor Business Name (if applicable)					
Address				Apartment or P.O. Box Number	
City		State	Zip	Country	
Taxpayer ID Number		Telephone Number		Email Address	

Authorization

- I authorize South Coast Air Quality Management District (SCAQMD) to direct deposit funds to my account in the financial institution as indicated below. I understand that the authorization may be rejected or discontinued by SCAQMD at any time. If any of the above information changes, I will promptly complete a new authorization agreement. If the direct deposit is not stopped before closing an account, funds payable to me will be returned to SCAQMD for distribution. This will delay my payment.
- This authorization remains in effect until SCAQMD receives written notification of changes or cancellation from you.
- I hereby release and hold harmless SCAQMD for any claims or liability to pay for any losses or costs related to insufficient fund transactions that result from failure within the Automated Clearing House network to correctly and timely deposit monies into my account.

STEP 3:

You must verify that your bank is a member of an Automated Clearing House (ACH). Failure to do so could delay the processing of your payment. You must attach a voided check or have your bank complete the bank information and the account holder must sign below.

To be Completed by your Bank

Staple Voided Check Here	Name of Bank/Institution				
	Account Holder Name(s)				
	<input type="checkbox"/> Saving <input type="checkbox"/> Checking		Account Number	Routing Number	
	Bank Representative Printed Name		Bank Representative Signature		Date
	ACCOUNT HOLDER SIGNATURE:				Date

For SCAQMD Use Only Input By _____ Date _____

**ATTACHMENT C
1 through 5
PAYMENT SCHEDULES**

ATTACHMENT C-1

PAYMENT SCHEDULE AIR HANDLER #1

\$
Total Contract Amount Air Handler #1

<p>A. Upon competition of the demolition of Air Handler #1, Contractor may submit an invoice for 10% of the Air Handler #1 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>B. Upon delivery of the equipment and materials for Air Handler #1, Contractor may submit an invoice for 50% of the Air Handler #1 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>C. Upon competition of Air Handler #1 start up, Contractor may submit an invoice for 20% of the Air Handler #1 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$

A. WHENEVER in the opinion of the SCAQMD Building Supervisor the CONTRACTOR shall have completely performed each progressive portion the Contract on his part, the SCAQMD Building Supervisor shall notify the Building Maintenance Manager that the progressive amount has been completed in its entirety. Once the project is complete in its entirety, he shall request that the Building Maintenance Manager accept the work identified in this Contract is complete. The CONTRACTOR will then submit to the SCAQMD Building Supervisor for approval a written statement of the final quantities and competition of contract items for inclusion in the final invoice. Upon receipt of such statement, the SCAQMD Building Supervisor shall review the quantities and work included therein and shall authorize the CONTRACTOR to submit an invoice for the balance of the contract amount which in SCAQMD Building Supervisor opinion shall be just and fair, covering the amount and value of the total amount of work done by the CONTRACTOR, less five percent (5%) of the total work done. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables.

ATTACHMENT C-2

PAYMENT SCHEDULE AIR HANDLER # 2

\$ _____ Total Contract Amount Air Handler #2

<p>A. Upon completion of the demolition of Air Handler #2, Contractor may submit an invoice for 10% of the Air Handler #2 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>B. Upon delivery of the equipment and materials for Air Handler #2, Contractor may submit an invoice for 50% of the Air Handler #2 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>C. Upon completion of Air Handler #2 start up, Contractor may submit an invoice for 20% of the Air Handler #2 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$

A. WHENEVER in the opinion of the SCAQMD Building Supervisor the CONTRACTOR shall have completely performed each progressive portion the Contract on his part, the SCAQMD Building Supervisor shall notify the Building Maintenance Manager that the progressive amount has been completed in its entirety. Once the project is complete in its entirety, he shall request that the Building Maintenance Manager accept the work identified in this Contract is complete. The CONTRACTOR will then submit to the SCAQMD Building Supervisor for approval a written statement of the final quantities and competition of contract items for inclusion in the final invoice. Upon receipt of such statement, the SCAQMD Building Supervisor shall review the quantities and work included therein and shall authorize the CONTRACTOR to submit an invoice for the balance of the contract amount which in SCAQMD Building Supervisor opinion shall be just and fair, covering the amount and value of the total amount of work done by the CONTRACTOR, less five percent (5%) of the total work done. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables.

ATTACHMENT C-3

PAYMENT SCHEDULE AIR HANDLER #10

Total Contract Amount Air Handler #10

<p>A. Upon completion of the demolition of Air Handler #10, Contractor may submit an invoice for 10% of the Air Handler #10 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>B. Upon delivery of the equipment and materials for Air Handler #10, Contractor may submit an invoice for 50% of the Air Handler #10 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>C. Upon completion of Air Handler #1 start up, Contractor may submit an invoice for 20% of the Air Handler # 1 contract amount. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$

A. WHENEVER in the opinion of the SCAQMD Building Supervisor the CONTRACTOR shall have completely performed each progressive portion the Contract on his part, the SCAQMD Building Supervisor shall notify the Building Maintenance Manager that the progressive amount has been completed in its entirety. Once the project is complete in its entirety, he shall request that the Building Maintenance Manager accept the work identified in this Contract is complete. The CONTRACTOR will then submit to the SCAQMD Building Supervisor for approval a written statement of the final quantities and competition of contract items for inclusion in the final invoice. Upon receipt of such statement, the SCAQMD Building Supervisor shall review the quantities and work included therein and shall authorize the CONTRACTOR to submit an invoice for the balance of the contract amount which in SCAQMD Building Supervisor opinion shall be just and fair, covering the amount and value of the total amount of work done by the CONTRACTOR, less five percent (5%) of the total work done. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables.

ATTACHMENT C-4

PAYMENT SCHEDULE AIR HANDLER # 14

\$ _____ Total Contract Amount Air Handler #14

<p>A. Upon completion of the demolition of Air Handler #14, Contractor may submit an invoice for 10% of the Air Handler #14 contract amount. Contractor shall provide required conditional lien releases for demolition labor. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>B. Upon delivery of the equipment and materials for Air Handler #14, Contractor may submit an invoice for 50% of the Air Handler # 14 contract amount. Contractor shall provide required conditional lien releases for equipment, materials and/or supplies. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$
<p>C. Upon completion of Air Handler #14 start up, Contractor may submit an invoice for 20% of the Air Handler #14 contract amount. Contractor shall provide required conditional lien releases for any additional labor, equipment, materials and/or supplies. Progress payment upon approval of invoice shall be net/30 as indicated below in <i>Section "A"</i></p>	\$

A. WHENEVER in the opinion of the SCAQMD Building Supervisor the CONTRACTOR shall have completely performed each progressive portion the Contract on his part, the SCAQMD Building Supervisor shall notify the Building Maintenance Manager that the progressive amount has been completed in its entirety. Once the project is complete in its entirety, he shall request that the Building Maintenance Manager accept the work identified in this Contract is complete. The CONTRACTOR will then submit to the SCAQMD Building Supervisor for approval a written statement of the final quantities and completion of contract items for inclusion in the final invoice. Upon receipt of such statement, the SCAQMD Building Supervisor shall review the quantities and work included therein and shall authorize the CONTRACTOR to submit an invoice for the balance of the contract amount which in SCAQMD Building Supervisor opinion shall be just and fair, covering the amount and value of the total amount of work done by the CONTRACTOR, less five percent (5%) of the total work done. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables.

ATTACHMENT C-5

PROJECT CLOSE OUT PAYMENT SCHEDULE

\$ _____ Total Contract Amount

A. With final project approval from SCAQMD, completion of the close out documents and all required unconditional lien releases. Contractor shall then submit an invoice for balance of the contract amount.	\$

A. WHENEVER in the opinion of the SCAQMD Building Supervisor the CONTRACTOR shall have completely performed each progressive portion the Contract on his part, the SCAQMD Building Supervisor shall notify the Building Maintenance Manager that the progressive amount has been completed in its entirety. Once the project is complete in its entirety, he shall request that the Building Maintenance Manager accept the work identified in this Contract is complete. The CONTRACTOR will then submit to the SCAQMD Building Supervisor for approval a written statement of the final quantities and completion of contract items for inclusion in the final invoice. Upon receipt of such statement, the SCAQMD Building Supervisor shall review the quantities and work included therein and shall authorize the CONTRACTOR to submit an invoice for the balance of the contract amount which in SCAQMD Building Supervisor opinion shall be just and fair, covering the amount and value of the total amount of work done by the CONTRACTOR, less five percent (5%) of the total work done. Payment shall be made by SCAQMD to CONTRACTOR within thirty (30) days after approval by SCAQMD of an invoice prepared and furnished by CONTRACTOR showing services performed and referencing tasks and deliverables.

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 7

PROPOSAL: Approve Transfer of Monies from Health Effects Research Fund to Brain & Lung Tumor and Air Pollution Foundation and Authorize Solicitation and Potential Funding of Proposals

SYNOPSIS: At the March 13, 2015 meeting of the Brain & Lung Tumor and Air Pollution Foundation (Foundation), the Foundation Board asked that funds that the SCAQMD Board had previously transferred to the Health Effects Research Fund be designated for the Foundation's use to support brain and lung tumor and air pollution research. The Foundation would then issue a Request for Proposals to identify specific projects for review and potential funding upon approval by the Foundation Board. This action is to transfer \$2,500,000 from the Health Effects Research Fund to the Foundation to fund such research. This action is also to authorize the Foundation to solicit research proposals and to review and potentially fund such proposals.

COMMITTEE: Administrative, May 8, 2015; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the transfer of \$2,500,000 from the Health Effects Research Fund (Fund 48) to the Brain & Lung Tumor and Air Pollution Foundation.
2. Authorize the Brain & Lung Tumor and Air Pollution Foundation Board to solicit research proposals within the purpose of the Foundation and to review and potentially fund proposals with the transferred monies, as deemed appropriate by the Foundation.

Barry R. Wallerstein, D.Env.
Executive Officer

Background

At the June 2008 meeting, the Board established a Health Effects Research Fund and initially funded it with \$1.5 million from the BP Arco Settlement Fund. The Board further authorized, upon annual Board approval, the transfer of up to 20% of annual penalty money received that exceeds \$4 million in receipts to the Health Effects Research Fund. The available balance in this Fund as of February 27, 2015 is \$3,065,142.

Since 2003, the Board has funded the Brain & Lung Tumor and Air Pollution Foundation and the Asthma and Outdoor Air Quality Consortium from penalty revenues. These monies have been used to fund a number of research projects at local universities and research institutions.

Findings from the Brain & Lung Tumor and Air Pollution Foundation funded research indicate that fine particulate exposure is associated with biochemical changes in the brains of laboratory animals that are consistent with the biochemical pattern found in human brain tumors. Another project found preliminary associations of particulate matter levels and the risk of childhood brain tumors. These findings are of significant interest, but still preliminary, and are being followed up with additional study to better understand the relation of pollution exposure to the risk of contracting brain tumors. One of the hypotheses being tested is whether traffic-related emissions and ultrafine particles may be linked to the changes found in brain tissue and tumor risk.

Through the Asthma and Outdoor Air Quality Consortium, the Board has funded several research projects ranging from laboratory studies to epidemiology studies of air pollution health effects. Results of these projects have provided new information on health effects, including the findings of increased risk for asthma symptoms and lung inflammation in children exposed to traffic-related emissions and new findings of how pollutants can react with cell components to cause injury.

The requested Board action will provide funding to conduct additional health effects research related to brain and lung tumors and air pollution, which may include follow-up on the results from previous projects.

The purpose of the Foundation is to aid, assist, and support research on the incidence, detection, causes and cures of brain and lung tumors, especially those caused or aggravated by air pollution. A Request for Proposal for research related to brain and lung tumors and air pollution will be released by the Brain & Lung Tumor and Air Pollution Foundation Board. The Foundation Board will then review any proposals received for consideration of potential funding.

Results from these studies are expected to provide scientific information to inform policy choices for reducing emissions and exposures to pollutants in the South Coast

Air Basin and may provide new insights on how to develop therapies to treat brain tumors.

Proposal

Staff is proposing that the Board authorize the transfer of \$2,500,000 from the Health Effects Research Fund to the Brain & Lung Tumor and Air Pollution Foundation. The Foundation Board will issue an RFP to solicit proposals within the purpose of the Foundation. The Board will establish a process to evaluate the proposals and potentially fund the proposals with the transferred monies.

Resource Impacts

Funds are available from the Health Effects Research Fund (Fund 48).

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 8

PROPOSAL: Execute Sole-Source Contract for Three-Year Service Agreement for SCAQMD Access to On-line Legal Research Libraries

SYNOPSIS: The current service agreement with Thomson Reuters-West to provide SCAQMD with on-line legal research libraries will expire on June 30, 2015. This action is to enter into a new three-year agreement with Thomson Reuters-West. A sole-source contract is recommended since SCAQMD is securing print publications through this agreement at a substantially lower cost than the open market.

COMMITTEE: Administrative, May 8, 2015; Recommended for Approval

RECOMMENDED ACTION:

Authorize the Executive Officer to enter into a three-year agreement with Thomson Reuters-West to provide access to online legal research libraries and print publications in an amount not to exceed \$75,000 per fiscal year for a three-year period.

Barry R. Wallerstein, D.Env.
Executive Officer

KRW:vmr

Background

The District's Legal Office utilizes electronic legal databases in its course of work on the SCAQMD's behalf. Thomson Reuters-West (hereinafter "Thomson") has presented an offer for access to its electronic legal research libraries, as well as print publications, at a substantially discounted rate. In addition, the new contract provides for access to an increased number of electronic legal libraries.

Proposal

The Legal Office seeks to enter into a three-year contract with Thomson Reuters-West. The three-year contract will be funded in the fiscal year beginning July 1, 2015 through

June 30, 2018. Subsequent funding will be requested in the budget process for Fiscal Years 2016-17 and 2017-18. The three-year contract price shall not exceed \$225,000.

Sole-Source Justification

SCAQMD Procurement Policy, Section VIII(B)(2), provides for a waiver of formal bid processes under certain circumstances based upon documentation justifying a sole-source award. The award to Thomson Reuters-West is justified pursuant to Procurement Policy Sections VIII(B)(2)(a): the cost of labor for preparation of the described documents exceed the possible savings that could be derived from such detailed documents; and VIII(B)(2)(c)(2): the project involves the use of proprietary technology.

Resource Impacts

Sufficient funds will be available in Legal's FY 2015-16 Budget, Subscription Services Account, and subsequent funding for FY 2016-17 and FY 2017-18 to support this contract will be requested in future budgets.



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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 9

PROPOSAL: Approve Contract Awards Approved by MSRC

SYNOPSIS: As part of their FYs 2014-16 AB 2766 Discretionary Fund Work Program, the MSRC approved two new contracts under the Major Event Center Transportation Program, as well as a sole-source contract to support transportation services for the 2015 Special Olympics World Games. At this time the MSRC seeks Board approval of the contract awards.

COMMITTEE: Mobile Source Air Pollution Reduction Review, May 21, 2015;
Recommended for Approval

RECOMMENDED ACTIONS:

1. Approve the award of two contracts totaling \$2,072,266 under the Major Event Center Transportation Program, as part of approval of the FYs 2014-16 AB 2766 Discretionary Fund Work Program, as described in this letter and as follows:
 - a. A contract with Los Angeles County Metropolitan Transportation Authority in an amount not to exceed \$1,350,000 to provide bus service, as well as special Metrolink service for select games, for 2015 and 2016 Dodger games; and
 - b. A contract with Orange County Transportation Authority in an amount not to exceed \$722,266 to provide bus service to the 2015 Orange County Fair;
2. Approve a sole-source contract award to the Special Olympics World Games Organizing Committee, Inc. in an amount not to exceed \$380,536 to provide low-emission transportation services for the 2015 Special Olympics World games, as part of approval of the FYs 2014-16 AB 2766 Discretionary Fund Work Program, as described in this letter;
3. Authorize MSRC the authority to adjust contract awards up to five percent, as necessary and previously granted in prior work programs; and
4. Authorize the Chairman of the Board to execute new and modified contracts under FYs 2014-16 Work Program, as described above and in this letter.

Greg Pettis,
Chair, MSRC

Background

In September 1990 Assembly Bill 2766 was signed into law (Health & Safety Code Sections 44220-44247) authorizing the imposition of an annual \$4 motor vehicle registration fee to fund the implementation of programs exclusively to reduce air pollution from motor vehicles. AB 2766 provides that 30 percent of the annual \$4 vehicle registration fee subvended to the SCAQMD be placed into an account to be allocated pursuant to a work program developed and adopted by the MSRC and approved by the Board.

In November 2014, the MSRC selected initial categories for the FYs 2014-16 Work Program, with the understanding that additional project categories would continue to be developed and brought forward for consideration at a later date. At its May 21, 2015 meeting, the MSRC considered recommended awards under the Major Event Center Transportation Program, as well as a recommended sole-source award to support transportation services for the 2015 Special Olympics World Games. Details are provided below in the Proposals section.

Outreach

In accordance with SCAQMD's Procurement Policy and Procedure, public notices advertising the Major Event Center Transportation Program Announcement were published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin. In addition, the Program Announcement was advertised in the Desert Sun newspaper for expanded outreach in the Coachella Valley.

Additionally, potential bidders may have been notified utilizing SCAQMD's own electronic listing of certified minority vendors. Notice of the solicitation was e-mailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on the Internet at SCAQMD's Website (<http://www.aqmd.gov>). Further, the solicitation was posted on the MSRC's website at <http://www.cleantransportationfunding.org> and electronic notifications were sent to those subscribing to this website's notification service.

Proposals

At its May 21, 2015 meeting, the MSRC considered recommendations from its MSRC-TAC and approved the following:

Major Event Center Transportation Program

As part of the FYs 2014-16 Work Program, the MSRC allocated \$4.5 million for event center transportation programs and released a Program Announcement to solicit projects for traffic-impacted centers. Two applications have been received to date. Los Angeles County Metropolitan Transportation Authority (Metro) requested the MSRC to consider an award of \$1,350,000 to provide express bus service, as well as special Metrolink

service for select games, for the 2015 and 2016 Dodgers seasons. Service would be provided by CNG buses from Union Station for all home games (82 scheduled for the 2015 season), providing service from two hours prior to each game until 45 minutes after the game ends. In addition, special Metrolink trains will be added in support of “cross-town rivalry” games versus the Los Angeles Angels of Anaheim. For these games, trains will depart from Oceanside and arrive at Union Station, enabling patrons to utilize the bus service to access Dodger Stadium. Service would promote the use of public transit, including bus and rail, in lieu of personal automobile. Elimination of traffic congestion, especially reductions in automobile stop and go driving and queuing, has a direct link to reduced vehicle exhaust emissions. Metro and the Los Angeles Dodgers would contribute at least \$1,350,000 in co-funding. In accordance with the Program terms, Metro would only seek reimbursement for rail trips performed using Metrolink’s cleanest locomotives. The MSRC approved a contract award to Metro in an amount not to exceed \$1,350,000 to implement the 2015 and 2016 Dodger Stadium Express service.

Also in response to the Major Event Center Transportation Program Announcement, the Orange County Transportation Authority (OCTA) requested the MSRC to consider an award of \$722,266 to implement express bus service for the 2015 Orange County Fair. The service would include transportation to and from Fullerton Park & Ride, the Depot at Santa Ana, Goldenwest Transportation Center, the Anaheim Canyon Metrolink Station, Laguna Hills Transportation Center, Irvine Transportation Center, Anaheim Regional Transportation Intermodal Center, Junipero Serra Park & Ride, and the Village at Orange. Service would be provided every 20 to 40 minutes, depending upon the location and time of day. In addition to allowing Fair attendees to use public transportation for all or a portion of their trip, the service would also reduce vehicle traffic in and around the Fair. Elimination of traffic congestion, especially reductions in automobile stop and go driving and queuing, has a direct link to reduced vehicle exhaust emissions. OCTA and its project partners would collectively contribute \$723,300 in co-funding including fare box revenue, marketing design and production, and advertising and marketing purchases. The MSRC approved a contract award to OCTA in an amount not to exceed \$722,266 to implement the 2015 Orange County Fair Express.

Special Olympics World Games

At their April 16, 2015 meeting, the MSRC directed staff to investigate potential opportunities to assist the Special Olympics Games Organizing Committee (GOC) in providing clean transportation services in support of the Special Olympics World Games to be held in Los Angeles County in 2015 (LA2015). Transportation needs associated with LA2015 will begin on July 21, 2015 and conclude on August 3, 2015. Over 7,000 athletes from 170 countries will participate. More than 500,000 spectators are expected to attend the various events at multiple venues. In response to the MSRC’s direction, staff prepared a guidance document to assist GOC in preparing a proposal for MSRC-TAC and MSRC consideration. An element of the guidance was that any full-sized buses used be equipped with engines that meet or exceed the 2010 USEPA heavy-duty vehicle emissions standards, and smaller vehicles should be the lowest-emitting available, with a

preference for vehicles that operate on alternative fuels. Showcasing advanced technology vehicles, including zero-emission vehicles, was recommended.

The GOC submitted a proposal outlining four proposed transportation services: 1) the implementation of low-emission bus service from park and ride lots to the various venues, 2) van service from Los Angeles International Airport to hotels, 3) transportation of Los Angeles Police Department officers to LA2015 Opening Ceremonies, and 4) transit services extension in and around the I-710 corridor. The MSRC-TAC recommended funding the park and ride lot service in an amount not to exceed \$380,536. Subsequent to the MSRC-TAC meeting, MSRC staff were notified by the GOC that the transportation needs in support of LA2015 were changing, and that transportation-related funding shortfalls exist in other areas. The GOC asked the MSRC to consider allowing greater flexibility to identify and implement low-emission transportation services above and beyond those recommended by the MSRC-TAC. The MSRC considered the recommendation of the MSRC-TAC, and the evolving transportation needs of LA2015, and approved a sole-source contract award to the GOC in an amount not to exceed \$380,536. The funds could be used for one or more of the following: clean fuel bus services, “last mile” circulators connecting to athletic venues, extended rail service, and traffic mitigation services, with the specific services to be defined in the contract. Vehicles used must be consistent with the guidelines set forth above. Additionally, the GOC will be required to collect such information as necessary to quantify the air quality benefits associated with the transportation services.

At this time, the MSRC requests the SCAQMD Board to approve the contract awards as part of approval of the FYs 2014-16 AB 2766 Discretionary Fund Work Program as outlined above. The MSRC also requests the Board to authorize the SCAQMD Chairman of the Board the authority to execute all agreements described in this letter. The MSRC further requests authority to adjust the funds allocated to each project specified in this Board letter by up to five percent of the project’s recommended funding. The Board has granted this authority to the MSRC for all past Work Programs.

Sole-Source Justification

As an element of its FYs 2014-16 Work Program, the MSRC allocated an amount not to exceed \$380,536 to support clean transportation for LA2015. As discussed in Proposals above, this project will be implemented by initiating a sole-source contract with the GOC. While the MSRC and SCAQMD strive to retain technical services on a competitive basis, the SCAQMD’s Procurement Policy and Procedure recognizes that, at times, the required services are available from only one source, making the pursuit of a competitive procurement futile. The GOC is the responsible entity for providing services for the 2015 Games.

This request for a sole source award to the GOC is made under provision VIII.B.2.c.(1): The desired services are available from only the sole source due to the unique experience and capabilities of the proposed contractor or contractor team.

Resource Impacts

The SCAQMD acts as fiscal administrator for the AB 2766 Discretionary Fund Program (Health & Safety Code Section 44243). Money received for this program is recorded in a special revenue fund (Fund 23) and the contracts specified herein, as well as any contracts awarded in response to the solicitation, will be drawn from this fund.

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 10

PROPOSAL: Withdrawal of South Coast Air Basin Transportation Conformity SIP Submittals

SYNOPSIS: This action is to request that CARB withdraw an outdated Transportation Conformity SIP Submittal and its associated Consultation MOU from the California SIP. The Transportation Conformity SIP and associated Consultation MOU in question are incorporated in Rule 1902, which was last amended by Board actions on August 14, 1998. U.S. EPA Region IX notified CARB and the SCAQMD that the outdated Transportation Conformity SIP submittal is no longer approvable. After discussions with staff from CARB and U.S. EPA, the SCAQMD staff concurs with the proposed approach to withdraw the outdated Transportation Conformity SIP submittal and its associated interagency Consultation MOU from the California SIP.

COMMITTEE: Mobile Source, May 15, 2015; Recommended for Approval

RECOMMENDED ACTION:

Direct staff to request CARB to withdraw the Transportation Conformity SIP submittals and the associated Consultation MOU as included in Rule 1902, which were last amended by Board actions on August 14, 1998.

Barry R. Wallerstein, D.Env.
Executive Officer

PF:JC

Background

The U.S. Environmental Protection Agency (U.S. EPA) Administrator has directed U.S. EPA staff to eliminate the backlog of State Implementation Plan (SIP) submittals which have not been acted on to date and for technical reasons are not approvable in their submittal form. To this end, following discussions with U.S. EPA Region IX and California Air Resources Board (CARB) staff, the preferred option is to have CARB withdraw the outdated Transportation Conformity SIP from the California SIP since it is currently outdated and is not approvable as it does not address current air pollution standards.

The South Coast Air Quality Management District (SCAQMD) Board first approved the Transportation Conformity Rule 1902 on September 9, 1994 as a component of Regulation XIX, Federal Conformity Regulations. Rule 1902 was amended on May 10, 1996. The rule and associated Consultation MOU were last amended by the Board on August 14, 1998. Upon amendment, the Board, as with the previous adoption and amendment actions, directed staff to forward Rule 1902 and the Consultation MOU to CARB for inclusion in the California Transportation Conformity SIP to be submitted to U.S. EPA.

U.S. EPA's transportation conformity rules have undergone significant revisions over the past years and transportation conformity SIPs that were adopted in the 1990's do not conform to current requirements. Most notably, Rule 1902 language was drafted prior to establishment of the state and federal PM2.5 standards. Rule 1902 addresses transportation-related emissions contributing to PM10 non-attainment but does not address PM2.5. Furthermore, the South Coast Air Basin has since been designated attainment for PM10.

As a consequence, if the U.S. EPA acts on the SIP submittals, the most likely outcome would be disapproval. After discussions with staff from CARB and U.S. EPA, SCAQMD staff concurs with the proposed approach to withdraw from the California SIP the outdated Transportation Conformity SIP submittals and associated interagency Consultation MOU listed below. Staff proposes to initiate the process to adopt amendments to update Rule 1902. Until updated Rule 1902 is amended by the Board and approved into the SIP, the region will use the federal conformity regulation.

Proposal

Staff is proposing that the Board authorize the SCAQMD staff to request that CARB withdraw the Transportation Conformity Plan submittals and Consultation MOU from the California State Implementation Plan. The aforementioned submittals are listed in the following table.

Item	Adopted	Submitted	Comment
Rule 1902	9/9/1994	11/30/94	
	5/10/1996 (amended)	10/18/1996	Replaces 9/9/1994 version
	8/14/1998 (amended)	12/3/1998	Replaces 5/10/1996 version
Consultation MOU	May 10, 1996	10/18/1996	MOU dated 6/1/1995. Replaces section (f) of Rule 1902 with approved MOU to implement interagency consultation
	8/14/1998 (amended)	12/3/1998	

Resource Impacts

Existing staff resources are adequate to implement the proposed action.

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 11

PROPOSAL: Legislative and Public Affairs Report

SYNOPSIS: This report highlights the April 2015 outreach activities of Legislative and Public Affairs, which include: an Environmental Justice Update, Community Events/Public Meetings, Business Assistance, and Outreach to Business and Federal, State, and Local Government.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file.

Barry R. Wallerstein, D.Env.
Executive Officer

LBS:DJA:MC:DM:jns

BACKGROUND

This report summarizes the activities of Legislative and Public Affairs for April 2015. The report includes four major areas: Environmental Justice Update; Community Events/Public Meetings (including the Speakers Bureau/Visitor Services, Communications Center, and Public Information Center); Business Assistance; and Outreach to Business and Federal, State and Local Governments.

ENVIRONMENTAL JUSTICE UPDATE

The following are key environmental justice-related activities in which SCAQMD staff participated during the month of April. These events involve communities that may suffer disproportionately from adverse air quality impacts.

April 9

- Staff attended a California Department of Toxic Substances Control (DTSC) meeting at Resurrection Church, Los Angeles regarding the closure of the Exide Technologies facility in Vernon.

April 23

- Staff attended the Southern California Association of Governments (SCAG) Environmental Justice Workshop in Los Angeles.

April 29

- Staff attended the American Lung Association's planning meeting in San Bernardino for the Inland Counties Lung Force Expo in Ontario, which SCAQMD co-sponsored. This Expo event, which was held on May 2, was to promote lung health and awareness about air pollution.
- Staff represented SCAQMD at the 2015 Inland Empire Healthy Cities Symposium in Loma Linda sponsored by the Riverside and San Bernardino Departments of Public Health, and provided information on air quality in relation to environmental justice and health equity issues.

April 30

- Staff participated in the I-710 Corridor Project Environmental Impact Report/Environmental Impact Statement Community meeting in Paramount. The discussion of the meeting centered on Community Alternative 7, which includes a zero emission truck lane, as well as active transportation.

COMMUNITY EVENTS/PUBLIC MEETINGS

Each year, thousands of residents engage in valuable information exchanges through events and meetings that SCAQMD sponsors either alone or in partnership with others. Attendees typically receive the following information:

- Tips on reducing their exposure to smog and its health effects;
- Clean air technologies and their deployment;
- Invitations or notices of conferences, seminars, workshops and other public events;
- Ways to participate in SCAQMD's rule and policy development; and
- Assistance in resolving air pollution-related problems.

SCAQMD staff attended and/or provided information and updates at the following events:

April 1

- SCAQMD's Public Workshop on Proposed Amended Toxic Rules to Implement Office of Environmental Health Hazard Assessment (OEHHA) Revisions to Air Toxics Hot Spots Program Risk Assessment Guidelines, SCAQMD Headquarters, Diamond Bar

April 2

- Two SCAQMD Public Workshops on Proposed Amended Toxic Rules to Implement Office of Environmental Health Hazard Assessment (OEHHA) Revisions to Air Toxics Hot Spots Program Risk Assessment Guidelines at the Buena Park Community Center and the Wilmington Senior Citizen Center

April 11

- Bolsa Chica Earth Day Event, Bolsa Chica Ecological Reserve
- Frontier Project/CVWD Earth Day Event, Rancho Cucamonga

April 16

- Soboba Tribal Earth Day Event 2015, Tribal Hall, San Jacinto
- IEUA Chino Creek Wetlands Earth Day Event, Chino

April 17

- Bear Valley Earth Day Event, Bear Valley Electric, Bear Lake

April 18

- Monterey Park Earth Day Festival & Bike Ride Event, Barnes Park
- South Pasadena Earth Day Event & Garden Tour, La France Ave
- Sustainable Claremont Earth Day Event, Downtown Claremont

April 19

- Children's Earth Day Event, Culver City

April 20

- Annual Irvine Valley College Green Summit, Irvine

April 22

- SCAQMD's Public Consultation and CEQA Scoping Meeting on Proposed Amended Rule 1156 – Further Emission Reductions of Particulate Emissions from Cement Manufacturing Facilities, Gonzales Community Center, Colton

- Western Municipal Water District (WMWD) 8th Annual Earth Night in the Garden Event, WMWD, Riverside
- Cerritos College Annual Earth Day Event, Falcon Square

April 24

- Community Hospital Earth Day Event, San Bernardino

April 25

- City of Diamond Bar Earth Day Event, SCAQMD Headquarters, Diamond Bar
- Healthy Muscoy Festival, Inland Empire Job Corps Center, San Bernardino

April 26

- 18th Annual Spring Health & Business Expo, Brentwood

SPEAKERS BUREAU/VISITOR SERVICES

SCAQMD regularly receives requests for staff to speak on air quality-related issues from a wide variety of organizations, such as trade associations, chambers of commerce, community-based groups, schools, hospitals and health-based organizations. SCAQMD also hosts visitors from around the world who meet with staff on a wide range of air quality issues.

April 1

- Staff presented to 100 students of Mayfair Middle/High School in Lakewood, and provided them with an overview on the agency. Staff then discussed opportunities at SCAQMD during the school's career day event and demonstrated a hydrogen fuel cell vehicle.

April 3

- Eight students from the University of Southern California's Business & Public Policy Master's Program class visited SCAQMD headquarters and attended the Board Meeting where they were acknowledged by the Chair. After the meeting they received an overview on the agency and air quality, toured the laboratory and received information on clean alternative fuel vehicles.

April 10

- Staff provided an overview on the agency, air quality and a tour of the SCAQMD laboratory to 11 students from San Bernardino Valley College and 15 students from the Pomona College physics program.

April 15

- Staff spoke to 400 students at Los Angeles High School and provided them with an overview of the agency, air quality, and information on careers at SCAQMD.

COMMUNICATION CENTER STATISTICS

The Communication Center handles calls on the SCAQMD main line, 1-800-CUT-SMOG[®] line, the Spanish line, and after hours calls to each of those lines. Calls received in the month of April 2015 were:

Calls to SCAQMD's Main Line and the 1-800-CUT-SMOG [®] Line	3,730
Calls to SCAQMD's Spanish-language Line	<u>47</u>
Total Calls	3,777

PUBLIC INFORMATION CENTER STATISTICS

The Public Information Center (PIC) handles phone calls and walk-in requests for general information. Information for the month of April 2015 is summarized below:

Calls Received by PIC Staff	126
<u>Calls to Automated System</u>	<u>780</u>
Total Calls	906
Visitor Transactions	186
E-Mail Advisories Sent	7,807

BUSINESS ASSISTANCE

SCAQMD notifies local businesses of proposed regulations so they can participate in the agency's rule development process. SCAQMD also works with other agencies and governments to identify efficient, cost-effective ways to reduce air pollution and shares that information broadly. Staff provides personalized assistance to small businesses both over the telephone and via on-site consultation. The information is summarized below:

- Conducted eight free on-site consultations
- Provided permit application assistance to 112 companies
- Issued 31 clearance letters

Types of businesses assisted

Auto Body Shops	Distributors	Metal Coatings/ Processing Facilities
Coffee Roasting	Dry Cleaners	Recycling Facilities
Construction & Architecture	Gas Stations	Restaurants
	Manufacturers	

OUTREACH TO COMMUNITY GROUPS AND FEDERAL, STATE, AND LOCAL GOVERNMENTS

Field visits and/or communications were conducted with elected officials or staff from the following cities:

Anaheim	Huntington Beach	Newport Beach
Arcadia	Inglewood	Norco
Alhambra	Irvine	Orange
Aliso Viejo	Jurupa Valley	Pasadena
Banning	Los Angeles	Placentia
Brea	La Habra	Perris
Beaumont	La Canada Flintridge	Riverside
Buena Park	Lake Elsinore	Rosemead
Bradbury	Laguna Hills	San Gabriel
Carson	Laguna Woods	San Marino
Calimesa	Lawndale	San Jacinto
Claremont	Lomita	San Juan Capistrano
Canyon Lake	Los Alamitos	South Pasadena
Corona	Malibu	Temple City
Diamond Bar	Manhattan Beach	Temecula
Duarte	Menifee	Torrance
Eastvale	Monrovia	Tustin
Fountain Valley	Moreno Valley	Yorba Linda
Fullerton	Monterey Park	Yucaipa
Gardena	Mission Viejo	Walnut
Hemet	Murrieta	

Visits and/or communications were conducted with elected officials or staff from the following State and Federal Offices:

- U.S. Senator Barbara Boxer
- U.S. Senator Dianne Feinstein
- U.S. Congresswoman Karen Bass
- U.S. Congressman Ken Calvert
- U.S. Congresswoman Judy Chu
- U.S. Congresswoman Janice Hahn
- U.S. Congresswoman Grace Napolitano

- U.S. Congressman Ed Royce
- U.S. Congresswoman Loretta Sanchez
- U.S. Congressman Ted Lieu
- U.S. Congressman Adam Schiff
- U.S. Congressman Mark Takano
- U.S. Congresswoman Mimi Walters
- State Senator Ben Allen
- State Senator Joel Anderson
- State Senator Kevin De León
- State Senator Isadore Hall
- State Senator Ed Hernandez
- State Senator Bob Huff
- State Senator Janet Nguyen
- State Senator Holly Mitchell
- State Senator Mike Morrell
- State Senator Richard Roth
- State Senator Jeff Stone
- Assembly Member Autumn Burke
- Assembly Member Ed Chau
- Assembly Member Tom Daly
- Assembly Member Mike Gipson
- Assembly Member David Hadley
- Assembly Member Roger Hernandez
- Assembly Member Chris Holden
- Assembly Member Young Kim
- Assembly Member Chad Mayes
- Assembly Member Jose Medina
- Assembly Member Melissa Melendez
- Assembly Member Reggie Jones-Sawyer
- Assembly Member Don Wagner
- Assembly Member Marie Waldron

Staff represented SCAQMD and/or provided a presentation to the following governments and business organizations:

Anaheim Chamber of Commerce
 Arcadia Chamber of Commerce
 Association of California Cities, Orange County
 Beaumont Chamber of Commerce
 Chino Valley Chamber of Commerce
 Gateway Cities Council of Governments

Greater Riverside Chamber of Commerce
Irwindale Chamber of Commerce
League of California Cities, Inland Counties Division
Los Angeles Chamber of Commerce
Moreno Valley Chamber of Commerce
North Orange County Legislative Alliance
Orange County Business Council
Orange County Council of Governments
Orange County City Managers Association
Orange County Transportation Authority
Redondo Beach Chamber of Commerce
Riverside Transit Agency
Redlands Chamber of Commerce
San Bernardino Associated Governments
San Bernardino Chamber of Commerce
San Gabriel Valley Economic Partnership
San Gabriel Valley Public Affairs Network Group
San Gabriel Valley Council of Governments
South Bay Cities Council of Governments
South Bay Chambers of Commerce
South Bay Environmental Service Center
South Pasadena Chamber of Commerce
South Orange County Economic Coalition
Southern California Association of Governments
Southern California Gas Company
Southwest California Legislative Council
 Menifee Valley Chamber of Commerce
 Murrieta Chamber of Commerce
 Temecula Chamber of Commerce
 Lake Elsinore Chamber of Commerce
 Wildomar Chamber of Commerce
 Perris Valley Chamber of Commerce
Torrance Chamber of Commerce
U.S. Green Building Council, Orange County
Western Municipal Water District, Riverside
Western Riverside Council of Governments
 Clean Cities Coalition
Western Riverside Transportation NOW (RTA)
 Moreno Valley/Perris Chapter
 San Gorgonio Pass Chapter, Beaumont

Staff represented SCAQMD and/or provided a presentation to the following community groups and organizations:

American Lung Association, Inland Counties
Ahmanson Senior Center, Los Angeles
Alliance Richard Merkin Middle School, Los Angeles
Caltech Sustainability Community Alliance, Pasadena
California State University, Northridge
Dr. Theodore T. Alexander Jr. Science Center School, Los Angeles
Downtown Value School, Los Angeles
Expo Center, Los Angeles
Gertz-Ressler High School, Los Angeles
Grand Terrace High School, Grand Terrace
Hoover Recreation Center, Los Angeles
John Tracy Clinic, Los Angeles
Lanterman High School, Los Angeles
Long Beach Children's Clinic
Los Angeles Community College
Los Angeles Police Department, Southwest Community
Los Angeles High School
New Designs Charter School, Los Angeles
North Area Neighborhood Development Council, Los Angeles
Norwood Street Elementary School
Orthopedic Hospital Medical Magnet High School, Los Angeles
Resurrection Church, Los Angeles
Richard Merkin Middle School, Los Angeles
Riverside County Department of Public Health
Riverside County Health Coalition
Star Christian School, Los Angeles
San Bernardino County Department of Public Health
San Bernardino Valley College
San Bernardino Community Hospital
St. John's Cathedral, Los Angeles
Willard Villas Apartments, Los Angeles

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 12

REPORT: Hearing Board Report

SYNOPSIS: This reports the actions taken by the Hearing Board during the period of April 1 through April 30, 2015.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file this report.

Edward Camarena
Chairman of Hearing Board

SM

Two summaries are attached: **Rules From Which Variances and Orders for Abatement Were Requested in 2015** and **April 2015 Hearing Board Cases**.

The total number of appeals filed during the period April 1 to April 30, 2015 is 0; and total number of appeals filed during the period of January 1 to April 30, 2015 is 0.

Report of April 2015 Hearing Board Cases

Case Name and Case No.	Rules	Reason for Petition	District Position/ Hearing Board Action	Type and Length of Variance or Order	Excess Emissions
1. ExxonMobil Oil Corporation Case No. 1183-490 (M. Reichert)	202(a) 203(b) 2004(f)(1) 3002(C)(1)	Petitioner must isolate and shut down refinery flares for maintenance and inspection.	Not Opposed/Granted	SV and AOC granted consisting of one 35 consecutive day period and one 25 consecutive day period occurring between 4/15/15 and 7/13/15.	None
2. Paramount Petroleum Corporation Case No. 2914-120 (T. Barrera)	203(b) 1118(g)(3) 1118(g)(5)(A) 2004(f)(1) 2011(c)(2)(A) 2011(c)(3)(A) 2012(c)(2)(A) 2012(c)(3)(A) 3002(c)(1)	Planned Edison power outage will prevent petitioner from operating monitors serving flare equipment, boiler and tail gas incinerator.	Not Opposed/Granted	EV granted for 34 consecutive hours in a window of time between 4/25/15 and 4/26/15.	None
3. PurEnergy Operating Services, LLC Case No. 5227-13 (M. Reichert)	203(b) 3002(c)(1)	Source test revealed unexpected high VOC from peaking turbines.	Opposed/Dismissed	IV dismissed without prejudice for lack of good cause.	N/A
4. PurEnergy Operating Services, LLC Case No. 5227-13 (M. Reichert)	203(b) 3002(c)(1)	Source test revealed unexpected high VOC from peaking turbines.	Not Opposed/Granted	SV granted commencing 4/21/15 and continuing for 90 days (7/20/15) or until compliance is achieved, whichever occurs first.	VOC: 1.4 lb/hr per turbine

Case Name and Case No.	Rules	Reason for Petition	District Position/ Hearing Board Action	Type and Length of Variance or Order	Excess Emissions
5. SCAQMD vs. United States Government, Veterans Affairs Medical Center Case No. 5895-3 (Consent Calendar; No Appearance)	1146	Respondent operating four boilers exceeding Rule 1146 NOx limit.	Stipulated/Issued	O/A issued commencing 4/9/15 and continuing through 8/1/15. The Hearing Board shall retain jurisdiction over this matter for 30 days after compliance achieved.	N/A

Acronyms

- AOC: Alternative Operating Conditions
- CARB: California Air Resources Board
- CO: Carbon Monoxide
- ESP: Electrostatic Precipitator
- EV: Emergency Variance
- GDF: Gasoline Dispensing Facility
- H&S: Health & Safety Code
- H2S: Hydrogen Sulfide
- ICE: Internal Combustion Engine
- I/P: Increments of Progress
- IV: Interim Variance
- MFCD/EXT: Modification of a Final Compliance Date and Extension of a Variance
- Mod. O/A: Modification of an Order for Abatement
- N/A: Not Applicable
- NH3: Ammonia
- NOx: Oxides of Nitrogen
- O/A: Order for Abatement
- OSHPD: Office of Statewide Health Planning and Development
- PM: Particulate Matter
- PPM: Parts Per Million
- ROG: Reactive Organic Gas
- RV: Regular Variance
- SCR: Selective Catalytic Reduction
- SO2: Sulfur Dioxide
- SOx: Oxides of Sulfur
- SV: Short Variance
- TBD: To be determined
- VOC: Volatile Organic Compounds
- VRS: Vapor Recovery System

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 13

REPORT: Civil Filings and Civil Penalties Report

SYNOPSIS: This reports the monthly penalties from April 1 through April 30, 2015, and legal actions filed by the General Counsel's Office from April 1 through April 30, 2015. An Index of District Rules is attached with the penalty report.

COMMITTEE: Stationary Source, May 15, 2015, Reviewed

RECOMMENDED ACTION:

Receive and file this report.

Kurt R. Wiese
General Counsel

KRW:lc

No Civil Actions Filed

Attachments

April 2015 Penalty Report

Index of District Rules and Regulations

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
General Counsel's Office**

April 2015 Settlement Penalty Report

Total Penalties

Civil Settlements:	\$161,475.00
Self-Reported Violations:	\$2,500.00
MSPAP Settlements:	\$25,855.00
Hearing Board Settlements:	\$7,500.00
Total Cash Settlements:	\$197,330.00
Total SEP Value:	\$0.00
Fiscal Year through April 2015 Cash Total:	\$7,919,396.88
Fiscal Year through April 2015 SEP Value Only Total:	\$299,000.00

FAC ID	COMPANY NAME	RULE NUMBER	RECLAIM ID	SETTLED DATE	ATTY INT	NOTICE NO.	TOTAL SETTLEMENT
CIVIL SETTLEMENTS:							
115536	AES REDONDO BEACH, LLC	2012	Y	4/28/2015	WBW	P60556	\$3,000.00
164512	AGUA MANSA MRF, LLC	402 41700 402 41700		4/1/2015	KCM	P61114 P61113 P61114	\$2,625.00
175226	ANITA'S MEXICAN FOODS CORPORATION	202(A), 1146.2, 1147 203 (A), 203 (B) 203(A), 203 (B) 201, 203 (A), 222, 1147 1147		4/29/2015	NAS	P61444 P61413 P61404 P61416 P61432	\$70,000.00
164472	AQUA MARINA DEL REY APARTME	203 203		4/29/2015	NSF	P60954 P60952	\$2,500.00
117290	B BRAUN MEDICAL, INC.	2004(F)(1)	Y	4/28/2015	AJO	P62506	\$2,500.00
59449	BAKEMARK USA	203 (B)		4/3/2015	KCM	P59627	\$9,700.00
95308	CALIFORNIA HIGHWAY PATROL	203 (A) 203 (A)		4/7/2015	NSF	P61428 P61436	\$5,000.00
107656	CALMAT CO	2007 2007 2007	Y	4/14/2015	ML	P60553 P60552 P60551	\$500.00
94930	CARGILL INC	2012, 2004	Y	4/1/2015	RRF	P56320	\$2,000.00

FAC ID	COMPANY NAME	RULE NUMBER	RECLAIM ID	SETTLED DATE	ATTY INT	NOTICE NO.	TOTAL SETTLEMENT
176577	INGLEWOOD UNIFIED SCHOOL DISTRICT	203 (A), 1470 201, 203 (A), 1470		4/22/2015	NSF	P60651 P61227	\$5,000.00
27497	LA CITY, DEPT OF GEN SERVICE	203 (B)		4/3/2015	KCM	P58825	\$1,000.00
29411	LA CO., SHERIFF'S DEPARTMENT	3002(C)(1) 3002(C)(1)		4/24/2015	AJO	P62359 P58194	\$2,500.00
113098	MILKEN COMMUNITY HIGH SCHOOL	1470 1470		4/24/2015	WBW	P60654 P60657	\$2,000.00
118984	NORTHRIDGE HOSPITAL MEDICAL	1146		4/30/2015	NAS	P62151	\$32,000.00
117724	OIL OPERATORS INC.	1176(E)(2) 203 (B)		4/9/2015	TRB	P55631	\$10,000.00
800420	PLAINS WEST COAST TERMINALS	2004, 2012(G)(1)	Y	4/10/2015	RRF	P59711	\$3,150.00
170728	S & F ALRABADI INC. Small Claims	41960.2 461(C)(2)(B)		4/24/2015	PH	P60070	\$500.00
140316	SUNRISE OF SAN GABRIEL	1470		4/22/2015	WBW	P58595	\$3,000.00
152805	ZAMORA BROS MEATS INC.	203 (A)		4/1/2015	RRF	P59609	\$4,500.00
TOTAL CIVIL PENALTIES:		\$161,475.00					

FAC ID	COMPANY NAME	RULE NUMBER	RECLAIM ID	SETTLED DATE	ATTY INT	NOTICE NO.	TOTAL SETTLEMENT
SELF-REPORTED VIOLATION:							
33329	AZUSA PACIFIC UNIVERSITY		1415	4/30/2015		SRV108	\$2,500.00
TOTAL SRV SETTLEMENT:		\$2,500.00					
MSPAP SETTLEMENTS:							
138068	ANGELES NATIONAL GOLF CLUB		461 (E) (2)	4/14/2015		P60851	\$600.00
34505	BIG BEAR CITY AIRPORT		461 (E) (2)	4/3/2015		P61553	\$780.00
12572	CALTRANS		203 (A)	4/16/2015		P61552	\$550.00
166960	CANAM MINERALS, INC		203 (A)	4/14/2015		P60454	\$1,100.00
163553	CHAMPION HOME BUILDERS, INC		3002(C)(1)	4/3/2015		P57145	\$1,500.00
92211	COCA-COLA BOTTLING CO OF LO		203 (B), 1146.1	4/3/2015		P62483	\$5,400.00
174773	CONVENIENCE MANAGEMENT SERV		461	4/21/2015		P62341	\$1,320.00
157852	DOUGLAS JOHN WHITEMAN		461	4/1/2015		P60908	\$550.00
93117	DTG OPERATIONS		203 (B)	4/24/2015		P60956	\$2,625.00
178067	DUARTE FUEL, INC. DBA TUSTI		203(B), 461	4/24/2015		P62430	\$560.00

FAC ID	COMPANY NAME	RULE NUMBER	RECLAIM ID	SETTLED DATE	ATTY INT	NOTICE NO.	TOTAL SETTLEMENT
154989	HOOVER VALERO	461, 41960.2		4/1/2015		P60811	\$650.00
153651	IMPERIAL PAVING CO.	461 (E) (2)		4/29/2015		P59631	\$1,200.00
152645	JACKIE SERVICE STATION	461, 41960.2		4/3/2015		P61767	\$250.00
124816	KRAEMER CHEVRON	461		4/7/2015		P61669	\$2,520.00
25196	LA CITY, STREET MAINT BUREA	401, 1146.1		4/29/2015		P57476	\$2,600.00
155338	MCCOY INVESTMENTS, INC.	203, 461, 41954, 41960.2		4/29/2015		P61670	\$900.00
161831	MORENO VALLEY ARCO	461(C)(2)(B) 41960.2		4/24/2015		P59781	\$600.00
102977	RIVERSIDE CITY OF, PUBLIC U	203 (A)		4/7/2015		P58088	\$200.00
164076	SHELL DEALER, SHELL CAR WAS	203 (A)		4/29/2015		P60062	\$550.00
140144	TOTAL WESTERN, INC.	1166(C)(2)		4/29/2015		P34678	\$800.00
178713	VERA'S MASONRY	203(A)		4/7/2015		P59269	\$600.00
TOTAL MSPAP SETTLEMENT:		\$25,855.00					

FAC ID	COMPANY NAME	RULE NUMBER	RECLAIM ID	SETTLED DATE	ATTY INT	NOTICE NO.	TOTAL SETTLEMENT
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HEARING BOARD SETTLEMENTS:

35188	3M COMPANY Hearing Board Case No. 5970-2 Penalty for ongoing operation of the facility's equipment in noncompliance until 9.15.15.	203, 1147, 3002		4/17/2015	KCM	HRB2272	\$4,000.00
44873	A. C. D. INC Hearing Board Case No. 6003-1 Facility self-reported and is now on under a stipulated Order for Abatement for ongoing operation of facility engine in violation of Rule 203.		203	4/7/2015	KCM	HRB2270	\$2,500.00
173952	THE REHABILITATION CENTER O Hearing Board Case No. 5996-2 Beginning 11.17.14, RCBH shall pay \$1,000/month until they permanently cease use of all three boilers in noncompliance with District Rule.		1146.2	4/8/2015	NAS	HRB2271	\$1,000.00

TOTAL HEARING BOARD SETTLEMENTS: \$7,500.00

DISTRICT RULES AND REGULATIONS INDEX FOR APRIL 2015 PENALTY REPORTS

REGULATION II – PERMITS

List and Criteria Identifying Information Required of Applicants Seeking A Permit to Construct from the South Coast Air Quality Management - District *(Amended 4/10/98)*

- Rule 201 Permit to Construct *(Amended 1/5/90)*
- Rule 202 Temporary Permit to Operate *(Amended 5/7/76)*
- Rule 203 Permit to Operate *(Amended 1/5/90)*
- Rule 222 Filing Requirements for Specific Emission Sources Not Requiring a Written permit Pursuant to Regulation II. *(Amended 5/19/00)*

REGULATION IV - PROHIBITIONS

- Rule 402 Nuisance *(Adopted 5/7/76)*
- Rule 403 Fugitive Dust *(Amended 12/11/98)* Pertains to solid particulate matter emitted from man-made activities.
- Rule 461 Gasoline Transfer and Dispensing *(Amended 6/15/01)*

REGULATION XI - SOURCE SPECIFIC STANDARDS

- Rule 1146 Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters *(Amended 11/17/00)*
- Rule 1146.2 Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers *(Adopted 1/9/98)*
- Rule 1147 NOx REDUCTIONS FROM MISCELLANEOUS SOURCES (9/08)
- Rule 1166 Volatile Organic Compound Emissions from Decontamination of Soil *(Amended 5/11/01)*
- Rule 1176 Sumps and Wastewater Separators *(Amended 9/13/96)*

REGULATION XIV - TOXICS

- Rule 1415 Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems *(Amended 10/14/94)*
- Rule 1470 Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

REGULATION XX REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

- Rule 2004 Requirements (*Amended 5/11/01*)
- Rule 2007 Trading Requirements (*Amended 5/11/01*)
- Rule 2012 Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_x) Emissions (*Amended 5/11/01*)

REGULATION XXX - TITLE V PERMITS

- Rule 3002 Requirements (*Amended 11/14/97*)

CALIFORNIA HEALTH AND SAFETY CODE § 41700

- 41700 Violation of General Limitations
- 41954 Compliance for Control of Gasoline Vapor Emissions
- 41960.2 Gasoline Vapor Recovery

 [Back to Agenda](#)

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 14

REPORT: Lead Agency Projects and Environmental Documents Received By SCAQMD

SYNOPSIS: This report provides, for the Board's consideration, a listing of CEQA documents received by the SCAQMD between April 1, 2015 and April 30, 2015, and those projects for which the SCAQMD is acting as lead agency pursuant to CEQA.

COMMITTEE: Mobile Source, May 15, 2015, Reviewed

RECOMMENDED ACTION:
Receive and file.

Barry R. Wallerstein, D.Env.
Executive Officer

PF:SN:MK:JW:AK

CEQA Document Receipt and Review Logs (Attachments A and B) – Each month, the SCAQMD receives numerous CEQA documents from other public agencies on projects that could adversely affect air quality. A listing of all documents received and reviewed during the reporting period of April 1, 2015 and April 30, 2015 is included in Attachment A. A list of active projects from previous reporting periods for which SCAQMD staff is continuing to evaluate or has prepared comments is included as Attachment B.

The Intergovernmental Review function, which consists of reviewing and commenting on the adequacy of the air quality analysis in CEQA documents prepared by other lead agencies, is consistent with the Board's 1997 Environmental Justice Guiding Principles and Environmental Justice Initiative #4. Furthermore, as required by the Environmental Justice Program Enhancements for FY 2002-03 approved by the Board in September 2002, each of the attachments notes those proposed projects where the SCAQMD has been contacted regarding potential air quality-related environmental justice concerns. The SCAQMD has established an internal central contact to receive information on

projects with potential air quality-related environmental justice concerns. The public may contact the SCAQMD about projects of concern by the following means: in writing via fax, email, or standard letters; through telephone communication; as part of oral comments at SCAQMD meetings or other meetings where SCAQMD staff is present; or submitting newspaper articles. The attachments also identify for each project, the dates of the public comment period and the public hearing date, as reported at the time the CEQA document is received by the SCAQMD. Interested parties should rely on the lead agencies themselves for definitive information regarding public comment periods and hearings as these dates are occasionally modified by the lead agency.

At the January 6, 2006 Board meeting, the Board approved the Workplan for the Chairman's Clean Port Initiatives. One action item of the Chairman's Initiatives was to prepare a monthly report describing CEQA documents for projects related to goods movement and to make full use of the process to ensure the air quality impacts of such projects are thoroughly mitigated. In response to describing goods movement, CEQA documents, (Attachments A and B) are organized to group projects of interest into the following categories: goods movement projects; schools; landfills and wastewater projects; airports; and general land use projects, etc. In response to the mitigation component, guidance information on mitigation measures were compiled into a series of tables relative to: off-road engines; on-road engines; harbor craft; ocean-going vessels; locomotives; fugitive dust; and greenhouse gases. These mitigation measure tables are on the CEQA webpages portion of the SCAQMD's website. Staff will continue compiling tables of mitigation measures for other emission sources, including airport ground support equipment, etc.

As resources permit, staff focuses on reviewing and preparing comments for projects: where the SCAQMD is a responsible agency; that may have significant adverse regional air quality impacts (e.g., special event centers, landfills, goods movement, etc.); that may have localized or toxic air quality impacts (e.g., warehouse and distribution centers); where environmental justice concerns have been raised; and those projects for which a lead or responsible agency has specifically requested SCAQMD review. If the SCAQMD staff provided written comments to the lead agency as noted in the column "Comment Status", there is a link to the "SCAQMD Letter" under the Project Description. In addition, if the SCAQMD staff testified at a hearing for the proposed project, a notation is provided under the "Comment Status." However, if there is no notation, then SCAQMD staff did not provide testimony at a hearing for the proposed project.

During the period April 1, 2015 through April 30, 2015, the SCAQMD received 127 CEQA documents. Of the total of 140 documents* listed in Attachments A and B:

- 47 comment letters were sent;
- 20 documents were reviewed, but no comments were made;
- 21 documents are currently under review;
- 0 documents did not require comments (e.g., public notices, plot plans, Final Environmental Impact Reports);
- 45 documents were not reviewed; and
- 7 documents were screened without additional review.

* These statistics are from April 1, 2015 to April 30, 2015 and do not include the most recent “Comment Status” updates in Attachments A and B.

Copies of all comment letters sent to lead agencies can be found on the SCAQMD’s CEQA webpage at the following internet address:

<http://www.aqmd.gov/home/regulations/ceqa/commenting-agency>.

SCAQMD Lead Agency Projects (Attachment C) – Pursuant to CEQA, the SCAQMD periodically acts as lead agency for stationary source permit projects. Under CEQA, the lead agency is responsible for determining the type of CEQA document to be prepared if the proposal is considered to be a “project” as defined by CEQA. For example, an Environmental Impact Report (EIR) is prepared when the SCAQMD, as lead agency, finds substantial evidence that the proposed project may have significant adverse effects on the environment. Similarly, a Negative Declaration (ND) or Mitigated Negative Declaration (MND) may be prepared if the SCAQMD determines that the proposed project will not generate significant adverse environmental impacts, or the impacts can be mitigated to less than significance. The ND and MND are written statements describing the reasons why proposed projects will not have a significant adverse effect on the environment and, therefore, do not require the preparation of an EIR.

Attachment C to this report summarizes the active projects for which the SCAQMD is lead agency and is currently preparing or has prepared environmental documentation. During April, one Lead Agency project was released to the public for review. As noted in Attachment C, the SCAQMD continued working on the CEQA documents for six active projects during April.

Attachments

- A. Incoming CEQA Documents Log
- B. Ongoing Active Projects for Which SCAQMD Has or Will Conduct a CEQA Review
- C. Active SCAQMD Lead Agency Projects

**ATTACHMENT A* INCOMING CEQA
DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
Goods Movement LAC150428-09 Mitsubishi (MCC) Cement Facility Modification Project	The proposed project consists of modifications to the existing cement import facility located at 1150 Pier F Avenue, within the Port of Long Beach. The project would include installation of a vessel at-berth emission control system, construction of additional cement storage and truck loading capacity on an adjacent lot, and upgrades to ship unloading equipment and other landside structures. Reference LAC141003-05 Comment Period: N/A Public Hearing: 5/11/2015	Final Environmental Impact Report	Port of Long Beach	Document reviewed - No comments sent
Warehouse & Distribution Centers LAC150402-14 Arcadia Logistics Center	The proposed project consists of the construction and operation of a warehouse/distribution/logistics center on the reclaimed property, containing several buildings that collectively would provide a maximum of 1,688,000 square feet of building space on a 81.27-acre site. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/noparcadia.pdf Comment Period: 4/1/2015 - 5/4/2015 Public Hearing: N/A	Notice of Preparation	City of Arcadia	SCAQMD staff commented 4/9/2015
Warehouse & Distribution Centers LAC150407-02 Development Plan Approval Case No. 887-889	The proposed project consists of allowing a 406,000-square-foot concrete tilt-up building; construction of an approximately 506,000-square-foot concrete tilt-up building; and construction of an approximately 300,000-square-foot concrete tilt-up building on the approximately 54-acre site. Reference LAC150212-08 Comment Period: N/A Public Hearing: 4/13/2015	Notice of a Public Hearing	City of Santa Fe Springs	Document reviewed - No comments sent
Warehouse & Distribution Centers RVC150428-06 Optimus Logistics Center I	The proposed project consists of amending the land use designation of 68.48 acres from Commercial and Business Professional Office to Light Industrial to construct a 1,460,067-square-foot high cube warehouse development, with another 10.76 areas left undeveloped for a future commercial development fronting Ramona Expressway and 9.6 acres set aside for the future Ramona Expressway on-ramp at the I-215 Freeway. Reference RVC141128-05 Comment Period: N/A Public Hearing: 5/6/2015	Final Environmental Impact Report	City of Perris	Document reviewed - No comments sent
Warehouse & Distribution Centers RVC150430-07 World Logistics Center	The proposed project consists of a new 2,610 acre Specific Plan envisioned to accommodate up to 40.6 million square feet of high cube industrial warehouse distribution development and related uses on approximately 3,818 acres. Reference SBC130206-01 Comment Period: 4/30/2015 - 6/11/2015 Public Hearing: 6/11/2015	Notice of Availability of a Final Environmental Impact Report	City of Moreno Valley	Under review, may submit written comments

*Sorted by Land Use Type (in order of land uses most commonly associated with air quality impacts), followed by County, then date received.

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT A
INCOMING CEQA DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Warehouse & Distribution Centers</i> SBC150403-03 Eastvale Industrial Development Project	The proposed project consists of the construction and operation of a new 446,173-square-foot industrial warehouse building, parking, and infrastructure and the construction of road improvements to allow overflow truck parking and secondary access to the north. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopeastvaleind.pdf Comment Period: 3/30/2015 - 4/30/2015 Public Hearing: N/A	Notice of Preparation	City of Eastvale	SCAQMD staff commented 4/10/2015
<i>Industrial and Commercial</i> LAC150402-13 MGA Mixed-Use Campus Project	The proposed project consists of an integrated light industrial corporate office and residential mixed-use campus development project. The project will consist of a mix of uses totaling approximately 1.22 million square feet, including: 1) adaptive re-use and rehabilitation of the former LA Times printing facility for MGA light industrial uses and its corporate headquarters, as well as ancillary creative office space; 2) 700 rental housing units in four main residential buildings; 3) shared recreational campus amenities located throughout the site; and 4) approximately 14,000 square feet of campus and neighborhood serving retail and restaurant uses. Reference LAC141209-10 Comment Period: N/A Public Hearing: 4/28/2015	Final Environmental Impact Report	City of Los Angeles	Document reviewed - No comments sent
<i>Industrial and Commercial</i> LAC150407-01 Development Plan Approval Case No. 894	The proposed project consists of constructing a 58,396-square-foot concrete tilt-up building on a 3-acre site. Comment Period: N/A Public Hearing: 4/13/2015	Notice of a Public Hearing	City of Santa Fe Springs	Document reviewed - No comments sent
<i>Industrial and Commercial</i> RVC150417-04 Planning Application Change of Zone No. 2015-087 and 2015-086	The proposed project consists of a zone change on a 0.41 acre parcel from Rural to Industrial as well as proposed operation of a steel manufacturing shop within an existing 5,600-square-foot building on a 0.41-gross-acre parcel. Comment Period: 4/17/2015 - 5/7/2015 Public Hearing: N/A	Initial Project Consultation	City of Menifee	Document reviewed - No comments sent

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT A
INCOMING CEQA DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

SCAQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Industrial and Commercial</i> SBC150423-16 DEC2014-01048	The proposed project consists of the construction of an industrial building of about 161,000 square feet on a parcel of about 7.4 acres. Comment Period: 4/23/2015 - 5/27/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Rancho Cucamonga	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC150403-06 F.E. Weymouth Water Treatment Plant Improvements Program	The proposed project consists of upgrading existing and/or constructing new facilities at the Weymouth Plant to accommodate the plant's maximum operating capacity and update the overall facility. The project would involve rehabilitating and refurbishing aging treatment structures, upgrading systems to improve treatment processes, enhancing worker safety, reducing carbon emissions with renewable energy, improving stormwater management, and ensuring compliance with recent legislation pertaining to the State Drinking Water Act. Reference LAC141021-12 Comment Period: N/A Public Hearing: 4/14/2015	Final Environmental Impact Report	Metropolitan Water District of Southern California	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC150407-06 YRC Wilmington	The proposed project consists of a draft Removal Action Workplan that includes of environmental investigation findings and the proposed remedy to address contaminated soil. The site is contaminated with diesel petroleum hydrocarbons as well as vinyl chloride. Comment Period: 4/7/2015 - 4/25/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC150416-13 Orange County Metal Processing & Former PCA Metal Finishing, Inc. Properties - Fullerton Draft Feasibility Study, Remedial Action Plan	The proposed project consists of a Feasibility Study and Remedial Action Plan. The plan includes environmental studies, results and proposed clean-up activities. The chemicals of concern are metals in shallow soil and volatile organic compounds in shallow soil, soil vapors and groundwater. Comment Period: 4/16/2015 - 5/15/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Document reviewed - No comments sent

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT A
INCOMING CEQA DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

SCAQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> LAC150417-01 PG&E Topock Compressor Station Soil Investigation Project	The proposed project consists of gathering sufficient soil samples to reliably characterize the nature and extent of soil and sediment contamination within the Project Site. The project includes soil sampling and analysis. Comment Period: 4/15/2015 - 6/1/2015 Public Hearing: N/A	Notice of Availability of Recirculated Draft Environmental Impact Report	Department of Toxic Substances Control	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC150422-02 Quemetco Incorporated 720 South 7th Street, City of Industry	The proposed project consists of an approved Class II Permit Modification Request for the permanent installation of a Gala Centrifugal Pellet Dryer Model 5048, and the installation of two replacement plastic sink/float tank units. Comment Period: 4/17/2015 - 5/17/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC150423-18 Former International Light Metals Site	The proposed project consists of proposed remedy to clean up groundwater contamination at the former International Light Metals manufacturing facility in Torrance. The site is about 67 acres and is located in an area zoned for commercial and industrial uses. Comment Period: 4/23/2015 - 5/22/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC150428-01 AAD Distribution and Dry Cleaning Services, Inc. Proposed Consent Decree (Settlement Agreement)	The proposed project consists of a proposed consent decree. This decree resolves claims against Clean Harbors Wilmington, LLC; H&K Imperial Cleaners, Inc.; London Cleaners; Marvi Enterprises, Inc.; Royal Cleaners; Splendid Cleaners; and Sua, Inc. for their contributions to contamination at the site as a result of sending hazardous waste to the ADD facility. Comment Period: 4/28/2015 - 5/25/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Document screened - No further review conducted

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT A
INCOMING CEQA DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> LAC150428-05 Upgraded Existing Soil Vapor Extraction Remediation System Initial Study/Negative Declaration	The proposed project consists of the upgrade and reinstallation of the Soil Vapor Extraction (SVE) remediation system located within a 30-foot by 10-foot fenced area adjacent to the rear of a three-unit commercial retail building. All existing above-grade equipment, piping, conduit, debris, and wire within the fenced area was removed prior to excavation and installation of the upgraded SVE remediation system. Once the existing SVE remediation system was removed, installation of the upgraded SVE remediation system was located within the same 30-foot by 10-foot fenced area. The upgrade increased the height of the 14-inch diameter stack from 13 feet to 25 feet. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/mndsoilvapor.pdf Comment Period: 4/23/2015 - 5/12/2015 Public Hearing: N/A	Draft Negative Declaration	City of Cudahy	SCAQMD staff commented 5/8/2015
<i>Waste and Water-related</i> LAC150430-09 Hauled Water Initiative for New Development	The proposed project consists of adoption of an ordinance to allow hauled water as the primary source of potable water for new single-family residential construction in unincorporated areas of the County of Los Angeles, where there is no available service from a public or private water purveyor and where it has been demonstrated that an on-site groundwater well is not feasible. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/nophaulwtrla.pdf?sfvrsn=2 Comment Period: 5/1/2015 - 6/1/2015 Public Hearing: N/A	Revised Notice of Preparation	County of Los Angeles	SCAQMD staff commented 5/5/2015
<i>Waste and Water-related</i> LAC150430-10 Former MW Bluff Owner, LLC, 1620, 1624, 1644 Whittier Avenue and 970 16th Street, Costa Mesa, CA	The proposed project consists of a draft Corrective Measures Study for excavation of impacted soil, installation of soil vapor barriers, groundwater sampling and monitoring, and the placement of a land use covenant. Comment Period: 4/29/2015 - 5/29/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Under review, may submit written comments
<i>Waste and Water-related</i> ORC150408-02 Duckett Realty Anaheim Property	The proposed project consists of clean up of tetrachloroethylene in the subsurface soil and groundwater. Comment Period: 4/8/2015 - 4/21/2015 Public Hearing: N/A	Community Notice	Department of Toxic Substances Control	Document reviewed - No comments sent

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT A
INCOMING CEQA DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> RVC150421-02 North Norco Channel, Stage II Project	The proposed project consists of construction, operating and maintaining the North Norco Channel, Stage II Project. The project is designed to provide 100-year flood protection. The proposed facilities consist of improvements to an aboveground channel and installation of several underground storm drains that would feed into the channel. The project totals approximately 5,912 lineal feet of drainage improvements. Comment Period: 4/21/2015 - 5/20/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	Riverside County Flood Control	Document reviewed - No comments sent
<i>Waste and Water-related</i> SBC150402-16 Twin Creek	The proposed project consists of replacing the existing storm drain to increase capacity and serve the design flow of the proposed developments in the area. The design flow for this project is the 100-year storm event and the ultimate downstream design flow for this project is 1,275.9 cubic feet per second. Comment Period: 4/2/2015 - 5/2/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of San Bernardino	Document reviewed - No comments sent
<i>Waste and Water-related</i> SBC150424-02 Ashland Inc., Colton, CA	This document consists of a community survey for the corrective action order at Ashland Inc., located at 291 W. Adams St, Colton. As a result of past practices there is evidence of groundwater and soil contamination. Corrective action was conducted and is completed. Comment Period: 4/24/2015 - 5/5/2015 Public Hearing: N/A	Other	Department of Toxic Substances Control	Document screened - No further review conducted
<i>Utilities</i> LAC150402-09 ENV-2014-2780/ 2705 N. Broadway; Northeast Los Angeles	The proposed project consists of the installation, use, and maintenance of a wireless telecommunications facility comprised of three sectors, each with four panel antennas, located on the rooftop of an existing 47-foot tall building. Ancillary equipment, including an emergency generator, will be located on a raised platform behind the building, for each of the rooftop sectors, as well as additional screening, designed and painted to match an existing fence, for the proposed equipment lease area. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndcell20142780.pdf Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/8/2015
<i>Utilities</i> LAC150409-04 ENV-2014-2302/ 2455 W. Colorado Blvd; Northeast Los Angeles	The proposed project consists of the installation, operation and maintenance of unmanned, wireless telecommunication facility on a rooftop of an existing mixed-use building. The wireless facility consists of 12 screened panel antennas, 12 remote radio units, one parabolic antenna and five equipment cabinets located within an indoor lease area and one emergency generator. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndcell20142302.pdf Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/15/2015

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<i>Utilities</i> LAC150409-08 ENV-2014-3379/ 4771 N. Forman Ave.; North Hollywood- Valley Village	The proposed project consists of allowing the construction/installation of a wireless telecommunications facility with a height of 56' 8" to top of the penthouse on a rooftop of an existing building. The installation consists of three sections that total: 12 antennas, 12 remote radio units, three raycaps, and one standby generator all to be screened and located on the roof and basement of the existing property. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndcell20143379.pdf Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/15/2015
<i>Utilities</i> LAC150409-12 ENV-2014-4443/ 3906 W. Beverly Blvd., 252 N. Berendo St.; Wilshire	The proposed project consists of the installation, use and maintenance of an unmanned wireless telecommunications facility consisting of 12 panel antenna, 12 remote radio units, one microwave antenna, two GPS antenna, all located on the rooftop of an existing 72-foot tall building, with a back-up generator and three equipment cabinets. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndcell20142302.pdf Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/15/2015
<i>Utilities</i> LAC150416-10 ENV-2014-3649/ 10450 N. Wheatland Ave; Sunland-Tujunga-Lakeview Terrace-Shadow Hills-East La Tuna Canyon	The proposed project consists of a wireless telecommunication facility (WTF) to be located on an existing Southern California Edison 124-foot tall transmission tower. The WTF will be a maximum height of 48 feet on the tower, and will include three sectors with a total of six antennas and three remote radio units and a two-foot diameter microwave antenna at approximately 40 feet in height on the tower. A 24-foot by 14-foot equipment enclosure with eight-foot high walls will be located at grade approximately 40 feet southwest of the tower and will include a concrete pad and an emergency back-up diesel generator. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndcell20143649.pdf Comment Period: 4/16/2015 - 5/6/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/21/2015
<i>Utilities</i> LAC150416-15 North Aliso Field Project (Termo)	The proposed project consists of drilling up to twelve oil and natural gas wells from three pad locations in or adjacent to the existing Aliso Canyon Oil Field of Los Angeles County. The proposed Project also includes access routes, temporary staging areas, and supporting infrastructures such as pipelines and connections to existing power lines. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopnorthaliso.pdf Comment Period: 4/27/2015 - 5/27/2015 Public Hearing: N/A	Notice of Preparation	County of Los Angeles	SCAQMD staff commented 4/22/2015
<i>Utilities</i> LAC150423-01 ENV-2015-836/ 20431 W. Saticoy St;	The proposed project consists of permitting the installation, operation, and maintenance of a rooftop wireless telecommunication facility consisting of a 12 panel antennas, 12 remote radio units, two raycaps, two new hybrid fiber cables with a cable tray, two equipment cabinets, and two GPS antennas located on the roof of an existing two and three story apartment building. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndcell2015836.pdf Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/24/2015

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<i>Utilities</i> LAC150430-06 ENV-2014-4377/ 6047 N. Tampa Ave; Encino-Tarzana	The proposed project consists of the installation, use, and maintenance of an unmanned wireless telecommunications facility consisting of 12 panel antenna, 12 remote radio units, and three raycaps to be located on the rooftop of an existing 41-foot, 8-inch tall building, with a back-up generator and three equipment cabinets to be located at an enclosed lease area on the ground floor, all sided on an 18,000-square-foot site. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/mnd2014-4377.pdf Comment Period: 4/30/2015 - 5/20/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 5/7/2015
<i>Utilities</i> ORC150401-02 Transpacific Fiber-Optic Cables Project	The proposed project consists of the installation and operation of up to four transpacific submarine cable systems, which would connect the United States to various Pacific Rim locations such as Southeast Asia, China, Australia, and Japan. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/noptranspacific.pdf Comment Period: 4/2/2015 - 5/4/2015 Public Hearing: N/A	Notice of Preparation	City of Hermosa Beach	SCAQMD staff commented 4/8/2015
<i>Transportation</i> ORC150403-05 I-405 Improvement Project in Orange County	The proposed project consists of improving operations of I-405 primarily in the County of Orange for approximately 16 miles between 0.2 miles south of Bristol Street and 1.4 miles north of I-605, as well as portions of State Route 22, SR-73, and I-605 to reduce congestion and improve lane continuity through the corridor. Reference: ORC130627-01 Comment Period: 4/1/2015 - 5/4/2015 Public Hearing: N/A	Final Environmental Impact Report	U.S. Department of Transportation	Document reviewed - No comments sent
<i>Transportation</i> RVC150421-04 Mid-County Parkway Preferred Alternative	The proposed project consists of a new east-west freeway which will provide a direct and continuous route connecting major populations/employment centers as identified in the Land Use Elements of the county of Riverside General Plan and the General Plans of the cities of Perris and San Jacinto, a distance of approximately 14.3 miles between Interstate 215 in the west and State Route 79 in the east. Reference RVC150326-01, RVC140131-01, RVC130124-02 Comment Period: 4/21/2015 - 5/26/2015 Public Hearing: N/A	Notice of Availability of a Final Environmental Impact Report	Federal Highway Administration	Under review, may submit written comments
<i>Transportation</i> RVC150424-01 Mid County Parkway	The proposed project consists of a project to improve west-east transportation in western Riverside County between Interstate 215 in the west and State Route 79 in the east. The project is a proposed 16-mile transportation corridor designed to relieve local and regional traffic congestion between the City of Perris and San Jacinto and surrounding Riverside County communities. Reference RVC130124-02 Comment Period: 4/24/2015 - 5/26/2015 Public Hearing: N/A	Notice of Availability of a Final Environmental Impact Report	Riverside County Transportation Commission	Under review, may submit written comments

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<i>Transportation</i> RVC150428-08 BUZZ Trolley - Case No. 5.1370-BUZZ	The proposed project consists of a fare-free City-operated trolley service. Its 10.5-mile route generally extends along Palm Canyon and Indian Canyon Drives. The project's four trolleys are fueled by compressed natural gas. Comment Period: 4/27/2015 - 5/18/2015 Public Hearing: 5/20/2015	Draft Negative Declaration	City of Palm Springs	Document reviewed - No comments sent
<i>Institutional (schools, government, etc.)</i> LAC150417-03 Civic Center Project	The proposed project consists of a new City Hall, a new Port Building for Harbor Department administration, a new and relocated Main Library, a redeveloped Lincoln Park, a residential development, and a commercial mixed-use development. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopciviccenter.pdf Comment Period: 4/16/2015 - 5/15/2015 Public Hearing: 4/30/2015	Notice of Preparation	City of Long Beach	SCAQMD staff commented 4/23/2015
<i>Institutional (schools, government, etc.)</i> ORC150410-01 Tustin Legacy School Facilities Project	The proposed project consists of developing several school facilities within the Tustin Area. The project involves expansion of the existing Heritage School enrollment capacity from 600 students to 900 students and development of a 40.03-acre site to house Legacy Academy, a 6-12 magnet Science, Technology, Engineering and Math school; and alternative education facility; and possibly future District office facilities. Comment Period: 4/10/2015 - 5/18/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	Tustin Unified School District	Document reviewed - No comments sent
<i>Institutional (schools, government, etc.)</i> ORC150414-06 District Maintenance, Operations, and Facilities	The proposed project consists of relocating the School District's maintenance, operations, and facilities functions currently occurring at the Maintenance and Operations and Transportation Center located at 8211 Lampson Avenue to the Chapman Education Center located at 11852 and 11700 Knott Street. Comment Period: 4/15/2015 - 5/4/2015 Public Hearing: N/A	Draft Negative Declaration	Garden Grove Unified School District	Document reviewed - No comments sent
<i>Institutional (schools, government, etc.)</i> RVC150416-01 Rancho San Geronio Elementary School	The proposed project consists of acquiring a 24+ acre parcel on the south side of Westward Avenue between the extensions of 4th and 8th Streets to construct an elementary school, grades K-8 with a capacity of 850 students. Comment Period: 4/16/2015 - 5/11/2015 Public Hearing: 5/11/2015	Draft Negative Declaration	Banning Unified School District	Document reviewed - No comments sent

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<i>Retail</i> RVC150421-05 PA13-0032	The proposed project consists of a 185,761-square-foot retail store on a 19-acre parcel. The project includes a Conditional Use Permit for either a gas station, including 16 fueling pumps, a 2,900-square-foot convenience store, and a drive-through car wash or a 3,500-square-foot fast food restaurant with drive-through on a 1.01-acre parcel and a Tentative Parcel map to subdivide 21 acres into two parcels for development of a retail shopping center. Comment Period: 4/20/2015 - 6/4/2015 Public Hearing: N/A	Draft Environmental Impact Report	City of Moreno Valley	Under review, may submit written comments
<i>Retail</i> RVC150424-03 Anthony Vineyards Shed Expansion	The proposed project consists of the addition of a new 33,540-square foot freezer building and a new 14,800-square-foot open canopy to an existing 102,360-square-foot fruit packing facility for a total of 150,716 square feet at build-out. The proposed project also includes a parcel merger to combine three parcels into one parcel, and record a "No Build" easement over a portion of four parcels. Comment Period: 4/28/2015 - 5/21/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	City of Coachella	Document screened - No further review conducted
<i>Retail</i> RVC150428-10 MA15045	The proposed project consists of two new free-standing ATM kiosks and drive-thru lanes within an existing parking lot. Comment Period: 4/28/2015 - 5/11/2015 Public Hearing: N/A	Initial Project Consultation	City of Jurupa Valley	Document screened - No further review conducted
<i>Retail</i> SBC150414-05 EXT-15-002 for CUP 11-002, Design Review Application 11-002 and Accessory Sign Review 12-010	The proposed project consists of the demolition of an existing restaurant and construction of a new approximately 3,485-square-foot multi-tenant commercial building to accommodate a new fast-food restaurant with drive-through and a bakery. Comment Period: N/A Public Hearing: 4/21/2014	Notice of a Public Hearing	City of Highland	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150401-03 Palladium Residences	The proposed project consists of a mixed-use development on an approximately 3.6-acre parcel. The project includes two development options to provide flexibility for changing market conditions. Under Option 1, Residential, the Project would contain up to 731 residential units. Under Option 2, Residential/Hotel, the Project would provide up to 598 residential units and a 250-room hotel with related hotel facilities such as a banquet and meeting area. Reference LAC141024-04 Comment Period: N/A Public Hearing: N/A	Final Environmental Impact Report	City of Los Angeles	Document reviewed - No comments sent

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General Land Use (residential, etc.) LAC150401-04 Oceanaire Apartment Project	The proposed project consists of a 216-unit multi-family/mixed-use apartment complex on the 1.76-acre site. The project would include a single structure that would consist of seven levels along West Ocean Boulevard and five levels along West Seaside Way. Comment Period: 3/30/2015 - 4/28/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Long Beach	Document reviewed - No comments sent
General Land Use (residential, etc.) LAC150401-05 Hollywood Cherokee Project	The proposed project consists of constructing a six-story, 224-unit residential apartment/condominium building on a 1.14-acre site in the Hollywood community. Reference LAC141211-12 Comment Period: N/A Public Hearing: N/A	Final Environmental Impact Report	City of Los Angeles	Document reviewed - No comments sent
General Land Use (residential, etc.) LAC150402-01 ENV-2014-4604/ Western Property 11111-1125 Weddington St., and 11104- 11120 W. Chandler Bl.; Eastern Property 11009-11061 W. Weddington St., and; 11022-11058 W. Chandler Bl.; North Hollywood-Valley Village	The proposed project consists of a permit for the construction and operation of a five-story mixed-use development project located on two properties separated by Blakeslee Ave. The Eastern Property will be improved with a 223-unit apartment building and 4,316 square feet of ground floor commercial/artcraft uses, including the renovated 1,966-square-foot Weddington House, a historical-cultural property. The Western Property will be improved with a 106-unit apartment building. Six existing commercial buildings will also be demolished. The project will require the import/export of less than 500 cubic yards of earth. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mnd20144604.pdf Comment Period: 4/2/2015 - 5/4/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/14/2015
General Land Use (residential, etc.) LAC150402-02 ENV-2014-757/ 2806 W. 7th St; Wilshire	The proposed project consists of developing a six-story apartment development with approximately 162,000 square feet of building area and will be located on a gross lot area of 55,800 and net lot area of 54,000 square feet. The project includes the construction of 158 dwelling units with 5,571 square feet of ground floor retail/restaurant space and 250 on-site parking spaces. Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document reviewed - No comments sent

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General Land Use (residential, etc.) LAC150402-03 ENV-2014-4193/ 7939-7945 N. Coldwater Canyon Ave.; Sun Valley-La Tuna Canyon	The proposed project consists of a tentative tract map for six single-family home lots and twelve parking spaces on a 0.84-acre site. Two existing single-family homes on the project site are to be demolished. Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
General Land Use (residential, etc.) LAC150402-04 ENV-2014-4195/ 18840 W. Sherman Way; Reseda-West Van Nuys	The proposed project consists of the construction and use of a 49-unit multi-family apartment community and 1,344 square feet of commercial space located in a three-story building with one level of on-grade parking garage and three levels of residential apartment units. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mnd20144195.pdf Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/16/2015
General Land Use (residential, etc.) LAC150402-05 ENV-2014-4811/ 7843 Lankershim Blvd.; Sun Valley-La Tuna Canyon	The proposed project consists of demolishing two existing buildings and constructing a 66,656-square-foot mixed-use/affordable housing development, consisting of a four-story, 48-foot high 50 unit residential building, and a 2-story, 25,300-square-foot commercial/office building. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mnd20144811.pdf Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/15/2015
General Land Use (residential, etc.) LAC150402-06 ENV-2013-3961/ 418 W. Wren Dr.; Northeast Los Angeles	The proposed project consists of the construction of a 2,402-square-foot single-family dwelling with an attached 2-car garage. Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
General Land Use (residential, etc.) LAC150402-07 ENV-2014-2230/517 W. Avenue 37; Northeast Los Angeles	The proposed project consists of the construction, use and maintenance of a 1,338-square-foot single-family dwelling on an approximately 5,314-square-foot hillside. Comment Period: 4/2/2015 - 4/22/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted

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<i>General Land Use (residential, etc.)</i> LAC150403-04 NoHo West	The proposed project consists of demolishing an existing 90,000-square-foot office building at the corner of Laurel Canyon and Erwin Street and approximately 30,000 square feet of the existing Macy's annex building. The main Macy's building would be expanded and re-used for approximately 500,000 square feet of office uses. The project will also include the development of the remainder of the Project site with approximately 300,000 square feet of commercial uses. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopnoho.pdf Comment Period: 4/3/2015 - 5/4/2015 Public Hearing: N/A	Notice of Preparation	City of Los Angeles	SCAQMD staff commented 4/10/2015
<i>General Land Use (residential, etc.)</i> LAC150407-03 Project No. PLN14-0018/ Tentative Tract Map No. 72719 (255 S. Vermont Ave. Glendora)	The proposed project consists of a Tentative Tract Map for condominium purposes to develop 40 detached condominiums. The property is currently improved with a 22,184-square-foot industrial building. Development of the property would include demolition of all existing structures. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndvermontglendale.pdf Comment Period: 4/7/2015 - 4/28/2015 Public Hearing: 5/5/2015	Notice of Availability of a Draft Mitigated Negative Declaration	City of Glendora	SCAQMD staff commented 4/29/2015
<i>General Land Use (residential, etc.)</i> LAC150408-01 GPA No. 95-2014; Zone Change No. 172-14; Specific Plan No. 12-2014; Design Overlay Review No. 1567-14; Sign Program No. 19-2014	The proposed project consists of a mixed-use development with 357 market-rate apartment units and 32,000 square feet of commercial space on a 5.5-acre site. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndavalon.pdf Comment Period: 4/8/2015 - 5/5/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Carson	SCAQMD staff commented 4/23/2015
<i>General Land Use (residential, etc.)</i> LAC150409-01 ENV-2014-4618/ 15353-15385 W. Weddington St.; Van Nuys-North Sherman Oaks	The proposed project consists of demolishing an existing 169-unit apartment building and the construction, use, and maintenance of a new four-story 270-unit condominium development. The proposed project will include export of approximately 90,000 cubic yards of dirt. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mnd20144618.pdf Comment Period: 4/9/2015 - 5/11/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/23/2015

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<i>General Land Use (residential, etc.)</i> LAC150409-02 ENV-2015-0251/ 1415, 1417 N. Ave. 45; Northeast Los Angeles	The project consists of the construction, use, and maintenance of a new 10-unit small lot subdivision. The project will require the export of approximately 100 cubic yards of dirt. Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150409-05 ENV-2014-2639/ 1058/1070 S. Holt Ave.; Wilshire	The proposed project consists of constructing a five-story, 56-foot building with 29 residential units, including three units for very low income households. The project includes demolishing four existing single- and multi-family buildings, consisting of eight units, that total approximately 11,193 square feet and requires the export of 11,000 cubic yards of dirt. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/env20142639.pdf Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/17/2015
<i>General Land Use (residential, etc.)</i> LAC150409-06 ENV-2014-2718/ 9410 W. Sierra Mar Pl.; Hollywood	The proposed project consists of demolishing an existing 1,766-square-foot 61-year-old, single-family dwelling; and the construction of a 15,119-square-foot single-family dwelling. The project will include a haul route to permit the importing/exporting of 4,156 cubic yards of soil. Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150409-07 ENV-2014-2809/ 2650 E. Olympic Blvd.; Boyle Heights	The proposed project consists of three components: 1) Adaptive reuse of the Sears Building; 2) Parking Structure on Rio Vista Ave.; and 3) 12th St. vacation. The project would convert the existing vacant space into 1,030 Joint Living & Work Quarters; 219,258 square feet of general office; 31,285-square-foot supermarket; 26,070-square-foot restaurant; 15,642-square-foot drinking place; 15,642-square-foot apparel store; 2,607-square-foot coffee shop; and 2,607-square-foot walk-in-bank. Comment Period: 4/9/2015 - 5/11/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150409-09 ENV-2014-4601/ 415 S. Le Doux Rd.; Wilshire	The proposed project consists of demolishing one structure and the construction of an apartment building with 19 residential units. The project will include a haul route to permit the export of approximately 3,200 cubic yards of dirt. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/env20144601.pdf Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/22/2015

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General Land Use (residential, etc.) LAC150409-10 ENV-2014-4660/ 124 S. Croft Ave; Wilshire	The proposed project consist of demolishing an existing four-unit apartment building and the construction of a new five-story, 16,000-square-foot, 13-unit apartment building with 12 market-rate units and one affordable unit. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/env20144660.pdf Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/17/2015
General Land Use (residential, etc.) LAC150409-11 ENV-2014-3053/ 880 N. Stone Canyon Rd.; Bel Air-Beverly Crest	The proposed project consists of demolishing an existing single-family dwelling and the construction of a new two-story, 7,739-square-foot single-family dwelling with a 4,870-square-foot basement/subterranean garage; an 897-square-foot, two-story building and pool. Comment Period: 4/9/2015 - 4/29/2015 Public Hearing: N/A	Notice of Availability of a Final Negative Declaration	City of Los Angeles	Document screened - No further review conducted
General Land Use (residential, etc.) LAC150414-03 1914 S. Pacific Coast Highway Mixed-Use Project	The proposed project consists of demolition of all existing on-site structures and surface parking, and the construction of a mixed-use development. The mixed-use development consists of 52 residential condominium units and approximately 10,552 square feet of ground floor retail and office space. Comment Period: 4/9/2015 - 5/11/2015 Public Hearing: N/A	Notice of a Public Hearing and Notice of Availability of Mitigated Negative Declaration	City of Redondo Beach	Document reviewed - No comments sent
General Land Use (residential, etc.) LAC150414-04 Montebello Hills Specific Plan	The proposed project consists of approximately 488 acres within the Montebello Oil Field. The project includes residential construction on approximately 173.6 acres that would consist of up to 1,200 residential dwelling units; open space of approximately 314.6 acres and infrastructure. Reference LAC140911-01 Comment Period: N/A Public Hearing: 4/21/2015	Notice of a Public Hearing	City of Montebello	Under review, may submit written comments

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT A
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<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>General Land Use (residential, etc.)</i> LAC150416-03 ENV-2012-2986/ 10390-10393 W. Ashton Ave., 1234 S. Beverly Blvd; Westwood	The proposed project consists of demolishing a three-unit apartment building and the construction of a five-unit, three-story building, over one-level subterranean parking. Approximately 4,000 cubic yards of dirt will be exported from site. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/env20122986.pdf Comment Period: 4/16/2015 - 5/6/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/29/2015
<i>General Land Use (residential, etc.)</i> LAC150416-04 ENV-2015-0705/ 5016 W. Rosewood Ave; Wilshire	The proposed project consists of the construction, use, and maintenance of a new four-unit small lot division. The existing house will be demolished. Comment Period: 4/16/2015 - 5/18/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150416-07 ENV-214-1536/ 856-862 S. Wilton Pl; Wilshire	The proposed project consists of the merger and subdivision of two lots into 10 lots for the construction of 10 new single-family homes. Comment Period: 4/16/2015 - 5/6/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150416-08 ENV-2015-375/ 17150 W. Roscoe Blvd; Reseda-West Van Nuys	The proposed project consists of the construction, use and maintenance of five small lot homes and two single-family dwellings in conjunction with the subdivision of one lot into seven lots. The project will include grading of approximately 500 cubic yards of dirt. Comment Period: 4/16/2015 - 5/6/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150416-09 ENV-2005-1674-Reconsideration, 900 S. Figueroa St; Central City	The proposed project consists of changes to the development of Phase II or Recorded Tract 62367 to increase the authorized number of dwelling units by 60 additional units, increase open space and accommodate bicycle parking. Phase II will include a 28-story mixed-use building with 341 residential units, approximately 11,687 square feet of ground floor retail and three levels of subterranean parking. Phase I has already been constructed. Comment Period: 4/16/2015 - 5/6/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted

- Project has potential environmental justice concerns due to the nature and/or location of the project.

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<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
General Land Use (residential, etc.) LAC150416-11 ENV-2015-394/ 7223 N. Tyron Ave; Van Nuys-North Sherman Oaks	The proposed project consists of a General Plan Amendment and Zone Change for the development of a four-story residential building with 38 dwelling units and 13,555 square feet of private open space on an approximately 35,280-square-foot site. One single-family dwelling will be demolished. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/env2015394.pdf Comment Period: 4/16/2015 - 5/6/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/23/2015
General Land Use (residential, etc.) LAC150416-12 ENV-2014-3973/ 1011-1031 S. Serrano Ave; Wilshire	The proposed project consists of the construction of a five-story, 91-residential unit building, including 8 units for very low income households on an approximately 31,050-square-foot site. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/env20143973.pdf Comment Period: 4/16/2015 - 5/18/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 5/5/2015
General Land Use (residential, etc.) LAC150416-14 GPA No. 96-2015; Zone Change No. 173-15, Specific Plan No. 13-2014; Design Overlay Review No. 1569-15; Parcel Merger No. 273-15	The proposed project consists of a mixed-use project consisting of 65 senior residential units and 3,000 square feet of commercial uses on 1.22 acres. Comment Period: 4/16/2015 - 5/12/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Carson	Document reviewed - No comments sent
General Land Use (residential, etc.) LAC150417-02 DR 14-03	The proposed project consists of a mixed-use development located on 1.13 acres. The project will include demolition of all existing structures to construct a four-story, mixed-use development with 11,860 square feet of retail/office space and 46 apartments. Comment Period: 4/16/2015 - 5/15/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	City of Rosemead	Document reviewed - No comments sent
General Land Use (residential, etc.) LAC150421-06 Garvey Avenue Corridor Specific Plan	The proposed project consists of the Garvey Avenue Corridor Specific Plan and identifies the long-term vision and objectives for land use development and public improvement along a 1.2 mile portion of Garvey Avenue in the western portion of the City of Rosemead. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopgarveyave.pdf Comment Period: 4/21/2015 - 5/21/2015 Public Hearing: N/A	Notice of Preparation	City of Rosemead	SCAQMD staff commented 4/24/2015

- Project has potential environmental justice concerns due to the nature and/or location of the project.

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<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>General Land Use (residential, etc.)</i> LAC150423-02 ENV-2014-4767/ 11029 W. Morrison St; North Hollywood-Valley Village	The proposed project consists of the construction, use and maintenance of five small lot single-family homes. Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150423-03 ENV-2015-927/ 11405-11415 W. Chandler Blvd.; North Hollywood-Valley Village	The proposed project consists of the construction of a seven-story mixed-use building consisting of 82 rental units and 1,000 square feet of commercial space on a 25,497-square-foot site. Comment Period: 4/23/2015 - 5/23/2016 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150423-04 ENV-2014-952/ 1771-1831 W. Blake Ave and 2645-2661 N. Blimp St; Silver Lake-Eco Park-Elysian Valley	The proposed project consists of developing a mixed-use project with a total of 117 dwelling units and 29,017 square feet of commercial space on two project sites. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/mnd2014952.pdf Comment Period: 4/23/2015 - 5/26/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 5/14/2015
<i>General Land Use (residential, etc.)</i> LAC150423-05 ENV-2014-3869/18529 W. Calvert St; Reseda-West Van Nuys	The proposed project consists of the development of a four-story apartment building with 24 residential units and subterranean parking on an approximately 16,561-square-foot site. One single-family residence will be demolished. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/env20143869.pdf Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 5/7/2015
<i>General Land Use (residential, etc.)</i> LAC150423-06 ENV-2014-2651/ 3406 N. The Paseo; Northeast Los Angeles	The proposed project consists of construction of a 3,244-square-foot, two-story single-family home on a 7,406-square-foot site. Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted

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<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>General Land Use (residential, etc.)</i> LAC150423-12 ENV-2014-4772/ 1051 S. Corning St; Wilshire	The proposed project consists of constructing a five-story building with 19 residential units, including 2 units for very low income households on an approximately 11,507-square-foot lot. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/mnd20144772.pdf Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 5/7/2015
<i>General Land Use (residential, etc.)</i> LAC150423-13 ENV-2014-4806/ 846 N. Wilcox Ave; Hollywood	The proposed project consists of the construction of a four-story, 23-unit multi-family dwelling that includes two units for very low income households on an approximately 13,600-square-foot lot. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/may/env20144806.pdf Comment Period: 4/23/2015 - 5/26/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	SCAQMD staff commented 5/7/2015
<i>General Land Use (residential, etc.)</i> LAC150423-14 ENV-2015-977/ 14958 W. Moorpark St; Sherman Oaks-Studio City-Toluca Lake-Caheunga Pass	The proposed project consist of the construction, use and maintenance of a surface parking lot consisting of 12 parking spaces. Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
<i>General Land Use (residential, etc.)</i> LAC150428-03 Skechers Design Center LLC	The proposed project consists of the demolition of all vacant structures currently on the project site, including a single-family residence and auto sales and repair facilities, and the development of a Design Center and Executive Offices for Skechers USA. The project site encompasses 83,956 square feet located north and south of 30th Street on two lots. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopskechers.pdf Comment Period: 4/28/2015 - 5/27/2015 Public Hearing: N/A	Notice of Preparation	City of Hermosa Beach	SCAQMD staff commented 4/30/2015
<i>General Land Use (residential, etc.)</i> LAC150430-01 ENV-2013-2196/ 1118 W. White Knoll Dr; Central City North	The proposed project consists of allowing 14 single family dwellings on an approximately 21,990-square-foot lot. Comment Period: 4/30/2015 - 6/1/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted

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SCAQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
General Land Use (residential, etc.) LAC150430-02 ENV-2013-1998/ 2925 W. Waverly Dr; Hollywood	The proposed project consists of a subdivision to create five lots for the development of five single-family dwellings. The project site is approximately 16,182 square feet and requires the demolition of an existing structure on site. Comment Period: 4/30/2015 - 6/1/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
General Land Use (residential, etc.) LAC150430-03 ENV-2014-689/ENV-2014-689/ 211 N. Alma Real Dr; Brentwood	The proposed project consists of demolishing an existing 3,636-square-foot single-family residence, and the construction of a 32-foot tall, 7,848-square-foot dwelling. The project includes the export of 1,975 cubic yards of earth. Comment Period: 4/30/2015 - 6/1/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	City of Los Angeles	Document screened - No further review conducted
General Land Use (residential, etc.) LAC150430-08 Entrada South Project	The proposed project consists of a mixed-use community and includes 339 single-family residences, 1,235 multi-family residences, and 730,000 square feet of commercial uses anticipated to be comprised of approximately 435,000 square feet of office uses and approximately 295,000 square feet of commercial retail development. Comment Period: 4/30/2015 - 6/29/2015 Public Hearing: N/A	Draft Environmental Impact Report	County of Los Angeles	Under review, may submit written comments
General Land Use (residential, etc.) ORC150401-01 Tustin Legacy Specific Plan Amendment 2015-001	The proposed project consists of a Specific Plan Amendment that will guide development of the remaining undeveloped area in the City of Tustin. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/noptustin.pdf?sfvrsn=2 Comment Period: 4/2/2015 - 5/4/2015 Public Hearing: N/A	Notice of Preparation	City of Tustin	SCAQMD staff commented 4/8/2015
General Land Use (residential, etc.) ORC150402-17 951-1055 South Beach Boulevard Project	The proposed project consists of developing nine separate, two-, three-, and four-story residential structures consisting of a total of 335 apartment units on the 10.48-acre project site. To accommodate the proposed development, an abandoned hotel, existing concrete building foundations, parking lot lights, asphalt, and landscaping would require removal. Comment Period: 4/3/2015 - 5/3/2015 Public Hearing: N/A	Notice of Availability of a Draft Negative Declaration	City of La Habra	Document reviewed - No comments sent

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**ATTACHMENT A
INCOMING CEQA DOCUMENTS LOG
APRIL 1, 2015 TO APRIL 30, 2015**

SCAQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>General Land Use (residential, etc.)</i> ORC150408-03 Marywood Residential Development	The proposed project consists of establishing a maximum of 40 single-family residences on approximately 16 acres. The existing Marywood Pastoral Center buildings and infrastructure would be demolished. Grading would include remediation of unsuitable fill material and re-compaction to resolve existing soil settlement issues adjacent to the City's two above-ground water tanks. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopmarywood.pdf Comment Period: 4/3/2015 - 5/4/2015 Public Hearing: 4/16/2015	Notice of Preparation	City of Orange	SCAQMD staff commented 4/15/2015
<i>General Land Use (residential, etc.)</i> ORC150410-02 West Gateway Project	The proposed project consists of developing a 177-unit development at the project site of an existing industrial and office use. The project includes demolishing the existing industrial buildings and construction of 177 three-story units including, 42 detached live/work units, 89 residential buildings and construction of 177 three-story units, including 42 detached live/work units, 89 attached live/work units and 46 residential units. Comment Period: 4/9/2015 - 5/8/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration and Public Hearing	City of Costa Mesa	Document reviewed - No comments sent
<i>General Land Use (residential, etc.)</i> ORC150423-17 PRJ1400236-/LRP14-00007, LRP14-000009, ZON14-00083: Fullerton Supportive Housing	The proposed project consists of a request for approval of a General Plan Land Use Map change from Industrial to Commercial, a Zoning Amendment to change the zone from Manufacturing, General to Central Business District, and a Major Site Plan to consider site, architectural and landscape plans for a 36-unit affordable housing development. Comment Period: 4/23/2015 - 5/13/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	City of Fullerton	Document reviewed - No comments sent
<i>General Land Use (residential, etc.)</i> RVC150402-15 Orchid Tree Inn	The proposed project consists of a 93-room hotel project on 3.12 acres on the north side of W. Baristo Road. The project includes demolition of several existing one- and two-story Orchid Tree hotel buildings, renovation of eight existing single-story hotel bungalows, construction of a new three-story hotel with parking spaces included on the ground floor, renovation of the main church sanctuary, construction of a two-story addition on the north side of church and the construction of a new banquet hall. Comment Period: 4/2/2015 - 4/21/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	City of Palm Springs	Document reviewed - No comments sent
<i>General Land Use (residential, etc.)</i> RVC150422-01 Rancho San Gorgonio Specific Plan	The proposed project consists of a master-planned community on an 831-acre site, and is organized into 44 planning areas that include a mixture of residential, commercial, open space, and recreational uses on a maximum of 3,385 residential units. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopranchsangorgonsp.pdf Comment Period: 4/20/2015 - 5/19/2015 Public Hearing: N/A	Notice of Preparation	City of Banning	SCAQMD staff commented 4/28/2015

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ATTACHMENT B*
ONGOING ACTIVE PROJECTS FOR WHICH SCAQMD HAS
OR IS CONTINUING TO CONDUCT A CEQA REVIEW

SCAQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Transportation</i> LAC150306-02 State Route 710 North Study	The proposed project consists of improving mobility and congestion relief on State Route 710 and surrounding areas in Los Angeles County, between State Route 2 and Interstates 5, 10, 210, and 605 in east/northeast Los Angeles and the western San Gabriel Valley. Comment Period: 3/6/2015 - 7/6/2015 Public Hearing: 4/11/2015	Draft Environmental Impact Report	California Department of Transportation	Preparing written comments
<i>Warehouse & Distribution Centers</i> SBC150310-11 Agua Mansa Commerce Center	The proposed project consists of five high-cube warehouse buildings and one industrial warehouse building totaling 1,346,433 square feet, a proposed 2.82-acre trailer parking lot, and an existing 8.88-acre detention basin. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/dseiragua.pdf Comment Period: 3/9/2015 - 4/22/2015 Public Hearing: N/A	Supplemental Environmental Impact Report	City of Colton	SCAQMD staff commented 4/14/2015
<i>Airports</i> LAC150320-01 6R-24L Runway Safety Area (RSA) Improvements Project	The proposed project includes relocating the end of Runway 6R approximately 200 feet to the east and displacing the threshold of Runway 6R approximately 500 feet. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/deiruplandgp.pdf Comment Period: 3/19/2015 - 4/24/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	Los Angeles World Airports	SCAQMD staff commented 4/24/2015
<i>Waste and Water-related</i> LAC150324-03 Palos Verdes Reservoir Upgrades Project	The proposed project consists of removing the upper portion of the outlet tower down to grade, replacing the valves and operating system, relining the reservoir with asphalt and a geomembrane liner, and replacing the geomembrane floating cover. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndpalosverdes.pdf Comment Period: 3/19/2015 - 4/20/2015 Public Hearing: N/A	Notice of Availability of a Draft Mitigated Negative Declaration	Metropolitan Water District of Southern California	SCAQMD staff commented 4/10/2015
<i>Transportation</i> ALL150310-02 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy	The proposed project consists of the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that provides a vision for regional transportation investments over a 20-year period. In accordance with applicable federal and state laws, SCAG updates the RTP/SCS every four years to reflect changes to the transportation network, the most recent planning assumptions, economic trends, and population and jobs growth forecasts. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nop20162040rtp.pdf Comment Period: 3/9/2015 - 4/7/2015 Public Hearing: 3/17/2015	Notice of Preparation	Southern California Association of Governments	SCAQMD staff commented 4/2/2015

*Sorted by Comment Status, followed by Land Use, then County, then date received.

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**ATTACHMENT B
ONGOING ACTIVE PROJECTS FOR WHICH SCAQMD HAS
OR IS CONTINUING TO CONDUCT A CEQA REVIEW**

<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Institutional (schools, government, etc.)</i> RVC150331-03 Agua Caliente Elementary School Relocation Project	The proposed project consists of the phased relocation of existing campus facilities across an approximately 12-acre lot. The project also proposes to add up to 120 pre-kindergarten students and associated faculty which would result in a total capacity of 850 total students. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/nopaguacaliente.pdf Comment Period: 3/31/2015 - 4/29/2015 Public Hearing: N/A	Notice of Preparation	Palm Springs Unified School District	SCAQMD staff commented 4/2/2015
<i>Retail</i> RVC150331-02 MA1402	The proposed project consists of constructing four detached commercial buildings consisting of a 4,650-square-foot sit-down restaurant, 2,925-square-foot drive-thru restaurant, 3,074-square-foot store and 2,719-square-foot car wash. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/pcma1402.pdf Comment Period: 3/31/2015 - 4/14/2015 Public Hearing: N/A	Initial Project Consultation	City of Jurupa Valley	SCAQMD staff commented 4/2/2015
<i>General Land Use (residential, etc.)</i> LAC150317-03 Serrano II Residential Project	The proposed project consists of redeveloping a 3.59-acre site with 40 single-family detached residential units and other related site improvements. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mndserrano.pdf Comment Period: 3/16/2015 - 4/14/2015 Public Hearing: N/A	Draft Mitigated Negative Declaration	City of Claremont	SCAQMD staff commented 4/14/2015
<i>General Land Use (residential, etc.)</i> LAC150319-03 ENV-2014-4616/ 18404 W. Collins St.; Encino-Tarzana	The proposed project consists of demolishing an existing two-story, 43-unit multi-family residential development and the construction, use and maintenance of a new four-story, 73-unit residential condominium with one level of subterranean parking. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/mnd20144616.pdf Comment Period: 3/19/2015 - 4/20/2015 Public Hearing: N/A	Notice of Availability of a Draft Negative Declaration	City of Los Angeles	SCAQMD staff commented 4/10/2015
<i>Plans and Regulations</i> RVC150219-10 General Plan Amendment No. 960: General Plan Update (EIR No. 521)	The Riverside County General Plan serves as a blueprint for the future of Riverside County. The action evaluated by the Draft EIR is the adoption of Riverside County General Plan Amendment No. 960, the General Plan Update Project, which proposes a variety of revisions to the current Riverside County General Plan to update existing policies, maps and implementing directions, and provide new information and policies where needed. Reference RVC140430-02 http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/deirno960.pdf Comment Period: 2/21/2015 - 4/6/2015 Public Hearing: N/A	Recirculated Draft Environmental Impact Report	County of Riverside	SCAQMD staff commented 4/6/2015

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**ATTACHMENT B
ONGOING ACTIVE PROJECTS FOR WHICH SCAQMD HAS
OR IS CONTINUING TO CONDUCT A CEQA REVIEW**

<u>SCAQMD LOG-IN NUMBER</u> PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<p><i>Plans and Regulations</i></p> <p>SBC150310-09 General Plan Update (GPU 08-03), Comprehensive Zoning Code Update (ZCU 08-03) Cable Airport Land Use Compatibility Plan (CALUCP) Update, and Climate Action Plan (CAP)</p>	<p>The proposed project consists of establishing new goals, policies and land use designations that align with the community's long-range vision; implement and ensure conformity with the General Plan Update; promote compatibility between Cable Airport and the surrounding land uses; and to develop strategies designed to reduce Upland's greenhouse gas e missions.</p> <p>http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/april/deiruplandgp.pdf</p> <p>Comment Period: 3/9/2015 - 4/22/2015</p>	<p>Notice of Availability of a Draft Environmental Impact Report</p>	<p>City of Upland</p>	<p>SCAQMD staff commented 4/17/2015</p>
	<p align="right">Public Hearing: N/A</p>			

- Project has potential environmental justice concerns due to the nature and/or location of the project.

**ATTACHMENT C
ACTIVE SCAQMD LEAD AGENCY PROJECTS
THROUGH APRIL 30, 2015**

PROJECT DESCRIPTION	PROPONENT	TYPE OF DOCUMENT	STATUS	CONSULTANT
<p>The Phillips 66 (formerly ConocoPhillips) Los Angeles Refinery Ultra Low Sulfur Diesel project was originally proposed to comply with federal, state and SCAQMD requirements to limit the sulfur content of diesel fuels. Litigation against the CEQA document was filed. Ultimately, the California Supreme Court concluded that the SCAQMD had used an inappropriate baseline and directed the SCAQMD to prepare an EIR, even though the project has been built and has been in operation since 2006. The purpose of this CEQA document is to comply with the Supreme Court's direction to prepare an EIR.</p>	<p>Phillips 66 (formerly ConocoPhillips), Los Angeles Refinery</p>	<p>Environmental Impact Report (EIR)</p>	<p>The Notice of Preparation/ Initial Study (NOP/IS) was circulated for a 30-day public comment period on March 26, 2012 to April 26, 2012. The consultant submitted the administrative Draft EIR to SCAQMD in late July 2013. The Draft EIR was circulated for a 45-day public review and comment period from September 30, 2014 to November 13, 2014. Two comment letters were received and responses to comments are being prepared.</p>	<p>Environmental Audit, Inc.</p>
<p>Tesoro Refinery proposes to integrate the Tesoro Wilmington Operations with the Tesoro Carson Operations (former BP Refinery). The proposed project also includes modifications of storage tanks at both facilities, new interconnecting pipelines, and new electrical connections. In addition, Carson's Liquid Gas Rail Unloading facilities will be modified. The proposed project will be designed to comply with the federally mandated Tier 3 gasoline specifications and with State and local regulations mandating emission reductions.</p>	<p>Tesoro Refining and Marketing Company Los Angeles Refinery</p>	<p>Environmental Impact Report (EIR)</p>	<p>A previous Draft Negative Declaration was withdrawn in order for the storage tank project to be analyzed in a new CEQA document that also addresses the Tesoro-BP Refinery Integration Project. A NOP/IS was prepared for the integration project and released for a 30-day public review and comment period from September 10, 2014 to October 10, 2014. 86 comment letters were received, and responses to comments are being prepared. The consultant is preparing a Draft EIR.</p>	<p>Environmental Audit, Inc.</p>
<p>Quemetco is proposing an increase in daily furnace feed rate.</p>	<p>Quemetco</p>	<p>Environmental Impact Report (EIR)</p>	<p>An Initial Study has been prepared by the consultant and is under review by SCAQMD staff.</p>	<p>Trinity Consultants</p>
<p>Chevron is proposing modifications to its Product Reliability and Optimization (PRO) Project and has applied for a modification to its permit to increase the firing duty of its Tail Gas Unit to meet current BACT requirements.</p>	<p>Chevron</p>	<p>Addendum</p>	<p>An addendum to the 2008 Final EIR has been prepared by the consultant. Staff has reviewed the Addendum and provided edits to the consultant. Staff is reviewing responses to comments on the permit applications.</p>	<p>Environmental Audit, Inc.</p>

A shaded row indicates a new project.

**ATTACHMENT C
ACTIVE SCAQMD LEAD AGENCY PROJECTS
THROUGH APRIL 30, 2015**

PROJECT DESCRIPTION	PROPONENT	TYPE OF DOCUMENT	STATUS	CONSULTANT
Breitburn Operating LP is proposing to upgrade their fluid handling systems to facilitate an increase in the amount of produced water that can be treated at the site in Sante Fe Springs.	Breitburn Operating LP	Environmental Impact Report (EIR)	The NOP/IS was released for a 30-day public review and comment period from December 4, 2014 to January 2, 2015. Two comment letters were received and responses were included in the draft EIR. The Draft EIR was released for 45-day public review and comment period starting April 15, 2015.	Environ
DCOR LLC is proposing to install three flares on their off-shore oil Platform Esther.	DCOR LLC	Mitigated Negative Declaration	A preliminary draft Mitigated Negative Declaration has been prepared by the consultant and is under review by SCAQMD staff.	RBF Consulting

A shaded row indicates a new project.

[↑ Back to Agenda](#)

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 15

REPORT: Rule and Control Measure Forecast

SYNOPSIS: This report highlights SCAQMD rulemaking activities and public workshops potentially scheduled for the year 2015 and portions of 2016.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file.

Barry R. Wallerstein, D.Env.
Executive Officer

PF:JW:cg

219	Equipment Not Requiring a Written Permit Pursuant to Regulation II
Rule 219 is moved from September to November to allow additional time to complete analysis and develop a formal proposal.	
415	Odors from Animal Rendering
Proposed Rule 415 is moved from July to September to allow staff to continue working with stakeholders on key issues.	
416	Odors from Kitchen Grease Processing
Proposed Rule 416 is moved to from September to December to allow additional time to work with stakeholders on key issues to develop a proposal.	
1106	Marine Coating Operations
1106.1	Pleasure Craft Coating Operations
Rules 1106 and 1106.1 are moved from September to October to allow additional time for analysis and to work with stakeholders.	

1118	Control of Emissions from Refinery Flares
Rule 1118 is moved from to-be-determined to December, which will allow time for analysis and working with stakeholders on a proposal.	
1123	Refinery Process Turnarounds (MCS-03)
Rule 1123 is moved from July to December to allow additional time to complete analysis and work with stakeholders.	
1136	Wood Products Coatings (CTS-02)
Rule 1136 is moved from December to February 2016 to allow staff additional time for review and propose needed revisions to outdated provisions and requirements.	
1148.1	Oil and Gas Production Wells
Rule 1148.1 is moved from June to July to allow additional time to incorporate stakeholder feedback.	
1148.2	Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers
Rule 1148.2 is moved from June to July to allow additional time to incorporate stakeholder feedback.	
1161	VOC Reductions from Mold Release Agents (CTS-03)
Proposed Rule 1161 is moved from October to January 2016 to allow additional time for analysis and work with stakeholders on a proposal.	
1171	Solvent Cleaning Operations (CTS-02)
Rule 1171 is moved from July to December to allow staff additional time to work with stakeholders.	
1177	Liquefied Petroleum Gas Transfer and Dispensing (FUG-02)
Rule 1177 is moved from November to December to allow additional time for analysis and work with stakeholders on a proposal.	
1188	VOC Reductions from Vacuum Trucks (FUG-01)
Proposed Rule 1188 is moved from October to January 2016 to allow additional time for analysis and work with stakeholders on a proposal.	
1304.2	Greenfield or Existing Electrical Generating Facility Fee for Use of Offsets for Load Serving Entities
Proposed Rule 1304.2 is moved from September to November to continue to work with stakeholders in analyzing any potential adverse impacts.	
1304.3	Greenfield or Existing Electrical Generating Facility Fee for Use of Offsets for Municipalities
Proposed Rule 1304.3 is moved from September to November to continue to work with stakeholders in analyzing any potential adverse impacts.	

1420	Emissions Standard for Lead
Proposed Amended Rule 1420 is moved from November to December to allow staff time to complete the rule development for Proposed Rule 1420.2 and to ensure adequate time to work with stakeholders.	
1420.1	Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities
Proposed Amended Rule 1420.1 is added to the schedule for September Public Hearing. During the adoption of amendments to Rule 1420.1 at the March 6, 2015 Governing Board Meeting, the Governing Board directed staff to return to the Governing Board within six months with a proposal to lower the overall point source lead emission limit to 0.003 lb/hour and other options. Staff is proposing amendments to lower the overall point source lead emission limit and other requirements.	
1420.2	Emissions Standard for Lead from Metal Melting Operations
Proposed Rule 1420.2 is moved from July to September to allow staff additional time to work with stakeholders.	
1430	Control of Toxic Air Contaminants from Metal Forging, Shredding, Grinding and Other Metal Processing Operations
Proposed Rule 1430 is moved from December to March 2016 to allow staff additional time to first develop Proposed Rule 1430.1 which will be a subset of sources covered under Rule 1430. Proposed Rule 1430.1 is scheduled for consideration at the October Governing Board Meeting.	
1430.1	Control of Toxic Air Contaminants from Grinding Operations at Forging Facilities
Proposed Rule 1430.1 is moved from July to October to allow interested stakeholders additional time for review and comments.	
1450	Control of Methylene Chloride Emissions
Proposed Rule 1450 is moved from November to February 2016 to allow staff additional time to develop a rule proposal and work with stakeholders.	
1466	Toxic Air Contaminant Emissions from Decontamination of Soil
Proposed Rule 1466 was previously listed as Rule 1166 where staff was recommending expanding the applicability of Rule 1166 to address decontamination of soils containing toxic metals. Staff is recommending creating a separate Proposed Rule 1466, which would establish requirements to control toxic metal emissions from activities involving storing, handling, and transporting soils with toxic metals.	
Reg. XX	Regional Clean Air Incentives Market (RECLAIM) (CMB-01)
Regulation XX (NOx RECLAIM) is moved from July to October to allow staff additional time to work with interested stakeholders.	

2301 ⁺	Control of Emissions from New or Redevelopment Projects (EGM-01)
Proposed Rule 2301 is being moved from November to January 2016 to be considered as part of the early action measures for the 2016 AQMP and to allow for additional staff analysis.	
4001* ¹	Backstop to Ensure AQMP Emission Reduction Targets Are Met at Commercial Marine Ports (IND-01)
Proposed Rule 4001 is moved from September to December to allow staff time to work with the ports of Los Angeles and Long Beach on the potential development of a new Clean Air Action Plan, which may impact staff's current proposal and the process moving forward.	

2015 MASTER CALENDAR

Below is a list of all rulemaking activity scheduled for the year 2015. The last four columns refer to the type of rule adoption or amendment. A more detailed description of the proposed rule adoption or amendment is located in the Attachments (A through D) under the type of rule adoption or amendment (i.e. AQMP, Toxics, Other and Climate Change).

**An asterisk indicates that the rulemaking is a potentially significant hearing.*

+This proposed rule will reduce criteria air contaminants and assist toward attainment of ambient air quality standards.

¹Subject to Board approval

California Environmental Quality Act shall be referred to as "CEQA."

Socioeconomic Analysis shall be referred to as "Socio."

2015

July		AQMP	Toxics	Other	Climate Change
1148.1 ¹	Oil and Gas Production Wells			√	
1148.2 ¹	Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers		√	√	
September					
415* ¹	Odors from Animal Rendering			√	
1156	Further Reductions of Particulate Emissions from Cement Manufacturing Facilities		√		
1420.1 ¹	Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities		√		
1420.2 ¹	Emissions Standard for Lead from Metal Melting Operations		√		
October					
1106 ¹	Marine Coating Operations			√	
1106.1 ¹	Pleasure Craft Coating Operations			√	
1110.2	Emissions from Gaseous and Liquid-Fueled Engines			√	
1430.1 ¹	Control of Toxic Air Contaminants from Grinding Operations at Forging Facilities		√		
Reg. XX* ⁺¹	Regional Clean Air Incentives Market (RECLAIM) (CMB-01)	√			

2015 MASTER CALENDAR (continued)

2015

November		AQMP	Toxics	Other	Climate Change
219 ¹	Equipment Not Requiring a Written Permit Pursuant to Regulation II			√	
1113* ⁺	Architectural Coatings (CTS-01)	√			
1304.2* ¹	Greenfield or Existing Electrical Generating Facility Fee for Use of Offsets for Load Serving Entities			√	
1304.3* ¹	Greenfield or Existing Electrical Generating Facility Fee for Use of Offsets for Municipalities			√	
1402	Control of Toxic Air Contaminants from Existing Sources		√		
December					
416 ¹	Odors from Kitchen Grease Processing			√	
1118 ¹	Control of Emissions from Refinery Flares			√	√
1123 ⁺¹	Refinery Process Turnarounds (MCS-03)	√			
1466 ¹	Volatile Organic Compound Emissions from Decontamination of Soil		√		
1171 ⁺¹	Solvent Cleaning Operations (CTS-02)	√			
1177 ⁺¹	Liquefied Petroleum Gas Transfer and Dispensing (FUG-02)	√			
1420 ⁺¹	Emissions Standard for Lead		√		
4001* ¹	Backstop to Ensure AQMP Emission Reduction Targets Are Met at Commercial Marine Ports (IND-01)	√			

2015 MASTER CALENDAR (continued)

2015 TO-BE DETERMINED

TBD		AQMP	Toxics	Other	Climate Change
219	Equipment Not Requiring a Written Permit Pursuant to Regulation II			√	
222	Filing Requirements for Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation I			√	
224	Incentives for Super-Compliant Technologies			√	
1107	Coating of Metal Parts and Products (CTS-02)			√	
1147	NOx Reductions from Miscellaneous Sources			√	
1148.2	Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers		√	√	
1168	Adhesive and Sealant Applications (CTS-02)	√			
1190 Series	Fleet Vehicle Requirements			√	
Reg. XIII	New Source Review			√	
1403	Asbestos Emissions from Demolition/Renovation Activities		√		
1411	Recovery of Recycling of Refrigerants from Motor Vehicle Air Conditioners		√		
1902	Transportation Conformity – Preamble			√	
2511	Credit Generation Program for Locomotive Head End Power Unit Engines			√	
2512	Credit Generation Program for Ocean-Going Vessels at Berth			√	
Reg. XXVII	Climate Change				√

2015 MASTER CALENDAR (continued)

2015 TO-BE DETERMINED

TBD	(continued)	AQMP	Toxics	Other	Climate Change
Reg. IV, IX, X, XI, XIV, XX, XXX and XXXV Rules	Various rule amendments may be needed to meet the requirements of state and federal laws, implement OEHHA revised risk assessment guidance, address variance issues/ technology-forcing limits, to abate a substantial endangerment to public health or welfare, or to seek additional reductions to meet the SIP short-term measure commitment. The associated rule development or amendments include, but are not limited to, SCAQMD existing rules listed in Table 1 of the December 5, 2014 Rule and Control Measure Forecast and new or amended rules to implement the 2012 AQMP measures in Table 2 of the December 5, 2014 Rule and Control Measure Forecast. The CCP has been updated to include new measures to address toxic emissions in the basin. The CCP includes a variety of measures that will reduce exposure to air toxics from stationary, mobile, and area sources (Table 3 of the December 5, 2014 Rule and Control Measure Forecast). Rule amendments may include updates to provide consistency with CARB Statewide Air Toxic Control Measures.	√	√	√	√
---	Mobile Source Measures	√	√		
---	SIP Implementation	√			

2015 MASTER CALENDAR (continued)

2016

January		AQMP	Toxics	Other	Climate Change
1161 ⁺¹	VOC Reductions from Mold Release Agents (CTS-03)	√			
1188 ⁺¹	VOC Reductions from Vacuum Trucks (FUG-01)	√			
2301 ⁺¹	Control of Emissions from New or Redevelopment Projects (EGM-01)	√			
February					
1136 ¹	Wood Products Coatings (CTS-02)			√	
1450 ¹	Control of Methylene Chloride Emissions		√		
March					
1430 ¹	Control of Toxic Air Contaminants from Metal Forging, Shredding, Grinding and Other Metal Processing Operations		√		

ATTACHMENT A

AQMP Rule Activity Schedule

This attachment lists those control measures that are being developed into rules or rule amendments for Governing Board consideration that are designed to implement the amendments to the 2012 Air Quality Management Plan.

2015

October	
Reg. XX* ⁺¹	<p>Regional Clean Air Incentives Market (RECLAIM) (CMB-01) <i>[Projected Emission Reduction: 3-5 TPD]</i> Proposed amendments to Regulation XX will seek to implement additional NOx emission reductions. <i>Joe Cassmassi 909.396.3155 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
November	
1113* ⁺	<p>Architectural Coatings (CTS-01) <i>[Projected Emission Reduction: N/A]</i> Potential amendments may include a backstop provision to address additional potential VOC emission reductions from the small container exemption, high volume categories, and increased fees in Rule 314 – Fees for Architectural Coatings. Additional clarifications will also be considered to address ongoing compliance issues. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
December	
1123 ⁺¹	<p>Refinery Process Turnarounds (MCS-03) <i>[Projected Emission Reduction: N/A]</i> Proposed amendments, if needed, will implement Control Measure MSC-03 of the 2007 AQMP by establishing procedures that better quantify emission impacts from start-up, shutdown or turnaround activities. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1171 ⁺¹	<p>Solvent Cleaning Operations (CTS-02) <i>[Projected Emission Reduction: Some VOC]</i> The proposed amendments will review existing exemptions and include clarifications that may arise due to compliance verification activities or manufacturer and public input, including the sales prohibition clause. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1177 ⁺¹	<p>Liquefied Petroleum Gas Transfer and Dispensing (FUG-02) <i>[Projected Emission Reduction: N/A]</i> Potential amendments may be proposed to include additional sources of emissions from the dispensing and transfer of LPG. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT A

AQMP Rule Activity Schedule (continued)

2015

December	(continued)
4001* ¹	<p>Backstop to Ensure AQMP Emission Reduction Targets Are Met at Commercial Marine Ports (IND-01) <i>[Projected Emission Reduction: TBD]</i> If triggered, the proposed rule will address cost-effective NO_x, SO_x, and PM_{2.5} emission reduction strategies from port-related sources to ensure emission reductions claimed or emission targets assumed in the 2012 AQMP for the 24-hour PM_{2.5} standard are maintained. <i>Randall Pasek 909.396.2251 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

To-Be Determined 2015

To-Be Determined	
1168	<p>Adhesive and Sealant Applications (CTS-02) <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 1168 will partially implement CTS-02 and reflect improvements in adhesive and sealants technology, as well as remove outdated provisions and include minor clarifications. <i>Naveen Berry 909.396.236 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
Reg. IV, IX, X, XI, XIV, XIV, XX, XXX AND XXXV Rules	<p>Various rule amendments may be needed to meet the requirements of state and federal laws, implement OEHHA revised risk assessment guidance, address variance issues/ technology-forcing limits, to abate a substantial endangerment to public health or welfare, or to seek additional reductions to meet the SIP short-term measure commitments and/or long-term emission reduction commitments. The associated rule development or amendments include, but are not limited to, SCAQMD existing rules listed in Table 1 of the December 5, 2014 Rule and Control Measure Forecast and new or amended rules to implement the 2012 AQMP measures in Table 2 of the December 5, 2014 Rule and Control Measure Forecast.</p>

ATTACHMENT A

AQMP Rule Activity Schedule (continued)

To-Be Determined 2015

To-Be Determined	
---	<p>Mobile Source Measures <i>[Projected Emission Reduction: TBD]</i></p> <p>The District may adopt measures to limit emissions from mobile sources, both on-road and off-road (nonroad) sources, consistent with the Board’s direction to counsel at the October 2014 meeting to explore the District’s regulatory authority over mobile sources. These measures may include but are not limited to, transportation control measures, operational limits, fleet rules, credit generation rules, and indirect source rules, such as an indirect source rule for railyards and/or other sources which attract mobile sources.</p> <p><i>Henry Hogo 909.396.3184 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
---	<p>SIP Implementation <i>[Projected Emission Reduction: TBD]</i></p> <p>The District may adopt additional measures to carry out the State Implementation Plan for PM2.5 or ozone, or other pollutants if required, as deemed necessary to meet commitments and federal requirements.</p> <p><i>Philip Fine 909.396.2239 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

2016

January	
1161 ⁺¹	<p>VOC Reductions from Mold Release Agents (CTS-03) <i>[Projected Emission Reduction: TBD]</i></p> <p>The proposed rule will establish requirements for mold release products used in composite, fiberglass, metal and plastic manufacturing, and concrete stamping operations.</p> <p><i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1188 ⁺¹	<p>VOC Reductions from Vacuum Trucks (FUG-01) <i>[Projected Emission Reduction: TBD]</i></p> <p>The proposed rule will establish VOC emission standards and other requirements associated with the operation of vacuum trucks not covered by Rule 1149 – Storage Tank and Pipeline Cleaning and Degassing.</p> <p><i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT A

AQMP Rule Activity Schedule (continued)

2016

January	(continued)
2301 ⁺¹	<p>Control of Emissions from New or Redevelopment Projects (EGM-01) <i>[Projected Emission Reduction: Committed to reduce 0.5 tons per day of VOC, 0.8 tons per day of NOx, and 0.5 tons per day of PM2.5 in 2023.]</i></p> <p>The proposed rule will implement AQMP Control Measure EGM-01 – Emission Reductions from New or Redevelopment Projects. Proposed Rule 2301 will consider the co-benefits of VOC, NOx, and PM 2.5 emission reductions from the 2012 Regional Transportation Plan/Sustainable Communities Strategy and San Joaquin Valley Air Pollution Control District’s Rule 9510 – Indirect Source Review to meet the “all feasible measures” requirement.</p> <p><i>Henry Hogo 909.396.3184 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT B

Toxics Rule Activity Schedule

This attachment lists those rules or rule amendments for Governing Board consideration that are designed to implement the Air Toxics Control Plan.

2015

July	
1148.2 ¹	<p>Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 1148.2 may be needed to extend the implementation of requirements to submit emissions reports and other necessary changes to be consistent with SB 4. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
September	
1156	<p>Further Reductions of Particulate Emissions from Cement Manufacturing Facilities <i>[Projected Emission Reduction: N/A]</i> Cement manufacturing facilities currently maintain a monitoring network for hexavalent chromium. The proposed amendments will address the conditions by which the existing monitoring requirements could be reduced, particularly as they pertain to partial or full facility shutdown and any change in ownership and land use. <i>Tracy Goss 909.396.3106 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1420.1	<p>Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities <i>[Projected Emission Reduction: N/A]</i> During the adoption of amendments to Rule 1420.1 at the March 6, 2015 Governing Board Meeting, the Governing Board directed staff to return to the SCAQMD Governing Board within six months with a proposal to lower the overall point source lead emission limit to 0.003 lb/hour and other options. Staff is proposing amendments to lower the overall point source lead emission limit and other requirements. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1420.2 ¹	<p>Emissions Standard for Lead from Metal Melting Operations <i>[Projected Emission Reduction: TBD]</i> In October 2008, U.S. EPA lowered the National Ambient Air Quality Standard (NAAQS) for lead from 1.5 to 0.15 ug/m³. Proposed Rule 1420.2 will establish requirements for medium lead emitting sources to ensure compliance with the lead NAAQS. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT B

Toxics Rule Activity Schedule (continued)

2015

October	
1430.1 ¹	<p>Control of Toxic Air Contaminants from Grinding Operations at Forging Facilities <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 1430.1 will establish emission reduction requirements to control toxic emissions from grinding operations at forging facilities. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
November	
1402	<p>Control of Toxic Air Contaminants from Existing Sources <i>[Projected Emission Reduction: TBD]</i> Amendments to Rule 1402 will address revised toxic air contaminant risk guidance that have been approved by OEHHA. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
December	
1420 ⁺¹	<p>Emissions Standard for Lead <i>[Projected Emission Reduction: TBD]</i> In October 2008, U.S. EPA lowered the National Ambient Air Quality Standard (NAAQS) for lead from 1.5 to 0.15 ug/m³. Proposed Rule 1420 will establish requirements for smaller lead emitting sources that are not covered under Rules 1420.1 and Rule 1420.2 to ensure compliance with the lead NAAQS. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1466 ¹	<p>Volatile Organic Compound Emissions from Decontamination of Soil <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 1466 would establish requirements to control toxic metal emissions from activities involving storing, handling and transporting soils with toxic metals. This was previously listed as amendments to Rule 1166. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT B

Toxics Rule Activity Schedule (continued)

To-Be Determined 2015

To-Be Determined	(continued)
1148.2	<p>Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers <i>[Projected Emission Reduction: N/A]</i> Revisions to Rule 1148.2 may be needed based on information collected through implementation of Rule 1148.2. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1403	<p>Asbestos Emissions from Demolition/Renovation Activities <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 1403 will include specific requirements when conducting asbestos emitting demolition/renovation activities at schools, daycares, and possibly establishments that have sensitive populations. Amendments may include other provisions to improve the implementation of the rule. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1411	<p>Recovery of Recycling of Refrigerants from Motor Vehicle Air Conditioners <i>[Projected Emission Reduction: TBD]</i> The proposed amendments to Rule 1411 will align with existing Clean Air Act requirements to minimize the release of refrigerants during the servicing of motor vehicle air conditioning, incorporate other clarifications and enhance enforceability. <i>Philip Fine 909.396.2239 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
Reg. IV, IX, X, XI, XIV, XIV, XX, XXX and XXXV Rules	<p>The Clean Communities Plan has been updated to include new measures to address toxic emissions in the basin. The CCP includes a variety of measures that will reduce exposure to air toxics from stationary, mobile, and area sources (Table 3 of the December 5, 2014 Rule and Control Measure Forecast). Rule amendments may include updates to provide consistency with CARB Statewide Air Toxic Control Measures.</p>
---	<p>Mobile Source Measures <i>[Projected Emission Reduction: TBD]</i> The District may adopt measures to limit emissions from mobile sources, both on-road and off-road (nonroad) sources, consistent with the Board's direction to counsel at the October 2014 meeting to explore the District's regulatory authority over mobile sources. These measures may include but are not limited to, transportation control measures, operational limits, fleet rules, credit generation rules, and indirect source rules, such as an indirect source rule for railyards and/or other sources which attract mobile sources. <i>Henry Hogo 909.396.3184 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT B

Toxics Rule Activity Schedule (continued)

2016

February	
1450 ¹	<p>Control of Methylene Chloride Emissions <i>[Projected Emission Reduction: N/A]</i> Proposed Rule 1450 will establish requirements to control methylene chloride from furniture stripping operations and other sources. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
March	
1430 ¹	<p>Control of Toxic Air Contaminants from Metal Forging, Shredding, Grinding and Other Metal Processing Operations <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 1430 will establish emission reduction requirements to control toxic emissions from grinding operations. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT C

Other Rule Activity Schedule

This attachments lists rules or rule amendments for Governing Board consideration that are designed to improve rule enforceability, SIP corrections, or implementing state or federal regulations.

2015

July	
1148.1 ¹	<p>Oil and Gas Production Wells <i>[Projected Emission Reduction: N/A]</i> Amendments may be necessary to improve rule effectiveness in reducing emissions from production wells and associated equipment and improving housekeeping activities to minimize potential nuisance. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1148.2 ¹	<p>Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 1148.2 may be needed to extend the implementation of requirements to submit emissions reports and other necessary changes to be consistent with SB 4. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
September	
415* ¹	<p>Odors from Animal Rendering <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 415 will provide protection to the public from odors created during animal rendering operations. The proposed rule will incorporate a preventative approach to odors by establishing Best Management Practices and will consider enclosures for operations and processes that generate odors and from wastewater treatment. The proposed rule may also contain requirements for an Odor Mitigation Plan for continuing odor issues at facilities subject to the rule. <i>Tracy Goss 909.396.3106 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
October	
1106 1106.1 ¹	<p>Marine Coating Operations Pleasure Craft Coating Operations <i>[Projected Emission Reduction: N/A]</i> The proposed amendments will include any clarifications that may arise due to the compliance verification activities or manufacturer and public input, including the sales prohibition clause. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT C

Other Rule Activity (continued)

2015

October	(continued)
1110.2	<p>Emissions from Gaseous- and Liquid-Fueled Engines <i>[Projected Emission Reduction: N/A]</i> The proposed amendments to Rule 1110.2 would potentially extend the compliance date for biogas used to fuel power generators at landfills and municipal waste facilities. The amendment would result in delayed emission reductions. <i>Joe Cassmassi 909.396.3155 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
November	
219 ¹	<p>Equipment Not Requiring a Written Permit Pursuant to Regulation II <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 219 may be proposed to exclude equipment with de minimis emissions from the requirement to obtain written permits. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1304.2* ¹	<p>Greenfield or Existing Electrical Generating Facility Fee for Use of Offsets for Load Serving Entities <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 1304.2 would provide for new, greenfield or additions at existing electrical generating facilities to access the SCAQMD’s internal offset account, subject to qualifying conditions, eligibility, and the payment of a fee to invest in air quality improvement projects consistent with the AQMP. This rule is a companion to Rule 1304.1 and will provide offsets so that new, proposed and other existing electrical generating facilities can compete on a level playing field with existing generating facilities with utility steam boilers, and implement the State’s plan to maintain grid reliability. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1304.3* ¹	<p>Greenfield or Existing Electrical Generating Facility Fee for Use of Offsets for Municipalities <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 1304.3 would provide for new, greenfield or additions at existing electrical generating facilities to access the SCAQMD’s internal offset account, subject to qualifying conditions, eligibility, and the payment of a fee to invest in air quality improvement projects consistent with the AQMP. This rule is a companion to Rule 1304.1 and will provide offsets so that new, proposed and other existing electrical generating facilities run by local municipalities can meet the reliable electric needs of their customers. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT C

Other Rule Activity (continued)

2015

December	
416 ¹	<p>Odors from Kitchen Grease Processing <i>[Projected Emission Reduction: TBD]</i> Proposed Rule 416 will provide protection to the public from odors created during kitchen grease processing operations. The proposed rule will establish Best Management Practices (BMP) to address odors created during delivery and processing of trap grease to affected facilities. In addition, the proposed rule will examine enclosure for wastewater treatment operations and filter cake storage. The proposed rule may also contain requirements for an Odor Mitigation Plan for continuing odor issues at facilities subject to the rule. <i>Tracy Goss 909.396.3106 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1118 ¹	<p>Control of Emissions from Refinery Flares <i>[Projected Emission Reduction: TBD]</i> Amendments may be necessary to address results of the additional analysis required by the adopting resolution for the last amendment. Amendments may also be necessary to implement an AB 32 measure. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

To-Be Determined 2015

To-Be Determined	
219	<p>Equipment Not Requiring a Written Permit Pursuant to Regulation II <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 219 may be proposed to exclude equipment with de minimis emissions from the requirement to obtain written permits. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
222	<p>Filing Requirements for Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation I <i>[Projected Emission Reduction: N/A]</i> Amendments to Rule 222 may be proposed to add additional equipment categories to the streamlined filing/registration program of Rule 222. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT C

Other Rule Activity (continued)

To-Be Determined 2015

To-Be Determined	
224	<p>Incentives for Super-Compliant Technologies <i>[Projected Emission Reduction: TBD]</i> This proposed rule will outline strategies and requirements to incentivize the development, establishment and use of super-compliant technologies. It may be considered as a part of Rule 219 amendments or proposed as a separate incentive rule. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1107	<p>Coating of Metal Parts and Products <i>[Projected Emission Reduction: N/A]</i> Potential amendments to Rule 1107 would further reduce VOC emissions and improve rule clarity and enforceability. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1147	<p>NOx Reductions from Miscellaneous Sources <i>[Projected Emission Reduction: N/A]</i> Amendments may be necessary to address findings of ongoing technology assessment. <i>Joe Cassmassi 909.396.3155 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1148.2	<p>Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers <i>[Projected Emission Reduction: N/A]</i> Revisions to Rule 1148.2 may be needed based on information collected through implementation of Rule 1148.2. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
1190 Series	<p>Fleet Vehicle Requirements <i>[Projected Emission Reduction: TBD]</i> Amendments to Rule 1190 series fleet rules may be necessary to address remaining outstanding implementation issues and in the event the court's future action requires amendments. In addition, the current fleet rules may be expanded to achieve additional air quality and air toxic benefits. <i>Dean Saito 909.396.2647 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
Reg. XIII	<p>New Source Review <i>[Projected Emission Reduction: TBD]</i> Amendments may be necessary to address U.S. EPA comments on SIP approvability issues and/or requirements. Amendments may also be proposed for clarity and improved enforceability. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT C

Other Rule Activity (continued)

To-Be Determined 2015

To-Be Determined	(continued)
1902	<p>Transportation Conformity <i>[Projected Emission Reduction: TBD]</i> Amendments to Rule 1902 may be necessary to bring the District’s Transportation Conformity rule in line with current U.S. EPA requirements. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
2511	<p>Credit Generation Program for Locomotive Head End Power Unit Engines <i>[Projected Emission Reduction: TBD]</i> Develop a rule to allow generation of PM mobile source emission reduction credits from Locomotive Head End Power Unit Engines. Credits will be generated by retrofitting engines with PM controls or replacing the engines with new lower-emitting engines. <i>Randall Pasek 909.396.2251 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
2512	<p>Credit Generation Program for Ocean-Going Vessels at Berth <i>[Projected Emission Reduction: TBD]</i> Develop a rule to allow generation of PM, NOx and SOx emission reduction credits from ocean-going vessels while at berth. Credits will be generated by controlling the emissions from auxiliary engines and boilers of ships while docked. <i>Randall Pasek 909.396.2251 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
Reg. IV, IX, X, XI, XIV, XX, XXX AND XXXV Rules	<p>Various rule amendments may be needed to meet the requirements of state and federal laws, implement OEHHA revised risk assessment guidance, address variance issues/ technology-forcing limits, to abate a substantial endangerment to public health or welfare, or to seek additional reductions to meet the SIP short-term measure commitment. The associated rule development or amendments include, but are not limited to, SCAQMD existing rules listed in Table 1 of the December 5, 2014 Rule and Control Measure Forecast and new or amended rules to implement the 2012 AQMP measures in Table 2 of the December 5, 2014 Rule and Control Measure Forecast. The CCP has been updated to include new measures to address toxic emissions in the basin. The CCP includes a variety of measures that will reduce exposure to air toxics from stationary, mobile, and area sources (Table 3 of the December 5, 2014 Rule and Control Measure Forecast). Rule amendments may include updates to provide consistency with CARB Statewide Air Toxic Control Measures.</p>

ATTACHMENT C

Other Rule Activity (continued)

2016

February	
1136 ¹	<p>Wood Products Coatings <i>[Projected Emission Reduction: TBD]</i> The proposed amendments will include clarifications that may arise due to compliance verification activities or manufacturer and public input, including the sales prohibition clause. <i>Naveen Berry 909.396.2363 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

ATTACHMENT D

Climate Change

This attachments lists rules or rule amendments for Governing Board consideration that are designed to implement SCAQMD’s Climate Change Policy or for consistency with state or federal rules.

To-Be Determined 2015

To-Be Determined	
Reg. XXVII	<p>Climate Change <i>[Projected Emission Reduction: TBD]</i> Additional protocols may be added to Rules 2701 and 2702 and amendments to existing rules may be needed to address implementation issues. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>
Reg. IV, IX, X, XI, XIV, XX, XXX and XXXV Rules	<p>Rule developments/amendments may be needed to meet the requirements of state and federal laws related to climate change air pollutants.</p>

2016

February	
1118 ¹	<p>Control of Emissions from Refinery Flares <i>[Projected Emission Reduction: TBD]</i> Amendments may be necessary to address findings from the additional analysis required by the adopting resolution for the last amendment. Amendments may also be necessary to implement an AB 32 measure. <i>Susan Nakamura 909.396.3105 CEQA: Krause 909.396.2706 Socio: Cassmassi 909.396.3155</i></p>

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 16

PROPOSAL: Report of RFPs Scheduled for Release in June

SYNOPSIS: This report summarizes the RFPs for budgeted services over \$75,000 scheduled to be released for advertisement for the month of June.

COMMITTEE: Administrative, May 8, 2015; Recommended for Approval

RECOMMENDED ACTION:

Approve the release of RFPs for the month of June.

Barry R. Wallerstein, D.Env.
Executive Officer

MBO:lg

Background

At its January 8, 2010 meeting, the Board approved a revised Procurement Policy and Procedure. Under the revised policy, RFPs for budgeted items over \$75,000, which follow the Procurement Policy and Procedure, no longer require individual Board approval. However, a monthly report of all RFPs over \$75,000 is included as part of the Board agenda package and the Board may, if desired, take individual action on any item. The report provides the title and synopsis of the RFP, the budgeted funds available, and the name of the Deputy Executive Officer/Asst. Deputy Executive Officer responsible for that item. Further detail including closing dates, contact information, and detailed proposal criteria will be available online at <http://www.aqmd.gov/grants-bids> following Board approval on June 5, 2015.

Outreach

In accordance with SCAQMD's Procurement Policy and Procedure, a public notice advertising the RFPs and inviting bids will be published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County's Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential bidders may be notified utilizing SCAQMD's own electronic listing of certified minority vendors. Notice of the RFPs will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on the Internet at SCAQMD's website (<http://www.aqmd.gov>) where it can be viewed by making the selection "Grants & Bids."

Proposal Evaluation

Proposals received will be evaluated by applicable diverse panels of technically-qualified individuals familiar with the subject matter of the project or equipment and may include outside public sector or academic community expertise.

Attachment

Report of RFPs Scheduled for Release in June 2015

**June 5, 2015 Board Meeting
Report on RFPs Scheduled for Release on June 5, 2015**

(For detailed information visit SCAQMD's website at
<http://www.aqmd.gov/rfp/index.html> following Board approval on June 5, 2015)

STANDARDIZED SERVICES

RFP #P2015-24	Issue RFP for Security Guard Services at Diamond Bar Headquarters	JOHNSON/3018
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The current security guard services contract expires November 30, 2015. This action is to issue an RFP to solicit bids from interested parties in order to secure a new three-year contract for this service. Funds for this service are included in the FY 2015-16 Budget and will be included in budgets for each of the remaining fiscal years of the contract.

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 17

PROPOSAL: Status Report on Major Projects for Information Management
Scheduled to Start During Last Six Months of FY 2014-15

SYNOPSIS: Information Management is responsible for data systems management services in support of all SCAQMD operations. This action is to provide the monthly status report on major automation contracts and projects to be initiated by Information Management during the last six months of FY 2014-15.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file.

Barry R. Wallerstein, D.Env.
Executive Officer

JCM:MAH:OSM:nv

Background

Information Management (IM) provides a wide range of information systems and services in support of all SCAQMD operations. IM's primary goal is to provide automated tools and systems to implement Board-approved rules and regulations, and to improve internal efficiencies. The annual Budget specifies projects planned during the fiscal year to develop, acquire, enhance, or maintain mission-critical information systems.

Summary of Report

The attached report identifies each of the major projects/contracts or purchases that are expected to come before the Board between January 1 and June 30, 2015. Information provided for each project includes a brief project description, FY 2014-15 Budget, and the schedule associated with known major milestones (issue RFP/RFQ, execute contract, etc.).

Attachment

Information Management Major Projects for Period January 1 through June 30, 2015

ATTACHMENT
June 5, 2015 Board Meeting
Information Management Major Projects
for the Period of January 1 through June 30, 2015

Item	Brief Description	Budgeted Funds	Schedule of Board Actions	Status
Systems Development, Maintenance and Support	Provide Development, Maintenance and Support for: <ul style="list-style-type: none"> • Web Application Development • E-Commerce Infrastructure • CLASS System Replacement • CLASS System(s) Enhancements • Version Upgrades 	\$464,500	April 3, 2015	Completed
Issue RFP for Purchase of Conference Room Enhancements	The audio visual upgrade project for conference rooms GB and Hearing Board will enhance functionality of both conference rooms.	To be budgeted	April 3, 2015	Completed
Issue RFP for Evaluation/Improvement of SCAQMD's Website	Issue RFP to solicit bids from qualified firms to evaluate the current website and make recommendations for improvements.	TBD	May 1, 2015	On Schedule

Double-lined Rows - Board Agenda items current for this month

Shaded Rows - activities completed

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 19

REPORT: Administrative Committee

SYNOPSIS: The Administrative Committee met on Friday, May 8, 2015. The Committee discussed various issues detailed in the Committee report. The next Administrative Committee meeting is scheduled for Friday, June 12, 2015 at 10:00 a.m.

RECOMMENDED ACTION:

Receive and file.

Dr. William A. Burke, Chair
Administrative Committee

GC

Attendance: Attending the May 8, 2015 meeting in Newport Beach were Committee Members William Burke, Dennis Yates, Clark E. Parker Sr. and Judith Mitchell.

ACTION/DISCUSSION ITEMS:

1. **Board Members' Concerns:** None.
2. **Chairman's Report of Approved Travel:** Executive Officer Barry Wallerstein reported that Councilmember Judith Mitchell will be traveling to Sacramento to attend the monthly CARB Board meeting and Mayor Miguel Pulido will be attending the U.S. Conference of Mayors in San Francisco regarding air quality-related issues.
3. **Approval of Compensation for Board Member Assistant(s)/Consultant(s):** Dr. Wallerstein reported that this item is to approve the annual renewal of the existing Board Consultants and Assistants compensation proposals except one of Board Member Cacciotti's Board Consultants. Councilman Cacciotti is still considering that proposal and will submit it for approval at the June meeting.

Moved by Yates; seconded by Parker; unanimously approved.

4. **Report of Approved Out-of-Country Travel:** None to report.
5. **Update on Riverside County Paving Projects Funded by AB 1318 Mitigation Funds in Coachella Valley:** Assistant Deputy Executive Officer Fred Minassian provided an update on the Riverside County AB 1318 Road Paving Projects which are resulting in significant reductions of unhealthful fugitive dust emissions. The Board approved \$4.1 million for the projects, which were all located in environmental justice areas. The contract identified 31 projects as Priority 1 with 10 additional projects identified as Priority 2, which were to be completed with any remaining funds. In addition, the Riverside County Transportation Department augmented the project with \$270,000. In the event that any of the projects exceeded their estimated cost, an amount of approximately \$390,000 was set aside as a contingency fund to ensure that the projects would be completed. However, all the projects were completed within cost. This item is to request a no-cost amendment to move the \$390,000 contingency amount to Priority 2 for more projects. Mr. Minassian presented a short video that detailed the success and accomplishment of the mobile home park project, which is 90% complete. A total of nine miles will be paved benefitting air quality for many children and families.

Moved by Mitchell; seconded by Yates; unanimously approved.

6. **Approve Transfer of Monies from Health Effects Research Fund to Brain & Lung Tumor and Air Pollution Foundation and Authorize Solicitation and Potential Funding of Proposals:** Dr. Wallerstein advised that in recent meetings the Committee has received reports regarding revenues from penalties and further advised that the Board's policy has been to periodically transfer penalty money to the Brain & Lung Tumor and Air Pollution Foundation. This action is to transfer \$2.5 million of penalty money to the foundation which will then issue an RFP under the foundation's guidelines and use the money to fund research projects on brain and lung tumors and air pollution.

Moved by Yates; seconded by Parker; unanimously approved.

7. **Execute Sole-Source Contract for Three-Year Service Agreement for SCAQMD Access to On-Line Legal Research Libraries:** General Counsel Kurt Wiese advised that this item is to approve a contract for on-line legal research services with Thomson Reuters-West for \$75,000.

Moved by Yates; seconded by Mitchell; unanimously approved.

8. **Install Air Filtration System at a School in Boyle Heights, Conduct Lawn Mower Exchange Events in Boyle Heights and San Bernardino, Upgrade Boilers in San Bernardino and Conduct Home Weatherization Program in Boyle Heights and San Bernardino:** Director of Strategic Initiatives Susan Nakamura reported that in 2011 U.S. EPA awarded SCAQMD a Targeted Air Shed Grant for \$2.9 million to assist with the implementation of the Clean Communities Plan in Boyle Heights and San Bernardino. To date, \$1.2 million has been spent. To engage the community and encourage residents to participate, staff has been working on the implementation of four incentive programs for air filtration in schools, yard equipment exchange, and boiler and process heater efficiency upgrades for use of the remaining funds. This item is to request approval to 1) amend a contract with IQAir North America, adding \$435,632 to install air filtration systems at Murchison Street Elementary School in Boyle Heights; 2) execute contracts with Black and Decker, Inc. and The Greenstation to purchase up to 800 lawn mowers in an amount not to exceed \$164,000 to conduct two residential lawn mower exchanges; 3) execute a contract with the City of San Bernardino in an amount not to exceed \$57,000 for the differential cost of installing high-efficiency condensing boilers; and 4) authorize the Executive Officer to enter into a Collaboration Agreement with Southern California Gas Company in an amount not to exceed \$500,000 to conduct a home weatherization program.

Mayor Yates commented that this is a prime opportunity for the District to require its subcontractors to hire young people from the environmental justice areas so that they can learn a vocation as part of this program by teaching them skills such as glazing, caulking and weatherizing a house, thus gaining the experience needed for a possible permanent job. Dr. Wallerstein responded that staff will follow up with Southern California Gas Company regarding that request.

Moved by Parker; seconded by Yates; unanimously approved.

9. **Issue RFP for Refurbishment of Pace Air Handlers at SCAQMD Headquarters:** Assistant Deputy Executive Officer Bill Johnson reported that this item requests authorization to issue an RFP for the refurbishment of the air handler systems at District Headquarters, now in their third decade of service. There are approximately 23 air handlers and 3-5 air handlers will be replaced per year over a 5-year time period.

Moved by Yates; seconded by Mitchell; unanimously approved.

10. **Report of RFPs Scheduled for Release in June:** Chief Financial Officer Michael O'Kelly reported that this item requests issuance of an RFP for security guard services. It is typically a three-year agreement, and the current contract expires at the end of this year.

Moved by Yates; seconded by Mitchell; unanimously approved.

11. **Review of the June 5, 2015 Governing Board Agenda:** There were no questions regarding the June 5, 2015 Board Agenda.

12. **Public Comment:** None.

Meeting adjourned at 8:30 a.m.

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 20

REPORT: Legislative Committee

SYNOPSIS: The Legislative Committee met on Friday, May 8, 2015 following the Board Retreat. The next Legislative Committee meeting is scheduled for Friday, June 12, 2015 in Conference Room CC8.

RECOMMENDED ACTION:
Receive and file this report.

Judith Mitchell
Chair
Legislative Committee

LBS:GSA:PFC:jf

Attendance [Attachment 1]

Committee Chair Judith Mitchell and Committee Members Michael Antonovich and Janice Rutherford were present.

Report on Federal Legislative Issues [Attachment 2]

South Coast AQMD's federal legislative consultants the Carmen Group and Kadesh & Associates each provided a written report on various key Washington, D.C. issues.

Update on State Legislative Issues [Attachment 3]

South Coast AQMD's state legislative consultants Joe A. Gonsalves & Son and Gonzalez, Quintana & Hunter each provided a written report on various key Sacramento issues.

Briefing Paper on Potential Use of Unmanned Aircraft for Air Quality Data Gathering [Attachment 4]

Dr. Laki Tisopulos, Assistant Deputy Executive Officer of Science & Technology Advancement provided an update to the committee on emerging technology innovations and new federal regulations relating to unmanned aircraft vehicles (UAVs), also known as drones. Dr. Tisopulos also discussed possible beneficial and cost-effective air

monitoring applications of UAVs, while taking into account various limitations and concerns.

The committee identified and discussed some potential concerns involving the use of UAVs, including, but not limited to, those relating to privacy, airspace operations and technological limitations, as well as safety and liability issues. Staff outlined possible approaches and ongoing efforts to address such concerns. Committee Chair Mitchell noted the valid concerns over privacy and other issues previously stated. She advised staff to continue to monitor legislation relative to UAVs with the agency's priority being to proceed with caution and explore the feasibility for partnered deployment with emergency responders (e.g. police and fire department).

Greenhouse Gas Related Legislation [Attachment 5]:

Senior Public Affairs Manager of Legislative and Public Affairs, Guillermo Sanchez provided the committee with a brief overview of greenhouse gas (GHG) state legislation introduced this year. These bills, each with their contending priorities, are seeking to utilize the growing Greenhouse Gas Reduction Fund.

Mr. Sanchez outlined South Coast AQMD's next steps in this policy area. He also explained that through this legislative activity and the budget, there is a major opportunity for the SCAQMD to maximize the benefit of the state's investments by securing co-benefit emission reductions of criteria pollutants, along with GHG emission reductions. Executive Officer Dr. Barry Wallerstein also mentioned the Committee's and full Board's approved position on SB 32 (Pavley) that endorsed staff efforts to seek such co-benefit emission reductions.

Report from SCAQMD Home Rule Advisory Group [Attachment 6]

Please refer to Attachment 6 for written report.

Other Business:

None

Public Comment Period:

None

Attachments

1. Attendance Record
2. Federal Legislative Update
3. State Legislative Update
4. Potential Use of Unmanned Aircraft for Air Quality Data Gathering
5. Greenhouse Gas Related Legislation
6. SCAQMD Home Rule Advisory Group Report

ATTACHMENT 1

ATTENDANCE RECORD –May 8, 2015

DISTRICT BOARD MEMBERS:

Councilmember Judy Mitchell, Chair
Supervisor Michael Antonovich
Supervisor Janice Rutherford

STAFF TO COMMITTEE:

Lisha B. Smith, Deputy Executive Officer
Derrick Alatorre, Assistant Deputy Executive Officer/Public Advisor
Guillermo Sanchez, Senior Public Affairs Manager
Julie Franco, Senior Administrative Secretary

DISTRICT STAFF:

Barry R. Wallerstein, Executive Officer
Barbara Baird, Chief Deputy Counsel
Philip Fine, Deputy Executive Officer
Bayron Gilchrist, Assistant Chief Deputy Counsel
Fred Minassian, Assistant Deputy Executive Officer
Matt Miyasato, Deputy Executive Officer
Mohsen Nazemi, Deputy Executive Officer
Kurt Wiese, General Counsel
Philip Crabbe, Community Relations Manager
Patti Whiting, Staff Specialist

OTHERS PRESENT:

Mark Abramowitz, Governing Board Member Consultant (Lyou)
Sue Gornick, WSPA
Jacob Haik, Governing Board Member Consultant (Buscaino)
Bill LaMarr, California Small Business Alliance
Chung Liu, Governing Board Member Consultant (Mitchell)
Rita Loof, RadTech
Peter Okurowski, CEA
Marissa Perez, Governing Board Member Consultant (Mitchell)
Bill Quinn, CCEEB
David Rothbart, Los Angeles County Sanitation Districts
Andrew Silva, Governing Board Member Consultant (Rutherford)
Claire Spencer, Tesoro
Susan Stark, Tesoro
Lee Wallace, So Cal Gas



ATTACHMENT 2A

MEMORANDUM

To: Members of the South Coast Air Quality Management District Legislative Committee

From: Mia O'Connell, Gary Hoitsma, and Stewart Harris, Carmen Group

Date: May 1, 2015

Subj: Updated on Federal Legislative Issues

Please find the following information regarding Carmen Group's Federal Legislative update for the District's Legislative Committee. We would be pleased to answer any questions from you or the Committee regarding these items.

- 1) **MAP-21 Status:** With surface transportation authorizations expiring at the end of this month, Congress' exact plan for going forward remains uncertain. With the House out this week and both the House and Senate out the week of Memorial Day at the end of the month, some action will need to be taken by May 22nd at the latest. Despite some differences between the House and the Senate that have to be worked out in the coming days, it now appears most likely that there will be a two-month extension of existing authority for all programs carrying through to the first of August. This can be done without any new revenue, since the Highway Trust Fund is now officially reported to have enough money to last that long. This will give Congress more time to identify the approximately \$11 billion in new revenue that will then be needed to sustain current programs through the end of the calendar year. Thus passage of any new comprehensive bill with serious policy changes and longer-term funding – possibly rooted in tax reform of some kind -- will most likely be deferred until the November/December timeframe. At least that is the scenario that seems most likely right now.
- 2) **AQMD MAP-21 Issues:** Draft bills continue to be worked on behind the scenes in the House and the Senate. From what we have learned so far, the next MAP-21 bill will include a new freight formula program with its amount of funding – like that for all other program categories -- tied to however big the overall bill turns out to be. So far, we are told there are no air-quality related or other set-asides being carved out from this freight formula distribution. At the same time, CMAQ program eligibilities are being changed to encourage much greater use of those funds on AQMD-favored advanced clean vehicle technologies that are believed to have a much higher benefit-cost ratio for improving air quality than are other more traditional CMAQ approaches. Committee staffs believe these changes, coupled with increased funding for CMAQ, will incentivize states and local jurisdictions to put more CMAQ dollars directly in the kind of advanced technology projects AQMD is trying to promote.

Proven Process. Proven Results.™

- 3) **Targeted Airshed Grant Program:** Earlier this week, Congressman Calvert was briefed by EPA regarding the DERA and Targeted Airshed Grant Programs. The briefing served as an opportunity for the Congressman to clarify for EPA the intent of language regarding Targeted Airshed Grants in the FY15 Appropriations bill. We will be working with Lisha and her team to update the Targeted Airshed Grant language for Congressman Calvert to use in the FY16 Interior Environment Appropriations bill, which is currently under development.

- 4) **FY 2015 Diesel Emission Reduction Act RFP:** On Thursday, April 30th, EPA released their Fiscal Year 2015 DERA Request for Proposals. We will be working with Lisha and her team to determine whether the District will be submitting an application (due June 15th), and will again work with Congressman Calvert's office to support the District proposal.

KADESH & ASSOCIATES, LLC

ATTACHMENT 2B

Kadesh & Associates Legislative Report to the SCAQMD board 5/8/15

Appropriations

The House passed the Energy and Water Appropriations bill on May 1 by a vote of 240-177 and the Senate is expected to begin the process of marking up its own bill later this month. The President has issued a veto threat to the House bill stating that this is because it "drastically underfunds critical investments" in clean energy and climate change. There were several notable amendments to the bill including one that blocks funds from being used to finalize DOE furnace efficiency rules.

As you recall the Energy and Water Appropriations bill includes the program that has funded our zero emissions goods movement projects the past few years. We received \$10 million from the fiscal year 2014 bill and are still awaiting the Agency's request for proposals for the 2015 program.

Senator Feinstein's staff have relayed to us that they have heard from several entities regarding the Zero Emissions Goods Movement funds allocated to the agency, specifically in 2012. We continue to work with SCAQMD staff and the Senator's office to resolve any concerns and try for future funding. Senator Feinstein was the Subcommittee chair and in charge of writing the Senate bill until the Republicans took over the Senate this year. She now serves as the Ranking member.

Separately we have also been working with staff from DOE EERE (where the zero emissions program is housed) to provide information on ways to further incent zero emission vehicular infrastructure.

Meanwhile the Senate Interior Appropriations committee recently held a hearing with EPA witnesses on the 2016 Interior appropriations as a prelude to marking up an Interior appropriations bill. The Interior Appropriations bill of course funds DERA among all the many important EPA programs that affect SCAQMD.

These are notable developments as Congress has struggled to pass appropriations bill on time and through regular order the past few years so Appropriators are working hard to return to the traditional normalcy in the appropriations process.

Energy Efficiency bill

The President signed into law the Energy Efficiency Improvement Act of 2015 which establishes a voluntary, market-driven approach for commercial building owners and their tenants to reduce energy consumption. This is a subset of the more comprehensive Shaheen-Portman and Portman-Shaheen energy efficiency bills that have

KADESH & ASSOCIATES, LLC

fallen short over the past couple of Congresses. On April 30, the Senate Energy and Natural Resources committee held a hearing and received testimony on 22 general energy efficiency proposals and proponents of the more comprehensive Portman-Shaheen legislation are hopeful that additional energy efficiency legislation can be passed this Congress.

Transportation Bill

Transportation authorization runs out at the end of the month. There is still nothing close to any sort of Congressional consensus on funding options. The Repatriation proposal put forth by Senators Boxer and Rand Paul which pays for highway spending by providing companies a tax break on their overseas earnings has been rejected by Senator Hatch and Congressman Ryan, the Chairs of Senate Finance and House Ways and Means. A recent Joint Committee on Taxation analysis pegged the cost of the bill at \$118 billion.

Just this week, Senator Wyden (Ranking member of Senate Finance) and Senator John Hoeven introduced legislation that would offer up to \$180 billion in tax-exempt bond authority and up to \$45 billion in infrastructure tax credits over the next decade aimed at increasing private investment in transportation projects. Despite the bipartisan support, we don't expect this bill to get much traction either. In fact, virtually all potential funding streams have been rejected outright by key legislators.

At this point we don't expect Congress to let the authorization or the funding lapse so we expect a short term extension which realistically could last all the way through the rest of the calendar year and even into 2016. Most likely the funding will have to come from the general fund with no real offset.

And earlier this week (On May 5), the Senate Commerce Committee held another hearing on a surface transportation reauthorization bill. As always we will inform SCAQMD staff of anything notable that comes out of the hearing. The Commerce Committee oversees the freight piece of the legislation in the Senate.

Air Quality

Lastly, we are working with Senator Feinstein's office to answer their request for information about the effects of the ongoing California drought on air quality in our region.



ATTACHMENT 3A

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STATE LEGISLATIVE UPDATE

FRIDAY, MAY 1ST, 2015

RECAP OF MEETINGS WITH BOARD MEMBER MITCHELL:

On April 21st and April 22, 2015, our office had the pleasure of arranging and attending meetings in Sacramento with Board Member Mitchell and key Members of the Legislature and Legislative Committees. With roughly 80% of the Legislature having less than 2 years' experience; we thought this was a great opportunity to establish relationships with these newly elected members of the Legislature.

The purposes of these meetings were twofold:

1. A "meet and greet" introducing the Legislators to SCAQMD and the role the District plays in their communities.
2. Offer the District as a resource to the Legislators.

Board Member Mitchell met with the following Legislators:

- Senator Fran Pavley, 27th Senate District, Chair of the Senate Natural Resources and Water Committee.
- Assembly Member Das Williams, 37th Assembly District, Chair of the Assembly Natural Resources Committee.
- Rebecca Newhouse, Consultant, Senate Environmental Quality Committee.
- Assembly Member Chad Mayes, 42nd Assembly District, which is covered by SCAQMD.
- Assembly Member Chris Holden, 41st Assembly District, Assembly Majority Floor Leader.
- Assembly Member Bill Quirk, 20th Assembly District, Chair of the Select Committee on California's Clean Energy Economy.
- Assembly Member David Hadley, 66th Assembly District. Member of the Assembly Natural Resources Committee.
- Assembly Member Anthony Rendon, 63rd Assembly District, Chair of the Assembly Utilities and Commerce Committee.

WATER REGULATIONS:

On Tuesday, April 28th, 2015, Governor Brown met with various Mayors from across the State of California on the Proposed 25% water Reduction he called for in the beginning of April. At the press conference following the meeting with California Mayors, Governor Brown announced he will propose legislation to help local officials better enforce conservation requirements and will direct state agencies to streamline environmental review of local water supply projects.

The proposed legislation will give new enforcement authority to local entities that don't currently have it and increase potential penalties against water wasters. It will specifically:

- Establish a new penalty of up to \$10,000 per violation, expanding on \$500 per day maximum infraction established in last year's drought legislation.
- Allow penalties to be issued administratively by wholesale and retail water agencies, as well as city and county governments. This change speeds up an infraction process involving courts that was established in last year's emergency drought legislation.
- Enable these entities to enforce local water restrictions against water waste, as well as conservation restrictions established by the State Water Resources Control Board.
- Allow local public agencies to deputize staff to issue water conservation-related warnings and citations.

This legislation will give all water agencies and local governments a consistent, minimum set of enforcement authorities to achieve required water conservation. Local water agencies with existing authorities to enforce against water waste can continue to use those authorities. Under the proposed legislation, any monetary penalties from this enforcement will be used for local conservation efforts.

Separately, to streamline environmental permitting for critical water supply projects, the Governor has directed his Office of Planning and Research and other state agencies to help local water agencies reduce the time required to comply with state-required environmental reviews. These permit streamlining efforts will focus on projects that can increase local water supplies with limited environmental impacts. The Governor's Office will also explore legislative changes that can speed-up delivery of critical water supply projects.

UPCOMING LEGISLATIVE DEADLINES:

There are a few upcoming legislative deadlines I would like to make the Committee aware of:

- May 1 – Last day for policy comm. to hear and report bills to the Appropriations Committee.
- May 15 – Last day for policy committees to hear non fiscal bills.
- May 22 - Last day for policy committees to meet until June 8, 2015.
- May 29 - Last day for Appropriations Committees to meet until June 8, 2015.
- June 5 – Last day for bills to be passed out of their house of origin.



ATTACHMENT 3B

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GONZALEZ, QUINTANA & HUNTER, LLC

May 1, 2015

TO: Members of the South Coast AQMD Legislative Committee
FROM: Will Gonzalez, SCAQMD Consultant
RE: State Legislative Update

AB 513 (Beall) – Carl Moyer Modernization

AB 513 (Beall) is sponsored by the CA Air Pollution Control Officer's Association (CAPCOA) and supported by SCAQMD. The bill makes several updates to the Carl Moyer program to ensure significant sources of mobile air pollution are eligible to receive incentive funding to reduce their emissions. The bill was heard in the Senate Transportation and Housing Committee on April 21st and passed with a strong bipartisan vote of 10-0. Subsequently, the bill was heard in the Senate Environmental Quality Committee on April 29th and despite several questions raised by committee members regarding the structure of vehicle fees and categories of fund recipients, also passed with a strong bi-partisan vote of 7-0. CAPCOA and SCAQMD will be working with committee members to respond to these inquiries.

Governor Brown's Executive Order on Climate Change

Governor Jerry Brown issued an executive order on April 29th establishing a state goal of reducing GHG levels to 40% of 1990 levels by 2030. Brown's executive order establishes an interim target between the existing AB 32 statute (1990 levels by 2020) and Governor Schwarzenegger's Executive Order (80% of 1990 levels by 2050). The new 2030 interim target will likely accelerate the pace of GHG reductions most industries are undertaking to meet the existing 2050 target.

SB 32 (Pavley) – GHG Reduction Goals

SB 32 (Pavley) easily cleared its first committee hearing by a vote of 5-2 and now heads to Senate Appropriations committee. The bill directs the CA Air Resources Board to establish new industry GHG reduction targets to achieve a GHG reduction equivalent to 80% of 1990 levels. Senator Pavley announced she would be amending her bill to conform to Governor Brown's executive order establishing a 2030 interim GHG target.

SB 350 (de Leon) / AB 645 (Williams) – Renewable Energy

Two bills moving through the legislative process to establish a new 50% Renewable Portfolio Standard have cleared all policy committees with little drama. SB 350 recently cleared the Senate Environmental Quality committee by a vote of 5-2 and AB 645 cleared the Assembly Natural Resources committee by a vote of 6-3. Both bills are headed to fiscal committees but are not expected to face substantial challenges until the bills reach the Assembly Floor.

ATTACHMENT 4A

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Use of Unmanned Aircraft Vehicles for Air Monitoring Applications

White Paper

Laki Tisopulos, Ph.D.

Assistant Deputy Executive Officer

Andrea Polidori, Ph.D.

Quality Assurance Manager



3/18/2015

Introduction

Unmanned Aerial Vehicles (UAVs), commonly referred to as drones, are remotely operated platforms known for their easy maneuvering, great flexibility, and relatively low-costs. Once relegated solely to military and intelligence use, civilian, commercial and governmental applications are now proliferating around the world. Cumulative spending on aerial drones is expected to grow very rapidly and reach \$98 billion over the next decade. Civilian and commercial applications will account for 12% of this spending (Business Insider Report; 2014). The size of a UAV can range from that of an insect to that of a commercial airliner (Figure 1). Smaller UAVs are usually employed for remote observation of hazardous environments, while larger autonomous drones weighing thousands of pounds are typically used by the military for combat operations.

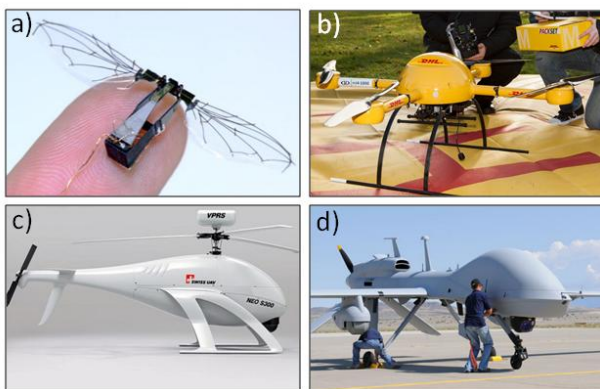


Figure 1 Example of a micro aerial vehicle prototype (a), a small UAV used for delivery of medicine (b), a helicopter-type UAV for aerial photography and HD video filming (c), and a large drone for military operations (d)

Because of recent technological advancements, small UAVs can now be employed for aerial meteorological and air quality measurements using commercially available sensors and sensor devices. These versatile platforms can be launched and deployed within minutes from the occurrence of an incident response situation with potential community impact implications (e.g. large-scale industrial accidents, wildfires, etc.) and are capable of sending data back to the operator in real time. While the newest generation of commercial UAVs opens the door to innovative techniques in sampling that were previously either impractical or not

cost-effective, the use of UAVs is not without challenges, both technical and logistical.

This short document mainly focuses on small UAVs [defined by statute as unmanned aircraft weighing less than 55 lb; Federal Aviation Administration (FAA), 2015], summarizes the current state of knowledge of small UAV technology, and discusses potential applications that may enhance current SCAQMD air monitoring capabilities.

Why Should SCAQMD Be Interested In UAVs?

There is tremendous synergy between what the rapidly evolving UAV technology can offer and the objectives of recent SCAQMD air monitoring initiatives. Specifically, SCAQMD just established a testing center (i.e. Air Quality Sensor Performance Evaluation Center, or AQ-SPEC) to evaluate the performance of “low-cost” sensors, many of which can be integrated in small UAVs for air monitoring purposes. Furthermore, SCAQMD is also aggressively exploring the use of more sophisticated fence-line optical remote sensing technologies for the purposes of improving its air monitoring capabilities, enhancing compliance with its regulatory program, and further developing its community and school alert initiatives. While presently SCAQMD is using fixed stations and mobile trailers to operate available air monitoring technologies, UAVs would provide alternative or additional platforms that are more versatile, nimble, and faster to deploy, which could greatly improve the effectiveness and usefulness of SCAQMD air monitoring programs.

UAV Types

The International Civil Aviation Organization (ICAO) classifies UAVs into *autonomous-* and *remotely piloted-aircraft*. While the former type is considered unsuitable for regulation due to legal and liability issues, the latter is subject to civil regulation under ICAO, FAA, and other relevant national aviation authorities. More commonly, drones are divided into two categories, namely *rotary-wing* and *fixed-wing* UAVs. The former type is a Vertical Take Off and Landing (VTOL) aircraft that can hover over a desired location (Figure 2). While its relative payload capacity is less than its fixed wing counterpart, it allows for extremely stable positioning near the location of interest (e.g. a smoke stack or other elevated pollution sources) and for both fixed and in-motion



Figure 2 Typical rotary-wing (left) and fixed-wing (right) UAVs used for civilian applications

sampling/monitoring. Conversely, fixed-wing UAVs are small aircraft that require a runway or other launch system to take-off/land, and do not have the ability to hover over desired locations for stationary sampling/monitoring (Figure 2). However, they typically provide longer flight times, can fly at higher cruising speeds, and can support larger payloads.

UAV Characteristics

- **Payload:** The carrying capacity of civilian UAVs varies widely and is typically between 0.5 and over 10 kg depending on the size and type of drone. This has important implications on the type of sensors and other equipment that the UAV can carry.
- **Flight time and range:** Flight time varies greatly, spanning from 15-30 minutes for purely electric UAVs to over 10 hours for gasoline powered UAVs. Flight range is also highly variable and for civilian drones it spans from a few hundred meters to a few kilometers.
- **Flight altitude:** For most civilian UAVs, flight altitude ranges from 300 to 1000 meters.
- **Wind resistance:** Typically, small UAVs cannot be operated during strong wind conditions. This has important implications in terms of risk and safety and limits their ability to monitor air quality or collect air samples during high wind events.
- **Cost:** Cost is highly variable depending on the payload, range capabilities, flight time and other technical considerations and may vary between a few hundred dollars to over \$10,000.
- **Other considerations:** Many commercially available UAVs are made of advanced lightweight materials such as injected foam, fiberglass, carbon fiber and aluminum. Small rotary-wing UAVs are typically 100% electric to minimize emissions and vibration. Vibration dampening components are often used to minimize malfunctions of the sampling/monitoring components and to stabilize video images.

Potential Air Monitoring Applications

Because of their light weight, a wide variety of modern low-cost air monitoring sensors can easily be integrated in commercially available UAVs and used for several useful applications, including:

- Meteorological measurements: Temperature, relative humidity, pressure, and winds (e.g. vertical wind profiles).
- Continuous gas monitoring: Ozone, nitrogen oxides, carbon monoxide, and other gases
- Integrated gaseous sampling: Sorbent tubes and other passive samplers and small canister samplers for VOC collection.
- Particulate matter measurements: Real-time (e.g. using light scattering techniques) and integrated sampling (e.g. using small impactors for collecting size-segregated particles).

It should be noted that SCAQMD relies on stationary monitoring stations to obtain such meteorological, gaseous and particulate measurement data. UAVs may provide an opportunity to augment SCAQMD's current stationary network capabilities.

- Horizontal and vertical gradient studies: Real-time air pollution measurements in close proximity and further away from the source (e.g. at different distances from a freeway, near a smoke stack, and at different elevations). This application may include the measurement and characterization of air pollution plumes with the aim of identifying the source of the emissions. Information on the horizontal and vertical gradients could also be used to validate and improve the results of existing dispersion models.
- Emergency response: Wildfires, refinery accidents and other major facility incidences such as the recent fire at Port of LA, releases of air toxics, and other hazardous situations where accessibility for ground measurements to what is considered as the “hot zone” is typically prohibited. UAVs can augment current SCAQMD capabilities by providing faster and more refined temporal and spatial distribution of the plume during such incidences, all critical pieces of information in formulating prompt and appropriate alerts for the public. Off-shore platforms is yet another example of a source with limited accessibility where UAVs can be useful in monitoring emissions.
- Odor identification and monitoring: UAVs could be helpful in locating sources of odors in remote or inaccessible locations, such as off-shore. They can also be used to collect samples or provide real-time measurements during odor events.
- Perimeter/fence-line monitoring and video surveillance: Refineries, industrial complexes and other large facilities.
- Remote sensing: Recently, UAVs have been outfitted with spectral cameras with different bands, Light Detection and Ranging (LiDAR), and other spectroscopic instruments for monitoring gaseous pollutants over large areas.

The selection of sensors/instruments that can be mounted on a drone depends largely on its payload capacity, as well as the specific applications. Real time air monitoring data can be transmitted directly to the operator via telemetry and the exact UAV position can be recorded continuously using an on-board Global Positioning System (GPS). Also, autonomous modes can be flown with pre-programmed flight paths and waypoints to repetitively document environmental changes over time (Figure 3).

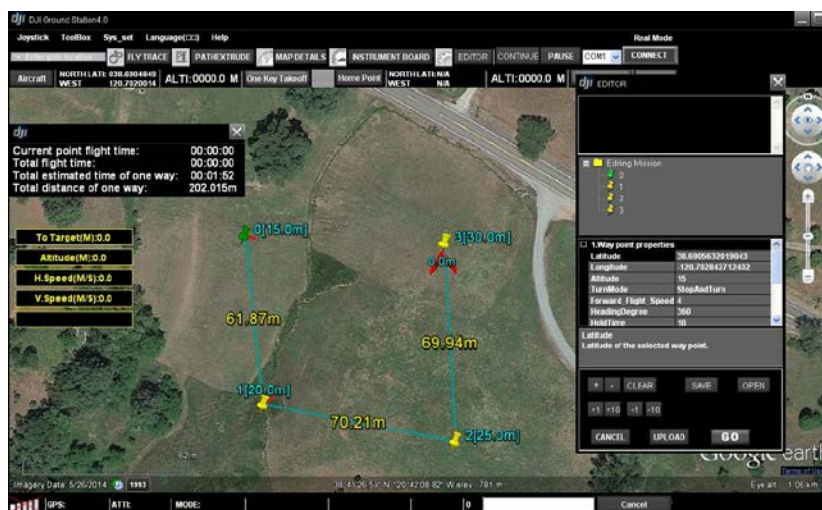


Figure 3 Example of a pre-programmed flight path for a multi-rotor UAV system (courtesy of T&B systems; Valencia, CA)

Past and Current Air Monitoring Studies

Due to restrictions imposed by the Federal Aviation Administration (FAA), the research of UAV applications in air quality monitoring has been limited. Watai et al. (2012) reported on the development of a non-dispersive infrared (NDIR) sensing system on a small UAV to monitor atmospheric CO₂ concentrations. The authors designed and built an economic and accurate gas sensor system (± 0.26 ppm precision) and performed several flight tests with a one hour flight autonomy and 3.5 kg payload. McGonigle, et al. (2008) reported the measurements of volcanic gases with a helicopter UAV at La Fossa crater, Volcano (Italy), using an ultraviolet and infrared spectrometer to measure SO₂ and CO₂ gas concentrations. This UAV had a 3 kg payload weight and 12 minutes flight autonomy. Khan, et al. (2012) developed a greenhouse gas analyzer using a vertical cavity surface emitting laser (VCSELs) embedded in a helicopter UAV. CO₂, CH₄ and water vapor were targeted by developing a sensing module for each targeted gas, with a vertical and horizontal resolution of less than 1 meter. Malaver et al. (2015) have recently developed a wireless sensor network and an UAV powered by solar energy to measure concentrations of CH₄ and CO₂ at ground and low aerial altitudes, simultaneously. Data collected during this study was transmitted in real time to a central node for analysis and 3D mapping of the target gas. T&B Systems, an environmental consulting firm that has locations in Valencia (CA) and Placerville (CA) has been collaborating with SCAQMD on several air monitoring activities. They have outfitted a commercially available multi-rotor UAV (i.e. quad-copter; Figure 4) with different types of low-cost sensors and other equipment to monitor particulate and gaseous samples in real time and collect integrated air samples. The use and capabilities of this particular system were presented during the Air Quality Sensor Workshop organized by SCAQMD on November 21, 2014. It should be noted that the California Air Response Planning Alliance (CARPA) is currently trying to get FAA approval to employ small UAVs for port and refinery monitoring.

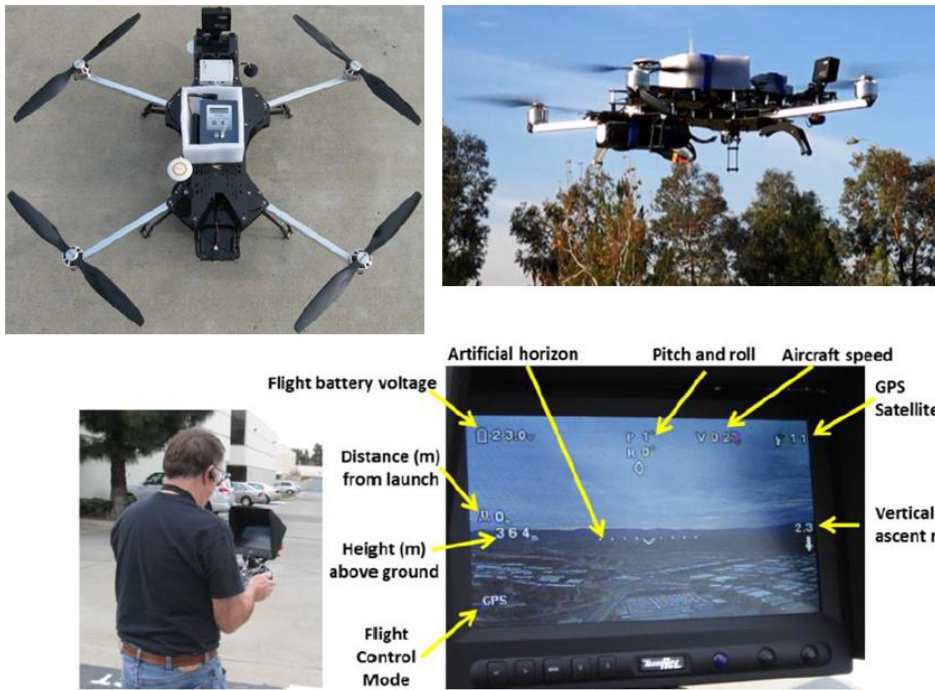


Figure 4 Commercially available multi-rotor UAV (i.e. quadcopter) outfitted with a UV photometric (Federal Equivalent Method; FEM) ozone analyzer. This unit is equipped with precise flight controls with first person view, display of flight parameters and air to ground telemetry of key data (courtesy of T&B Systems; Valencia, CA)

Limitations and Other Concerns

- **Payload capacity and flight time:** Small UAVs are usually battery powered, and power technology is the primary limiting factor in defining their payload capacity and flight time. Dramatic gains in both of these parameters have been achieved in the last several years.
- **Safety:** While work is underway, most drones cannot yet sense and avoid obstacles, making them a potential hazard to people and property. Safety, protection of property, and other similar issues must be addressed before UAVs can be fully integrated with available next generation air monitoring devices and used for routing air monitoring operations.
- **Radio frequency interference:** The radio frequency sensitivity of some electronic components can create flight issues, compromise the safe operation of UAVs, and interfere with the correct functioning of the sensors. Electronic shielding is often needed to minimize these unwanted effects.
- **Measurement instruments performance:** The performance of low-cost sensors is still uncharacterized in challenging environmental conditions (e.g. when temperature and pressure change rapidly and/or in the presence of strong winds). Results from our recently funded AQ-SPEC program will help identify sensors and sensor devices that are ideal for UAV integration and deployment.
- **Privacy:** Although new rules have recently been proposed by FAA to regulate the civilian and commercial use of small UAVs, it is clear that the rapidly expanding use of unmanned aircraft is already outpacing the regulations that govern them. As policy makers begin to contend with the advent of new UAV technologies, the paramount issues to be addressed are safety and privacy. In the United States today, only government

agencies, some public universities, and a handful of private companies hold the few hundred existing FAA permits to fly private drones for non-recreational purposes.

Regulatory Front - Federal Aviation Administration (FAA) draft rule

On Feb. 15, 2015, the FAA released its proposed rules for commercial drone operation that paves the way for commercial drone usage in the United States by 2017. The proposed rules are now open for a 60-day public comment period, which the FAA will take into account in formulating its final regulations. The proposed rules apply to the operation of small UAVs weighing 55 pounds or less for non-hobby or non-recreational purposes. The proposed rules do not affect recreational drone use, which is already permitted as long as users obey certain safety requirements. Once the final regulations are in place, governmental agencies, first responders and research institutions may continue to operate UAV technologies under FAA permits granted on a case by case basis known as “Certificate of Waiver or Authorization”, or they may avail themselves of the less restrictive commercial drone rules. The proposed rule establishes UAV operator requirements and operating limitations designed to minimize risks to other aircraft and people and property on the ground:

- A small UAV operator would have to be at least 17 years old, pass an aeronautical knowledge test and obtain an FAA UAV operator certificate. A small UAV operator would not need any further private pilot certifications.
- The small UAV must be operated within the line of site of the operator.
- A small UAV operator must avoid manned aircraft and, if there is a risk of collision with other aircraft, the UAV operator must be the first to maneuver away.
- The operator must discontinue the flight when continuing would pose a hazard to other aircraft, people or property.
- A small UAV operator must assess weather conditions, airspace restrictions and the location of people to lessen risks if he or she loses control of the UAV.
- A small UAV may not fly over people, except those directly involved with the flight.
- Flights should be limited to 500 feet altitude and no faster than 100 mph.
- Operators must stay out of airport flight paths and restricted airspace areas.

In conjunction with the release of the FAA’s proposed rules, the White House issued a memorandum setting forth guiding principles governing domestic drone usage by US federal agencies aimed at safeguarding privacy, civil rights and civil liberties, while leaving the US Department of Commerce to implement the specifics of such safeguards. As the White House memorandum relates only to privacy considerations for drone use by the federal government, it is up to each State to address how UAVs may or may not infringe on privacy rights and expectations.

Regulatory Front - State Response to UAVs

State legislatures across the country are debating if and how UAV technology should be regulated, taking into account the benefits of their use, privacy concerns and their potential economic impact. According to the National Conference of State Legislatures, by the end of 2014 20 states have enacted laws addressing UAV issues. Common issues addressed in the legislation include defining what a UAV or drone is, how they can be used by law enforcement or other state agencies, how they can be used by the general public, and regulations for their use

in hunting game. For its part, California has just begun to address the issue. On February 17, 2015, the Senate Judiciary Committee held its first oversight hearing regarding the use of unmanned drones. The hearing was intended as an initial discussion addressing four principle issues:

- How well is California prepared for the increasing prevalence of drones in our skies?
- When is the use of a drone appropriate and when does it become an invasion of privacy?
- How do we balance our right of privacy with technological innovation?
- How do we ensure that our legitimate concerns about privacy and civil liberties do not hamper innovations that benefit society?

So far this year, five bills related to UAV technologies have been introduced in the California Legislature and are pending their first hearing.

Conclusions

In recent years there have been significant advances in the technology, performance, and affordability of small commercially available UAVs. Although safety and privacy issues have still not been fully addressed by policy makers, the civilian and commercial UAV market in the United States is rapidly expanding and up to 30,000 UAVs could be in the Nation's skies by 2020. These systems provide a versatile sampling platform for a wide variety of environmental applications including air pollution monitoring. Currently, the commercial use of UAVs is limited by their relatively short flight time, their low carrying capacity, and other technical and FAA restriction issues. However, because of recent advances in low-cost sensor technologies and rapid changes in FAA regulations, the use of UAVs is likely to grow and these platforms will become viable tools to monitor air quality over large areas.

It is of paramount importance that federal, state and local authorities collaborate to establish a regulatory framework that strikes the right balance between privacy and civil right issues. This includes the right to harness the potential of UAV technology in a manner that will allow air quality agencies to explore the possibility of using drones to augment their air monitoring and emergency response capabilities.

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DRAFT

Use of Unmanned Aircraft Vehicles (UAVs) for Air Monitoring Applications

Special Legislative Committee Meeting
May 8, 2015

Laki T. Tisopulos, Ph.D., P.E.
Science & Technology Advancement

Background

- Unmanned Aerial Vehicles (UAVs; or drones)
 - Easy operation and fast deployment
 - Very nimble and versatile
 - Civilian, commercial, and governmental uses
- Rapid proliferation
 - Cumulative spending for civilian and commercial applications expected to reach ~\$12 billion by 2025
 - Civilian and commercial UAV market in the U.S. is rapidly expanding; up to 30,000 UAVs in the Nation's skies by 2020
- Integration with available "low-cost" sensors
 - Small UAVs can be used for air quality measurements
 - Potential to augment monitoring capabilities of air quality agencies



Background (continued)

- Small (civilian) UAV characteristics

- Type

- *Rotary-wing*: Vertical Take Off and Landing (VTOL), small payload, low cruising speeds, stable positioning
 - *Fixed wing*: require a runway to take-off/land, larger payloads, higher cruising speeds

- Flight range

- *Electric UAVs*: 15-30 min
 - *Gasoline UAVs*: up to 10 hours

- Flight altitude

- 300 to 1000 meters

- Cost

- From a few hundred dollars to over \$10,000



3

Air Monitoring Applications

- Meteorological measurements

- Temperature, relative humidity, pressure, and winds

- Continuous gas monitoring

- Ozone, nitrogen oxides, carbon monoxide, and others

- Integrated gaseous sampling

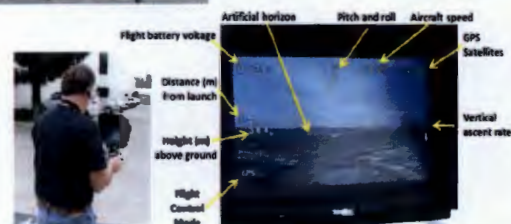
- Sorbent tubes and small canisters for VOC collection

- Particulate matter measurements

- Real-time and integrated sampling

- Horizontal / vertical gradient studies

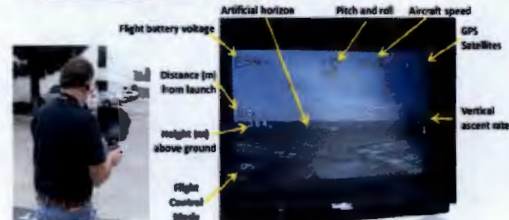
- Real-time measurements at different distances from emission source
 - Measurement and characterization of air pollution plumes



4

Air Monitoring Applications (continued)

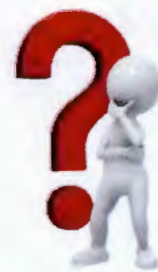
- Emergency response
 - Wildfires, refinery accidents and other hazardous situations
- Odor identification and monitoring
 - Locate odor source(s) in remote or inaccessible locations (e.g. off-shore)
 - Collect samples or provide real-time measurements during odor events
- Perimeter/fence-line monitoring and video surveillance
- Remote sensing
 - Outfit UAVs with spectroscopic instruments for monitoring gaseous pollutants over large areas



5

Limitations / Concerns

- Payload capacity and flight time
- Safety
- Radio frequency interference
- Measurement instruments performance
- Privacy



6

Regulatory Front

- FAA draft rule for commercial drone operation (Feb. 15, 2015)
 - Applies only to small UAVs (i.e. < 55 pounds)
 - Does not affect recreational use
 - Paves the way for commercial use by 2017
 - Establishes operator requirements and operating limitations
- White House memorandum (Feb. 15, 2015)
 - Establishes principles for drone use by federal government
 - Aimed at safeguarding privacy, civil rights and civil liberties
 - Each State to address how UAVs may infringe privacy rights and expectations
- State Regulations
 - Multiple regs enacted or in the process of being enacted
 - California Senate Judiciary Committee oversight hearing (Feb. 17, 2015)
 - Balancing privacy and technological innovation
 - How do we ensure that privacy concerns do not hamper innovations?



7

Why Should SCAQMD Be Interested In UAVs?

- Viable and affordable tools to monitor air quality over large areas
- Can greatly improve the effectiveness and usefulness of SCAQMD air monitoring programs
- Synergy between rapidly evolving UAV technology and the objectives of recent SCAQMD air monitoring initiatives
 - AQ-SPEC
 - Fence-line optical remote sensing program



8

Potential Path Forward

- Proceed cautiously
- Explore feasibility of deployment
 - Prioritize emergency response scenario
- Seek to partner with other agencies (e.g. fire department, police) or third party contractors
 - Piggyback on their UAV deployment plans/operational experience
 - Provide funding for A.Q. Instrumentation



ATTACHMENT 5A

Greenhouse Gas Related Legislation in 2015

Issue: What is the South Coast AQMD’s appropriate response to the over thirty still active greenhouse gas related bills?

Background:

EXISTING LAW AND FUNDING

Pursuant to the California Global Warming Solutions Act of 2006, the Air Resources Board (ARB) was required to adopt a statewide greenhouse gas (GHG) emissions limit regulations that achieve 1990 emissions levels by 2020 through the maximum technologically feasible and cost-effective GHG emission reductions. The Act further authorizes ARB to permit the use of market-based compliance mechanisms to comply with GHG reduction regulations. Accordingly, ARB established a cap-and-trade program that places a “cap” on aggregate GHG emissions from large emitters and allocates a certain number of allowances equal to the cap. Large emitters must obtain an allowance for each ton of carbon dioxide equivalent emitted. A portion of the allowances are auctioned by the state and the auction revenues are deposited into the Greenhouse Gas Reduction Fund (GGRF) and are available for appropriation by the Legislature to fund various programs intended to reduce GHG emissions.

The Governor’s proposed budget for 2015-16 assumes the receipt of \$1 billion in state revenue from cap-and-trade auctions and reflects the 2014-2015 Budget agreement. The Governor’s proposal continuously appropriates 35% of cap-and-trade funds for investments in transit, affordable housing, and sustainable communities. The next 25% of revenues are continuously appropriated to the state’s high speed rail project. The remaining 40% will be appropriated annually by the Legislature for investments in programs that include low-carbon transportation, energy efficiency and renewable energy, and natural resources and waste diversion.

SB 535 (De León, 2012), further requires that 25% of GGRF revenues fund projects that benefit disadvantaged communities with at least 10% of GGRF revenues to be expended directly within those communities.

Although the Governor’s proposed budget assumes only \$1 billion in state revenue from cap-and trade auctions, the Legislative Analyst’s Office estimates that the actual revenue may exceed \$2.3 billion. To the extent revenues exceed the amount assumed in the budget, those programs that are continuously appropriated specified percentages of auction revenue would receive significantly more funding in 2015-16 than is identified in the Governor’s budget. The rest of the additional revenue would be available to be allocated by the Legislature in the budget or future years based on its priorities.

PROPOSED GHG RELATED LEGISLATION IN 2015

As of May 1, 2015, there were over 30 still active competing bills proposing modifications to how the Global Warming Solutions Act of 2006 is implemented or how funds deposited in the GGRF are

expended. Many of those bills are moving along with only minor amendments to date. The expectation is that the bills in this policy area in particular will be amended more substantially as they move through their respective second chamber. The policy objectives reflected in those bills range from establishing greater transparency in how those funds are expended, to focusing a greater portion of the funding to economically disadvantaged communities, to securing greater funding from the GGRF to a variety of different programs and priorities. The attached list of current bills reflects the more substantive legislative proposals that are still moving through the legislative process.

BOARD MEMBER JUDITH MITCHELL APRIL 2015 TRIP TO SACRAMENTO

On April 21 and 22, Board Member and Legislative Committee Chair Judith Mitchell met with a variety of state legislators in Sacramento. During her discussions with legislators, Chair Mitchell emphasized our priority in relation to the various greenhouse gas related bills: to optimize the benefit to the state from its GGRF investments by prioritizing those projects and grant opportunities that maximize criteria pollutant and toxic emissions reduction co-benefits. Most of the legislators were receptive to the comments and some agreed to carry our message, but they all made the following observations and recommendations:

- Given the limited state resources and the multitude of challenges the state faces, our focus on maximizing the benefit to the state from its existing planned investments (rather than diverting funds from other categories) is the optimal message to deliver.
- With few exceptions, all the contending GHG related bills will be resolved through the appropriations and budget processes.
- For our priority to be reflected in the resulting greenhouse gas legislation actually passed this year, the Agency should also seek budget language to be included in this year's budget agreement or related trailer bills.

Policy Framework:

Many of the bills have merit, but there are over 30 contending bills impacting how GGRF moneys will be expended. It is anticipated that the first significant narrowing of the bills will occur in the appropriations process that will culminate in the Appropriation Committees' Suspense Hearings scheduled at the end of May. As the surviving bills move through their respective second chamber, SCAQMD will wish to affirm its principal objective in regards to greenhouse gases - GGRF expenditures should maximize criteria pollutant and toxic emissions reduction co-benefits.

Consequently, staff will return to the Legislative Committee in June and present the priority GHG related bills for a SCAQMD position. On a parallel track, consistent with standing Board policy and with the specific recommendations made by the legislators, staff will also present for approval specific budget language and related materials to be used in communicating this Agency's priority message to legislative leadership regarding criteria pollutant and toxic emission reduction co-benefits so that SCAQMD's priorities are reflected in the 2015-2016 state budget agreement.

ATTACHMENT 5B

Select 2015 Legislation Related to AB 32 Implementation¹

(Still active and without SCAQMD position as of May 1, 2015)

Proposals Impacting Expenditures from the Greenhouse Gas Reduction Fund (GGRF)

[AB 450 \(McCarty\)](#) **Greenhouse gas: energy efficiency: financing.**

Would authorize the use of the moneys in the Greenhouse Gas Reduction Fund to provide funding for the implementation of the PACE Reserve program.

[AB 590 \(Dahle\)](#) **Greenhouse Gas Reduction Fund.**

Would create the Biomass State Cost Share Account within the Greenhouse Gas Reduction Fund to provide funding to maintain the current level of biomass power generation in the state and revitalize currently idle facilities in strategically located regions.

[AB 678 \(O'Donnell\)](#) **Greenhouse gases: Energy Efficient Ports Program.**

Would require the State Air Resources Board to develop and implement the Energy Efficient Ports Program to fund energy efficiency upgrades and investments at public ports.

[AB 857 \(Perea\)](#) **California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology**

Program. Would revise the Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program to require the greater of 50% or \$100 million of the GGRF funds appropriated between January 2, 2018 and January 1, 2023 for development of a broad range of medium- and heavy-duty truck technology be allocated instead to support commercial deployment of existing heavy-duty (>26,000 lbs GVWR) truck technology that meets specified low oxides of nitrogen (low NOx) emission standards.

[AB 1030 \(Ridley-Thomas\)](#) **California Global Warming Solutions Act of 2006: Greenhouse Gas**

Reduction Fund. Would require a state agency that allocates moneys from the Greenhouse Gas Reduction Fund to prioritize projects that include project labor agreements with targeted hire goals, community workforce agreements that connect local residents to jobs or training opportunities, or partnerships with training entities that have a proven track record of placing disadvantaged workers in career-track jobs.

[AB 1336 \(Salas\)](#) **California Global Warming Solutions Act of 2006: disadvantaged communities.**

Would require a minimum of 40% of the available moneys in the GHGRF to be allocated to projects that provide benefits to disadvantaged communities.

[SB 189 \(Hueso\)](#) **Clean Energy and Low-Carbon Economic and Jobs Growth Blue Ribbon**

Committee. Would create the Clean Energy and Low-Carbon Economic and Jobs Growth Blue Ribbon Committee. The bill would set the terms and qualifications of committee members and would require the committee to advise state agencies on the most effective ways to expend clean energy and GHG-related funds and implement policies in order to maximize California's economic and employment benefits.

¹ For additional information on a bill or author, please click on the respective underlined link.

SB 231 (Gaines) Transportation programs.

Would include water-borne transit as an eligible project that may be funded under the Low Carbon Transit Operations Program and the Affordable Housing and Sustainable Communities Program, which receive 5% and 20% respectively of the annual proceeds in the Greenhouse Gas Reduction Fund.

SB 367 (Wolk) Agricultural lands: greenhouse gases.

Would appropriate \$50 million from the GGRF to the California Department of Food and Agriculture to establish a new grant program that supports on-farm practices that reduce greenhouse gas emissions and increase carbon storage in soil and woody biomass.

SB 398 (Leyva) Green Assistance Program.

Would establish the Green Assistance Program, to be administered by the Secretary for Environmental Protection, which would provide technical assistance to small businesses, small nonprofits, and disadvantaged communities in applying for moneys from the Greenhouse Gas Reduction Fund.

SB 400 (Lara) California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction

Fund. Would require the High-Speed Rail Authority to allocate not less than 25% of the moneys appropriated to the authority from the Greenhouse Gas Reduction Fund to environmental mitigation measures and projects that reduce greenhouse gas emissions from transportation sources and provide a cobenefit of improving air quality. The bill would give priority to measures and projects located in areas designated as extreme nonattainment.

SB 698 (Cannella) Active Transportation Program: school zone safety projects.

Would continuously appropriate an unspecified amount from the Greenhouse Gas Reduction Fund to the State Highway Account in the State Transportation Fund for purposes of funding school zone safety projects within the Active Transportation Program.

SB 706 (Pavley) Greenhouse Gas Reduction Fund: alternative fuels.

Would authorize the use of moneys in the Greenhouse Gas Reduction Fund to encourage the in-state production of alternative fuels with low carbon intensity from new and existing facilities using sustainable feedstocks.

SB 760 (Mendoza) Disadvantaged Community Enhancement Act of 2015.

Would require the Strategic Growth Council to develop and implement the Disadvantaged Community Enhancement Program to award grants to disadvantaged communities to facilitate projects for community enhancement improvements that reduce greenhouse gas emissions in furtherance of the goals of the California Global Warming Solutions Act of 2006 and that provide to eligible applicants multiple environmental benefits. The bill would authorize the council to expend moneys in the fund to implement the program. The bill would require the State Air Resources Board to determine a methodology for quantifying carbon reduction benefits of proposed projects and community enhancement improvements.

Other Proposals for Programmatic Modifications

AB 21 (Perea) California Global Warming Solutions Act of 2006: emissions limit: scoping plan.

Would require the State Air Resources Board, no later than January 1, 2018, to recommend to the Governor and the Legislature a specific target of statewide emissions reductions for 2030 to be accomplished in a cost-effective manner.

AB 23 (Patterson) California Global Warming Solutions Act of 2006: market-based compliance mechanisms: exemption. Would exempt distributors of fuels, including gasoline, diesel and natural gas, and any other entities that were not covered on January 1, 2013, from the cap-and-trade regulation adopted by the Air Resources Board (ARB).

AB 33 (Quirk) California Global Warming Solutions Act of 2006: Climate Change Advisory Council. Establishes the Climate Change Advisory Council (Council) to make recommendations to the Air Resources Board (ARB) regarding various greenhouse gas (GHG) emission reduction strategies, including grid integration, building efficiency, and advanced transportation.

AB 720 (Cooley) California Global Warming Solutions Act of 2006: market-based compliance mechanisms. Would require the State Air Resources Board, for any market-based compliance mechanism that the state board might adopt, to allow participating entities to freely sell or transfer greenhouse gas emissions allowances held in a holding account, as defined, or compliance account, as defined, except for allowances that have been expressly retired to meet a compliance obligation, as defined.

AB 779 (Garcia, Cristina) Environmental quality: transit priority areas.

Would delay the effective date of revised California Environmental Quality Act (CEQA) guidelines to establish criteria for determining the significance of transportation impacts of projects within transit priority areas that, among other things, promote the reduction of greenhouse gas emissions, until July 1, 2017.

AB 1179 (Rendon) California Global Warming Solutions Act of 2006: disadvantaged communities: report. Would require the State Air Resources Board to prepare, and post on its Internet Web site, a specified report on the projects funded to benefit disadvantaged communities.

AB 1288 (Atkins) California Global Warming Solutions Act of 2006: regulations.

Would eliminate the December 31, 2020 sunset on the Air Resources Board's authority to use market-based compliance systems to implement the California Global Warming Solutions Act.

AB 1332 (Quirk) California Global Warming Solutions Act of 2006: offsets.

Would require the State Air Resources Board, as part of a market-based compliance mechanism, to create an offset protocol for renewable energy projects that are able to ramp up or down during peak energy demands.

AB 1345 (Dahle) California Global Warming Solutions Act of 2006: wildfires.

Would require the state board to develop, no later than January 1, 2017, an emissions baseline for wildfires by calculating the average of the annual greenhouse gas emissions associated with wildfires between the years 1990 and 2015, inclusive.

SB 1 (Gaines) California Global Warming Solutions Act of 2006: market-based compliance mechanisms: exemption. Would exempt distributors of fuels, including gasoline, diesel and natural gas, and any other entities that were not covered on January 1, 2013, from the cap-and-trade regulation adopted by the Air Resources Board (ARB).

SB 5 (Vidak) California Global Warming Solutions Act of 2006: market-based compliance mechanisms: exemption. Would exempt distributors of fuels, including gasoline, diesel and natural gas, and any other entities that were not covered on January 1, 2013, from the cap-and-trade regulation adopted by the Air Resources Board (ARB).

SB 180 (Jackson) Electricity: emissions of greenhouse gases. Would, on July 1, 2017, replace the greenhouse gases emission performance standards for baseload generation with greenhouse gases emission performance standards for nonpeaking generation and peaking generation. The bill would require the Public Utilities Commission, by June 30, 2017, in consultation with the State Energy Resources Conservation and Development Commission and the State Air Resources Board, to establish a greenhouse gases emission performance standard for all nonpeaking generation of load-serving entities, and a separate standard for peaking generation.

SB 207 (Wieckowski) California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund. Would require that the report that a state agency creates prior to the expenditure of moneys from the Greenhouse Gas Reduction Fund, that includes a description of the expenditure proposed to be made and a description of how the proposed expenditure will contribute to achieving and maintaining greenhouse gas emissions reductions, be posted on the Internet Web sites of the state agency and the State Air Resources Board prior to the expenditure of those moneys.

SB 246 (Wieckowski) Climate Action Team. Would create the Climate Action Team, under the direction of the Secretary for Environmental Protection. Would require the team to be responsible for coordinating the state's climate policy to achieve the state's climate change goals, and would require the team, no later than January 1, 2019, and every 5 years thereafter, to update the Climate Adaptation Strategy and the Safeguarding California Plan.

SB 471 (Pavley) Water, energy, and reduction of greenhouse gas emissions: planning. Would require the State Air Resources Board to develop an inventory of greenhouse gas emissions from the water system in the state, using best available data. The bill would provide that water recycling, wastewater treatment, water end-use efficiency, water technology improvements, best management practices, and other projects that reduce water system greenhouse gas emissions are eligible for funding from the Greenhouse Gas Reduction Fund.

ATTACHMENT 6

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

LEGISLATIVE REPORT FROM HOME RULE ADVISORY GROUP MEETING OF APRIL 15, 2015

HRAG members present:

Dr. Joseph Lyou, Chairman

Elaine Chang, SCAQMD

Elizabeth Adams, EPA (participated by phone)

Curt Coleman, Southern California Air Quality Alliance

Jaclyn Ferlita, Air Quality Consultants

Chris Gallenstein, CARB (participated by phone)

Bill LaMarr, California Small Business Alliance

Rongsheng Luo, SCAG (participated by phone)

Art Montez, AMA International

Diane Moss, Renewables 100 Policy Institute (participated by phone-SCAG)

Bill Quinn, CCEEB (participated by phone)

Terry Roberts, American Lung Association of California

David Rothbart, Los Angeles County Sanitation Districts

Larry Rubio, Riverside Transit Agency (participated by phone)

Larry Smith, Riverside Cement

TyRon Turner, We Care About You

Lee Wallace, So Cal Gas and SDG&E

Mike Wang, WSPA

Others: Mark Abramowitz (Board Consultant to Dr. Lyou); Earl Elrod (Board Consultant to Mayor Yates); Daniel McGivney (SoCalGas/SDG&E); Kris Flaig (City of Los Angeles); Sue Gornick (WSPA); Rita Loof (Radtech); and Susan Stark (Tesoro).

AQMD Staff: Philip Crabbe, Amir Dejbakhsh, Phil Fine, Bill Wong, and Marilyn Traynor

LEGISLATIVE UPDATE

Philip Crabbe reported on the following items that were discussed at the Legislative Committee meeting on April 10, 2015:

Federal

Congress will most likely act before May 31 to approve a short-term extension of the MAP-21 transportation reauthorization bill. The exact length of the extension is still undecided. U.S. EPA recently announced its awards for the 2014 Diesel Emission Reduction Act (DERA) Program, which included \$753,476 for SCAQMD's project to replace 11 on-road drayage trucks, replace nine school buses with CNG, and replace one school bus with a battery-electric vehicle. In the last week of March, the U.S. Senate passed its budget resolution which sets the overall spending caps for appropriations bills, but does not create new spending authority. This will allow for reconciliation instructions which only require 51 votes in the Senate—in theory, the Republicans could

use this for spending attacks on other controversial issues. A budget resolution binds Congress but is not a law. The House and Senate bills are now being conferenced. In late March, the Senate passed a slimmed down version of the Energy Efficiency Improvement Act, S. 535 (Portman-Shaheen) that has failed to pass the Senate the past four years, for reasons unrelated to the actual bill. The bill that passed covers buildings and grid-enabled water heaters. The larger bill, S.720, also includes industrial efficiency. At the end of April, the Senate Energy Committee is scheduled to hold a hearing on S.720 as well as S.703 (covering housing energy efficiency and weatherization) and S.858 (covering energy efficiency in federal buildings). Last month the U.S. House Energy and Water Appropriations Committee held a hearing on the U.S. Department of Energy (DoE) budget. At SCAQMD's request, Congresswoman Lucille Roybal-Allard, who is on that committee, raised questions to the Assistant Secretary overseeing the zero emissions goods movement grant program to ensure that the DoE is pressing to continue that program.

State

The state legislature recently returned from their legislative spring break. Committee hearings are in full swing with over 2,000 bills introduced this year. There are four main issues that the state legislature is currently focused on: the drought, climate change, renewable energy, and the state budget. Governor Jerry Brown recently signed two bills that fast-tracked about \$1 billion for local drought relief and infrastructure projects. The Governor also issued an executive order that initiated the first ever mandatory water reduction effort throughout the state. The state's revenues are up and will continue to grow over the next few months. Normally, this means more resources for the state budget; however, for this year, this is causing significant problems to the budget due to the Proposition 98 minimum funding guarantee. New revenues have boosted the guarantee to an almost dollar for dollar level this year. When the Prop. 98 requirements are combined with the rainy day fund requirements of Prop. 2 that were recently passed, along with local government mandates that are required to be paid back under last year's budget, there are not enough revenues to cover all the costs.

Energy and climate change are big topics this year in Sacramento. SB 350 (authored by Senate Pro Tem Kevin de León) was passed recently by an 8-3 vote in the Senate Energy Committee. SB 350 would by 2030 increase the renewable energy portfolio to 50%, reduce petroleum use by 50%, and double energy efficiency in existing buildings. The bill is largely supported by environmentalists and energy companies, but also has support from other stakeholders including those from the labor and health sectors, as well as Warren Buffet's Berkshire Hathaway, Inc. Opposition includes the oil companies, chambers of commerce, and manufacturers. SB 350 will now move on to its second policy committee, the Senate Environmental Quality Committee, in the coming weeks.

The state has been holding cap and trade auctions of greenhouse gas emission credits. The Governor’s budget estimated that about \$1 billion in revenue would be generated from these auctions that would need to be spent on programs that reduce carbon. However there is an expectation that there may actually be about \$2 billion in revenue being generated and that the Governor may revise his estimates in his May Revise Budget. Consequently, legislators are jockeying to possibly influence how these potentially increased revenues are spent.

The Governor’s budget proposed to spend \$200 million for zero and near-zero emission vehicles. The legislature is looking to significantly increase this funding to \$350 million, given the potential doubling of cap and trade revenue.

The following bills were discussed:

Bill	Recommended Position
H.R. 1308 (Lowenthal) Economy in Motion: The National Multimodal and Sustainable Freight Infrastructure Act	Support
SB 513 (Beall) Carl Moyer Memorial Air Quality Standards Attainment Program	Support
SB 350 (De León and Leno) Clean Energy and Pollution Reduction Act of 2015	Actively Monitor

Discussion

Mr. Montez asked if there are any current bills that may provide energy efficiency funding to schools. Dr. Lyou suggested that there are some bills related to Proposition 39 (The California Clean Energy Jobs Act) and other bills that may be a source of funding for energy efficiency in schools.

[↑ Back to Agenda](#)

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 21

REPORT: Mobile Source Committee

SYNOPSIS: The Mobile Source Committee met on Friday, May 15, 2015. Following is a summary of that meeting. The next Mobile Source Committee meeting is scheduled for Friday, June 19, 2015 at 9:00 a.m.

RECOMMENDED ACTION:
Receive and file.

Dr. Clark E. Parker, Sr., Chair
Mobile Source Committee

EC: PMF: afm

Attendance

Committee Chair Dr. Clark E. Parker, Sr. attended via teleconference; Committee Members Ben Benoit and Judith Mitchell attended via videoconference. Dr. Parker called the meeting to order at 9:05 a.m.

The following items were presented.

ACTION ITEM:

1) Withdrawal of South Coast Air Basin Transportation Conformity SIP Submittals

Mr. Joe Cassmassi, Planning and Rules Director, provided a brief summary of the proposed request to CARB to withdraw the outdated Transportation Conformity SIP and associated interagency Memorandum of Understanding (MOU) between the SCAQMD, the local transportation agencies and SCAG from the California State Implementation Plan. The SCAQMD Transportation Conformity Plan was last amended by the Board in 1998 and then forwarded to CARB to submit to U.S. EPA as part of the California SIP. The plan was submitted to U.S. EPA but was not acted upon and has since become obsolete, not addressing the current conformity regulations and appropriate air contaminants. U.S. EPA has stated that the SIP is un-approvable in its current form. Discussions between CARB, U.S. EPA and

SCAQMD staff concurred that the appropriate approach to the issue would be to withdraw the submittal. Staff will evaluate amending Rule 1902, which defines the Transportation Conformity Plan commitment and associated MOU.

Dr. Parker asked for a brief summary of Rule 1902 and how it would affect the SIP. Mr. Cassmassi responded that only the SCAQMD's Transportation Conformity Plan submittal would be impacted. Chief Deputy Counsel Barbara Baird added that without the SIP the SCAQMD would continue to be covered under the federal transportation conformity rule and that SCAG and U.S. EPA would be able to make conformity findings under that rule.

Councilmember Mitchell asked why the Transportation Conformity SIP was not acted on in a timely manner by U.S. EPA. Mr. Cassmassi pointed out that the last amendment to Rule 1902 was in 1998, and Ms. Baird added that federal changes to the program as well as PM2.5 replacing PM10 as the focus of particulate pollution may have contributed to the delay in review. Dr. Parker also asked if long delays in rule and plan reviews by U.S. EPA occurred elsewhere. Mr. Cassmassi noted that prior to amending Rule 701 several years ago, the prior rule language had not been evaluated for more than 10 years under similar circumstances where the California air pollution episodes program was in place.

Moved by Mitchell; seconded by Benoit; unanimously approved.

INFORMATIONAL ITEMS:

2) Update on the 2016 AQMP Emissions Inventory and Modeling

Mr. Joe Cassmassi provided an update on the emissions inventory and ongoing regional modeling analyses conducted by staff as part of the development of the 2016 Air Quality Management Plan (AQMP). Mr. Cassmassi described the extent of computation needed to develop an ozone isopleth diagram, which is used to determine the air basin's emissions carrying capacity. He outlined the emissions and modeling platforms that will impact the 2031 Basin ozone carrying capacity. The first element that was discussed was the update to the 2012 baseline emissions and initial growth estimate provided by CARB's EMFAC emissions model and SCAG's transportation and demographics analyses. In general, the 2012 base year emissions are in-line with the projections made for 2012 from the previous AQMP. NOx and VOC emissions were projected to be reduced while SOx and PM2.5 varied marginally. Ammonia emissions were expected to increase; however, the final totals were still being evaluated. Mr. Cassmassi also described the SCAQMD's move to use real-time traffic data in the modeling emissions inventory for the simulations.

Mr. Cassmassi discussed the revisions to the meteorological, chemical and dispersion modeling software and their expected impact on the future attainment

analyses. The revisions to the modeling components represent the state-of-the-art in air quality modeling. He pointed out that staff are awaiting updates from CARB to the boundary conditions that provide estimates of long range pollutant transport. The most notable change to the modeling platform comes from U.S. EPA's revisions to the relative response function calculation that is used to scale the modeling attainment demonstrations. The revised RRF procedure focuses on the top ten highest concentration simulation days where the impact of emissions reductions are most responsive. Also, the analysis will benefit from the improvement in the most current air quality design value concentrations.

Overall, the changes to the modeling system may result in a higher VOC and/or NOx carrying capacity. Further simulation analyses and emissions control scenarios will be conducted to develop preliminary carrying capacities for both ozone and PM2.5 attainment in future years.

3) Report on 2016 AQMP Off-Road Equipment White Paper Development

Mr. Henry Hogo, Assistant Deputy Executive Officer/Science & Technology Advancement, provided an update on the development of the Off-Road Equipment White Paper, which is one of the ten white papers designed to inform the 2016 AQMP. The white papers will provide factual background information and discuss major policy issues to help frame the discussions on the development of the 2016 AQMP. A working group comprising members from the 2016 AQMP Advisory Group and other interested parties, was formed to provide input and comments on the development of this white paper. To-date, there have been three meetings of the working group.

An outline for the white paper was presented to the working group for input and comments. Mr. Hogo provided an overview of the history of regulatory programs and strategies that have led to emission reductions in the off-road equipment categories including current CARB regulations that apply to almost all of the various off-road emissions source categories. Mr. Hogo discussed the development of two emission reduction scenarios to illustrate the need to further reduce emissions in this sector to attain the ozone air quality standards. Further emission reductions will require advancement of technologies that have a zero- or near-zero emissions level. Many of the smaller equipment have commercially available products that are zero-emissions or operate on alternative fuels. In addition, there is a need to establish new exhaust emission standards significantly below current levels.

Mr. Hogo provided a summary of the initial assessment based on the emission reduction scenarios. Some emission sources may not be able to reach the "equal share" level. As such, there is a need for other sources to further reduce their emissions. There is the potential for sources to go beyond the "equal share" level with greater penetration of zero- and near-zero emission technologies. Therefore,

there is a need to accelerate commercialization and deployment of zero- and near-zero emission technologies. In addition to greater advanced technology deployment, operational strategies that are being implemented for fuel savings have the potential to provide additional emission reductions.

Mr. Hogo concluded with next steps in the white paper development process. Staff is drafting the early chapters of the documents and will release them to the working group for their comments in the next couple of weeks.

Dr. Parker asked whether staff has analyzed how the overall emission reduction target will be achieved given that not all sources will be able to reach their equal share reduction and what staff believes will most likely occur. Mr. Hogo indicated that the specific analysis of control strategies for each of the emission source categories will be done as part of the 2016 AQMP development, and that several of the emissions categories have commercially available zero-emission technologies; he provided examples for each of the source categories. For larger equipment such as construction and mining equipment, the operators indicated that they need more time to recoup their investments in newer equipment since the equipment have longer useful lives. As such, programs such as the SOON program, along with new emission standards that U.S. EPA can establish, can help accelerate the development of new engines that are cleaner than current emission standards and accelerate the acquisition of the cleaner equipment by offsetting the capital cost for the equipment.

WRITTEN REPORTS:

4) Rule 2202 Activity Report

The report was received as submitted.

5) Monthly Report on Environmental Justice Initiatives – CEQA Document Commenting Update

The report was received as submitted.

OTHER BUSINESS:

None

PUBLIC COMMENT:

None

The meeting was adjourned at 10:03 a.m.

Attachment

Attendance Roster

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MOBILE SOURCE COMMITTEE MEETING
Attendance Roster- May 15, 2015**

NAME	AFFILIATION
Dr. Clark E. Parker, Sr.	SCAQMD Governing Board (<i>via teleconference</i>)
Mayor Ben Benoit	SCAQMD Governing Board (<i>via videoconference</i>)
Councilmember Judith Mitchell	SCAQMD Governing Board (<i>via videoconference</i>)
Board Consultant Chung Liu	SCAQMD Governing Board (Mitchell)
Curtis Coleman	SoCal Air Quality Alliance
Angela Driscoll	Cal CIMA
Sue Gornick	WSPA
David Rothbart	Los Angeles County Sanitation Districts
Susan Stark	Tesoro
Christine Truong	LADWP
Lee Wallace	SoCal Gas
Philip Fine	SCAQMD Staff
Barbara Baird	SCAQMD Staff
Kurt Wiese	SCAQMD Staff
Matt Miyasato	SCAQMD Staff
Henry Hogo	SCAQMD Staff
Laki Tisopulos	SCAQMD Staff
Joe Cassmassi	SCAQMD Staff
Adewale Oshinuga	SCAQMD Staff
Richard Carlson	SCAQMD Staff
Tina Cox	SCAQMD Staff
Carol Gomez	SCAQMD Staff
Tracy Goss	SCAQMD Staff
Bayron Gilchrist	SCAQMD Staff
Sang-Mi Lee	SCAQMD Staff
Ian MacMillan	SCAQMD Staff
Chris Marlia	SCAQMD Staff
Randall Pasek	SCAQMD Staff
Kim White	SCAQMD Staff
Patti Whiting	SCAQMD Staff

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 22

REPORT: Stationary Source Committee

SYNOPSIS: The Stationary Source Committee met Friday, May 15, 2015. Following is a summary of that meeting.

RECOMMENDED ACTION:
Receive and file.

Dennis Yates, Chair
Stationary Source Committee

MN:am

Attendance

The meeting began at 10:30 a.m. In attendance at SCAQMD Headquarters was Committee Chair Dennis Yates. Committee Members Ben Benoit and Judith Mitchell attended via videoconference. Absent were Committee Members Dr. Joseph Lyou and Shawn Nelson.

INFORMATIONAL ITEMS

1. Rule 1156 – Further Reductions of Particulate Emissions from Cement Manufacturing Facilities

Ms. Jill Whynot, Assistant Deputy Executive Officer of Planning and Rules, gave the staff presentation. Emphasis was placed on consideration of updating the fence-line hexavalent chromium risk limit in the rule to reflect new Office of Environmental Health Hazard Assessment (OEHHA) guidelines, and that staff will continue to work with the facilities that are subject to this rule. Staff will conduct an additional public workshop in June and will extend the comment period to early July. A Public Hearing is presently scheduled for September 4, 2015. There were no Committee or public comments.

2. Update on Rules 1401 & 1402

Ms. Susan Nakamura, Director of Strategic Initiatives, provided an update to the previous April 17, 2015 Stationary Source Committee briefing on the proposed amendments to Rule 212 – Standards for Approving Permits and Issuing Public Notice, Rule 1401 – New Source Review of Toxic Air Contaminants, Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools, and 1402 – Control of Toxic Air Contaminants from Existing Sources. The proposed amendments will revise definitions and risk assessment procedures to implement the new OEHHA Guidelines regarding how health risks are calculated. The Socioeconomic Assessment has been revised to reflect costs for preparing Health Risk Assessments and public notification under Proposed Amended Rule 1402 which implements AB 2588.

During the public comment period, Mr. David Rothbart, Southern California Alliance of Publicly Owned Treatment Works, thanked staff for continuing to work closely with his organization but noted that there may be timing issues with the rule development schedule if additional changes are made. He added that CARB will be releasing their proposed Risk Management Guidelines in May for adoption by their Board in July, using the new OEHHA Guidelines. Mr. Joseph Hower, Environ, suggested that the Board consider higher risk thresholds and stated that facilities do not wish to have the Revised OEHHA Guidelines apply to already submitted HRAs. He also expressed concerns that if SCAQMD prepares the HRAs, the businesses will be faced with much shorter deadlines for public notification and risk reductions. Mayor Yates asked if it is mandatory for SCAQMD to follow the OEHHA guidelines. Mr. Kurt Wiese, General Counsel, responded that we must use the OEHHA Guidelines for HRAs according to SCAQMD rules.

3. Rule 1420.2 – Emissions Standard for Lead from Metal Melting Operations

Ms. Nakamura presented Proposed Rule 1420.2 – Emission Standards for Lead from Metal Melting Facilities. She indicated that the proposed rule would apply to over a dozen facilities, mostly metal melting operations, and is scheduled for the July Board Hearing. During the public comment period, Mr. Mark Olson, Vice President/General Manager of Gerdau/Tamco (Rancho Cucamonga), commented that their facility provides a vital service by recycling over 400,000 tons of scrap metal that would otherwise be shipped outside of California, in order to produce rebar for important infrastructure projects. He stated that Gerdau has worked with SCAQMD staff to ensure compliance with all regulatory requirements, invested nearly \$7 million since 2010 to ensure compliance and improve emission reductions, and that the facility has approved SCAQMD permits to install a \$37 million state-of-the-art control system that would meet the NAAQS and the proposed 0.100 µg/m³ of PR 1420.2. Mr. Olson stated that these efforts should be included in the draft staff report. Mr. Olson further stated that the rule language as currently drafted would require additional controls resulting in \$10-\$15 million in capital costs and an

increase in operational cost of \$2-3 million without reducing emissions in any measurable way, and would result in the closure of the facility and the loss of hundreds of jobs.

Ms. Jocelyn Thompson, Legal Partner at Alston and Bird (representing Gerdau/Tamco) also stated that there are three (3) areas in the rule language as currently written that are problematic. First, she stated that the proposed rule would require 99% control efficiency of all lead point sources. She stated that this is technologically infeasible for sources with very low inlet concentrations, and spending a substantial amount of money to control such low emissions would have no measurable impact to the impacted community. Second, she questioned the prudence of requirements for total enclosure of the slag. Ms. Thompson stated that the slag at Gerdau/Tamco has concentrations of lead that are comparable to those found in natural soils based on University of California testing. Third, she is also concerned about housekeeping such as roof washing due to high cost and worker safety without any measurable impact to protect public health. She further stated that the facility is prepared to spend a lot of money, but does not want it to be spent on things that have no measurable benefit. Councilmember Mitchell requested that staff respond to Gerdau/Tamco comments. Ms. Nakamura stated that staff is aware of all of the issues Gerdau/Tamco brought forward and that staff has been working on these issues with the facility. She stated that staff is working on a requirement to address small sources of lead given specific criteria. She also stated that staff has been talking with Gerdau/Tamco regarding the slag, and that staff is looking into things that could be done and possibly looking at concentrations in the slag that would trigger the need for some type of enclosure. She further added that staff is looking to taper off some of the housekeeping measures which may show up instead in the compliance plan.

Councilmember Mitchell requested that staff keep working with Gerdau/Tamco and asked if there are other companies in a similar situation. Ms. Nakamura stated that it was the first time that staff had heard that the restructured proposed rule would force Gerdau/Tamco to close, and that the restructured rule does not require a point source limit that would necessarily require additional controls. Ms. Nakamura stated that comments received from facilities in the metals coalition were very close in terms of the rule approach and that the Battery Council International are opposed to the rule because of the 0.100 $\mu\text{g}/\text{m}^3$ and concerned with the precedent it would set for the nation. Mayor Yates asked about storm water runoff with lead and if the SCAQMD addresses that issue. Deputy Executive Officer Mohsen Nazemi clarified that runoff is addressed by the sanitation districts as part of their discharge permit.

WRITTEN REPORTS

All written reports were acknowledged by the Committee.

PUBLIC COMMENTS

There were no public comments.

Mayor Yates announced that the next Stationary Source Committee meeting is scheduled for June 19, 2015 and adjourned the meeting at 11:20 a.m.

Attachments

Attendance Roster

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
STATIONARY SOURCE COMMITTEE
May 15, 2015
ATTENDANCE ROSTER (Voluntary)**

NAME	AFFILIATION
Mayor Dennis Yates	SCAQMD Governing Board
Mayor Ben Benoit (VT)	SCAQMD Governing Board
Councilmember Judith Mitchell (VT)	SCAQMD Governing Board
Board Consultant Chung Liu	SCAQMD Governing Board (Mitchell)
Mohsen Nazemi	SCAQMD staff
Dr. Philip Fine	SCAQMD staff
Kurt Wiese	SCAQMD staff
Barbara Baird	SCAQMD staff
Bay Gilchrist	SCAQMD Staff
Susan Nakamura	SCAQMD staff
Chris Marlia	SCAQMD staff
Jill Whynot	SCAQMD staff
Nancy Feldman	SCAQMD staff
Laki Tisopulos	SCAQMD staff
Tina Cox	SCAQMD staff
Joseph Hower	Ramboll Environ/Gerdau
Curtis Coleman	Southern California Air Quality Alliance
Howard Balentine	AECOM
David Rothbart	LA County Sanitation Districts
Sue Gornick	WSPA

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 23

REPORT: Technology Committee

SYNOPSIS: The Technology Committee met on May 15, 2015. Major topics included Technology Advancement items reflected in the regular Board Agenda for the June Board meeting. A summary of these topics with the Committee's comments is provided. The next Technology Committee meeting will be held on June 19, 2015.

RECOMMENDED ACTION:

Receive and file.

John J. Benoit
Technology Committee Chair

MMM:psc

Attendance: Supervisor John J. Benoit, Councilmember Joe Buscaino and Councilmember Judith Mitchell participated by videoconference. Mayor Dennis Yates was in attendance at SCAQMD headquarters. Mayor Miguel Pulido and Supervisor Janice Rutherford were absent due to a conflict with their schedules.

JUNE BOARD AGENDA ITEMS

1. Issue RFP to Sell Equipment Dismantled under SCAQMD Incentive Programs to Generate Revenue for Additional Incentive Projects and Execute Contract under SOON Provision

The SCAQMD incentives program includes dismantling of on-road trucks as well as repowering of off-road construction equipment. A) The first proposal is to release an RFP to identify qualified dismantlers to sell the dismantled equipment, with a percentage of the sale proceeds returned to SCAQMD to fund additional incentive projects. B) The second action is to execute a contract under the SOON Provision in the amount of \$2,540,779 from the Carl Moyer Program SB 1107 Fund (32).

Councilmember Buscaino asked about the amount and percentage of funds that would be generated. Staff estimates that 75% of the funds will come to the SCAQMD, and depending on the number of proposals received, this would generate approximately two hundred thousand dollars a year. Councilmember Buscaino also asked if this would affect public school districts. Staff responded that it would not and schools could continue with their current process. Staff committed to inquire with the Los Angeles Unified School District to determine if this will negatively impact the school district.

Supervisor Benoit suggested that the synopsis be written in such a way that the two action items are shown as two separate parts since they are different subjects. Staff will edit the synopsis by separating the action items as parts A and B.

Moved by Buscaino; seconded by Yates; unanimously approved.

2. Execute Contracts to Develop and Demonstrate Class 8 Plug-In Hybrid Electric Drayage Trucks and Amend Contract to Integrate On-Board Chargers 

On October 5, 2012, the Board approved \$958,120 for Vision Industries and \$925,000 for Balqon to develop and demonstrate zero emission drayage trucks as part of a DOE-funded zero emission cargo transport demonstration project. Since then, Vision Industries has filed for bankruptcy and ceased operation and Balqon has notified the SCAQMD of their decision to withdraw from the project leaving \$1,883,120 of the DOE funds available for reallocation. This action is to execute contracts, pending approval by the DOE, with Transportation Power Inc. and US Hybrid to develop and demonstrate Class 8 plug-in hybrid electric drayage trucks. This action is to also amend a contract with US Hybrid to add on-board chargers in their battery electric drayage trucks. The total amount of awards shall not exceed \$2,153,446, comprised of \$1,883,120 from the DOE funds recognized in the Advanced Technology Goods Movement Fund (61) and \$270,326 from the Clean Fuels Fund (31).

Councilmember Buscaino inquired about the reasons for Balqon to withdraw from their project, which was to develop and demonstrate three battery electric drayage trucks. Staff responded that Balqon cited limited resources to continue with this project. Councilmember Buscaino also asked if the information gained from these development projects could be shared to assist other technology developers. Staff responded SCAQMD could share non-proprietary information.

Moved by Yates; seconded by Mitchell; unanimously approved.

3. California Fuel Cell Partnership Executive Board Meeting Notes and Quarterly Update

This report summarizes the California Fuel Cell Partnership Executive Board meeting held April 14, 2015 and provides quarterly updates for the periods beginning October 2014 and January 2015. This was reviewed by the Technology Committee on May 15, 2015.

Staff commented that there is a 5-minute video of SCAQMD's Hydrogen Station Dedication posted on SCAQMD's YouTube account entitled, Hydrogen Clean Fuel Clean Air at <https://www.youtube.com/watch?v=iGA6o6JdESA&feature=youtu.be>.

This is a receive and file item.

4. Other Business

There was no other business.

5. Public Comment Period

There was no public comment.

Next Meeting: June 19, 2015

Attachment

Attendance

Attachment – Attendance

Supervisor John J. Benoit.....SCAQMD Governing Board (via VT)
Councilmember Joe BuscainoSCAQMD Governing Board (via VT)
Councilmember Judith Mitchell.....SCAQMD Governing Board (via VT)
Mayor Dennis YatesSCAQMD Governing Board
Buford CritesBoard Consultant (JBenoit) (via VT)
Marisa PerezBoard Consultant (Mitchell)
Bob UlloaBoard Consultant (Yates)
Ruby Fernandez, District CounselSCAQMD
Matt Miyasato, STASCAQMD
Henry Hogo, STA.....SCAQMD
Fred Minassian, STA.....SCAQMD
Laki Tisopulos, STASCAQMD
Randall Pasek, STA.....SCAQMD
Dean Saito, STA.....SCAQMD
Brian Choe, STASCAQMD
Lisa Mirisola, STA.....SCAQMD
Vicki White, STA.....SCAQMD
Walter Shen, STA.....SCAQMD
Robert Paud, IMSCAQMD
Donna Vernon, STA.....SCAQMD
Penny Shaw Cedillo, STA.....SCAQMD
Pat Krayser, STA.....SCAQMD
Danielle RobinsonCARB

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 24

REPORT: Mobile Source Air Pollution Reduction Review Committee

SYNOPSIS: Below is a summary of key issues addressed at the MSRC's meeting on May 21, 2015. The next meeting is scheduled for Thursday, June 18, 2015, at 2:00 p.m., in Conference Room CC8.

RECOMMENDED ACTION:
Receive and file.

Michael D. Antonovich
SCAQMD Representative on MSRC

MMM:HH:AP

Meeting Minutes Approved

The MSRC unanimously approved the minutes from its April 16, 2015 meeting. Those approved minutes are attached for your information (*Attachment 1*).

MSRC Chair Re-Appointed and New MSRC Vice-Chair Appointed

Annually the MSRC elects its chair and vice-chair. At its May 21, 2015 meeting, the MSRC unanimously re-appointed Greg Pettis as its chair for another one-year term. Mr. Pettis is a Council Member for the City of Cathedral City and represents the Riverside County Transportation Commission on the MSRC. This will be his third term as the MSRC chair. The MSRC also unanimously re-elected Larry McCallon as its MSRC vice-chair. Mr. McCallon is Mayor Pro Tem for the City of Highland and represents the San Bernardino Associated Governments (SANBAG) on the MSRC.

Major Event Center Transportation Program

As part of the FYs 2014-16 Work Program, the MSRC allocated \$4.5 million for event center transportation programs and released a Program Announcement to solicit projects for traffic-impacted centers. Two applications have been received to date. Los Angeles County Metropolitan Transportation Authority (Metro) requested the MSRC to consider an award of \$1,350,000 to provide express bus service, as well as special Metrolink service for select games, for the 2015 and 2016 Dodgers seasons. Service would be

provided by CNG buses from Union Station for all home games (82 scheduled for the 2015 season), providing service from two hours prior to each game until 45 minutes after the game ends. In addition, special Metrolink trains will be added in support of “cross-town rivalry” games versus the Los Angeles Angels of Anaheim. For these games, trains will depart from Oceanside and arrive at Union Station, enabling patrons to utilize the bus service to access Dodger Stadium. Service would promote the use of public transit, including bus and rail, in lieu of personal automobile. Elimination of traffic congestion, especially reductions in automobile stop and go driving and queuing, has a direct link to reduced vehicle exhaust emissions. Metro and the Los Angeles Dodgers would contribute at least \$1,350,000 in co-funding. In accordance with the Program terms, Metro would only seek reimbursement for rail trips performed using Metrolink’s cleanest locomotives. The MSRC approved a contract award to Metro in an amount not to exceed \$1,350,000 to implement the 2015 and 2016 Dodger Stadium Express service.

Also in response to the Major Event Center Transportation Program Announcement, the Orange County Transportation Authority (OCTA) requested the MSRC to consider an award of \$722,266 to implement express bus service for the 2015 Orange County Fair. The service would include transportation to and from Fullerton Park & Ride, the Depot at Santa Ana, Goldenwest Transportation Center, the Anaheim Canyon Metrolink Station, Laguna Hills Transportation Center, Irvine Transportation Center, Anaheim Regional Transportation Intermodal Center, Junipero Serra Park & Ride, and the Village at Orange. Service would be provided every 20 to 40 minutes, depending upon the location and time of day. In addition to allowing Fair attendees to use public transportation for all or a portion of their trip, the service would also reduce vehicle traffic in and around the Fair. Elimination of traffic congestion, especially reductions in automobile stop and go driving and queuing, has a direct link to reduced vehicle exhaust emissions. OCTA and its project partners would collectively contribute \$723,300 in co-funding including fare box revenue, marketing design and production, and advertising and marketing purchases. The MSRC approved a contract award to OCTA in an amount not to exceed \$722,266 to implement the 2015 Orange County Fair Express.

Special Olympics World Games

At their April 16, 2015 meeting, the MSRC directed staff to investigate potential opportunities to assist the Special Olympics Games Organizing Committee (GOC) in providing clean transportation services in support of the Special Olympics World Games to be held in Los Angeles County in 2015 (LA2015). Transportation needs associated with LA2015 will begin on July 21, 2015 and conclude on August 3, 2015. Over 7,000 athletes from 170 countries will participate. More than 500,000 spectators are expected to attend the various events at multiple venues. In response to the MSRC’s direction, staff prepared a guidance document to assist GOC in preparing a proposal for MSRC-TAC and MSRC consideration. An element of the guidance was that any full-sized buses used be equipped with engines that meet or exceed the 2010 USEPA heavy-duty vehicle emissions standards, and smaller vehicles should be the lowest-emitting

available, with a preference for vehicles that operate on alternative fuels. Showcasing advanced technology vehicles, including zero-emission vehicles, was recommended.

The GOC submitted a proposal outlining four proposed transportation services: 1) the implementation of low-emission bus service from park and ride lots to the various venues, 2) van service from Los Angeles International Airport to hotels, 3) transportation of Los Angeles Police Department officers to LA2015 Opening Ceremonies, and 4) transit services extension in and around the I-710 corridor. The MSRC-TAC recommended funding the park and ride lot service in an amount not to exceed \$380,536. Subsequent to the MSRC-TAC meeting, MSRC staff were notified by the GOC that the transportation needs in support of LA2015 were changing, and that transportation-related funding shortfalls exist in other areas. The GOC asked the MSRC to consider allowing greater flexibility to identify and implement low-emission transportation services above and beyond those recommended by the MSRC-TAC. The MSRC considered the recommendation of the MSRC-TAC, and the evolving transportation needs of LA2015, and approved a sole-source contract award to the GOC in an amount not to exceed \$380,536. The funds could be used for one or more of the following: clean fuel bus services, “last mile” circulators connecting to athletic venues, extended rail service, and traffic mitigation services. Vehicles used must be consistent with the guidelines set forth above. Additionally, the GOC will be required to collect such information as necessary to quantify the air quality benefits associated with the transportation services.

Received and Approved Final Reports

The MSRC received and unanimously approved three final report summaries this month, as follows:

1. Ryder System Incorporated, Contract #MS11068, which provided \$175,000 to install an LNG/LCNG fueling station in Fontana;
2. Ryder System Incorporated, Contract #MS11069, which provided \$175,000 to install an LNG/LCNG fueling station in Orange; and
3. Orange County Transportation Authority, Contract #MS14008, which provided \$601,187 to implement Express Blue Service to Orange County Fair.

Contract Modification Requests

The MSRC considered a contract modification request by City of Gardena, Contract #ML11032, which provided \$102,500 for the purchase of a vehicle, to expand stations, and upgrade their maintenance facility. The MSRC unanimously approved the substitution of a CNG street sweeper for the heavy-duty LPG vehicle specified in the contract; the substitution of one larger dispenser for three smaller dispensers as part of their CNG station expansions, as well as a 25 month contract term extension.

Contracts Administrator's Report

The MSRC's AB 2766 Contracts Administrator provides a written status report on all open contracts from FY 2004-05 through the present. The Contracts Administrator's Report for May 2015 is attached (*Attachment 2*) for your information.

Attachments

Attachment 1 – Approved April 16, 2015 Meeting Minutes

Attachment 2 – May 2015 Contracts Administrator's Report



**MOBILE SOURCE AIR POLLUTION REDUCTION REVIEW COMMITTEE
THURSDAY, APRIL 16, 2015 MEETING MINUTES**

21865 Copley Drive, Diamond, Bar, CA 91765- Conference Room CC-8

MEMBERS PRESENT:

(Chair) Greg Pettis, representing RCTC
(Vice Chair) Larry McCallon, representing SANBAG
Michael Antonovich, representing SCAQMD (via v/c)
Ben Benoit (Alt.), representing SCAQMD
Laura Cornejo (Alt.), representing Regional Rideshare Agency (via v/c)
Michele Martinez, representing SCAG
Brad McAllester (Alt), representing Los Angeles County MTA (via v/c)
Tim Shaw (Alt.) representing OCTA
Erik White, representing California Air Resources Board
Greg Winterbottom, representing OCTA

MSRC MEMBERS ABSENT:

Steve Veres, rep. LA County MTA

MSRC-TAC MEMBERS PRESENT:

(MSRC-TAC Vice Chair) Tanya Love, RCTC
Rongsheng Luo (Alt.), representing Southern California Association of Governments

OTHERS PRESENT:

Michael Cacciotti, Councilmember, City of South Pasadena and
SCAQMD Governing Board Member (via v/c)
Tiffany Chao
Lauren Dunlap, Southern California Gas
Earl Elrod, SCAQMD Board Asst (Yates)
Debra Mendelsohn, SCAQMD Board Asst (Antonovich)
Ilene Prince, Fraser Communications
Ric Teano, OCTA

SCAQMD STAFF & CONTRACTORS

Ray Gorski, MSRC Technical Advisor-Contractor
John Kampa, Financial Analyst
Matt MacKenzie, MSRC Contracts Assistant
Ana Ponce, MSRC Administrative Liaison
Cynthia Ravenstein, MSRC Contracts Administrator
Veera Tyagi, Senior Deputy District Counsel
Rachel Valenzuela, MSRC Contracts Assistant
Paul Wright, Audio Visual Specialist

CALL TO ORDER

- Call to Order

MSRC Chair Greg Pettis called the meeting to order at 2:02 p.m. Chair Pettis asked for roll to be called. Present at time of roll call were: MSRC Members Ben Benoit (Alt.); Laura Cornejo (via v/c); Michele Martinez; Brad McAllester (Alt.) (via v/c); Erik White; Greg Winterbottom; Tim Shaw (Alt.); MSRC Vice Chair Larry McCallon; and MSRC Chair Greg Pettis.

- Opening Comments:
There were no opening comments.

PUBLIC COMMENT PERIOD

Public comments were allowed during the discussion of each agenda item. No comments were made on non-agenda items.

STATUS REPORT

- Clean Transportation Policy Update
Cynthia Ravenstein, MSRC Contracts Administrator, gave the Clean Transportation Policy Update on behalf of MSRC-TAC Chair Gretchen Hardison, who could not attend today's meeting. The report is lengthier than usual because it covers two months. An electronic copy will be sent to the MSRC members so that they can access the links. Some items of interest ■ Revenues from the cap and trade are expected to be significantly underestimated. They think it could be as much as \$1 billion or more higher than they had originally estimated. ■ Several different opportunities from ARB, but there are a couple that seem to tie in with things the MSRC is already doing: A targeted car sharing and mobility options in disadvantaged communities pilot project; and a light duty financing assistance in disadvantaged communities pilot project. ■ The cost effectiveness limit for the Carl Moyer Program is being updated to \$18,030/ton.

CONSENT CALENDAR (Items 1 through 4)**Receive and Approve Items****Agenda Item #1 – Minutes of the January 15, 2015 and March 19, 2015 MSRC Meetings**

The minutes of the January 15, 2015 MSRC meeting were distributed at the meeting.

The minutes of the March 19, 2015 MSRC meeting were included in the agenda package. Ana Ponce reported that there is a change to the March 19, 2015 minutes. It should have been noted that MSRC Member Michele Martinez participated via video conference at that meeting. That correction will be made to the March minutes.

ON MOTION BY MSRC ALTERNATE BEN BENOIT, AND SECONDED BY MSRC VICE CHAIR LARRY MCCALLON, UNDER APPROVAL OF CONSENT CALENDAR ITEMS 1 THROUGH 4, THE MSRC UNANIMOUSLY VOTED TO APPROVE THE JANUARY 15 AND MARCH 19, 2015 MSRC MEETING MINUTES, WITH THE AMENDMENT MADE TO THE MARCH MEETING MINUTES.
AYES: BENOIT, CORNEJO, MARTINEZ, MCALLESTER, WHITE, WINTERBOTTOM, MCCALLON, PETTIS.
NOES: NONE

ACTION: Staff will place the approved minutes on the MSRC's website.

Agenda Item #2 – Summary of Final Reports by MSRC Contractors

Eight final report summaries were included in the agenda package, as follows:
1) California State University, Los Angeles, Contract #MS07022, which provided \$250,000 towards the construction of a hydrogen fueling station; 2) Clean Energy Fuels Corporation, Contract #MS08056, which provided \$400,000 towards the construction of a new CNG station in Long Beach; 3) Clean Energy Fuels Corporation, Contract #MS08061, which provided \$400,000 towards the construction of a new CNG station in Los Angeles; 4) Clean Energy Fuels Corporation, Contract #MS08066, which provided \$400,000 towards the construction of a new CNG station at Palm Springs; 5) Clean Energy Fuels Corporation, Contract #MS08070, which provided \$400,000 towards the construction of a new CNG station in Paramount; 6) Clean Energy Fuels Corporation, Contract #MS08072, which provided \$400,000 towards the construction of a new CNG station in Burbank; 7) Clean Energy Fuels Corporation, Contract #MS08073, which provided \$400,000 towards the construction of a new CNG station in Norwalk; and 8) Anaheim Transportation Network, Contract #MS12064, which provided \$127,296 to implement Anaheim Circulator Service.

ON MOTION BY MSRC ALTERNATE BEN BENOIT, AND SECONDED BY MSRC VICE CHAIR LARRY MCCALLON, UNDER APPROVAL OF CONSENT CALENDAR ITEMS 1 THROUGH 4, THE MSRC UNANIMOUSLY VOTED TO APPROVE THE FINAL REPORTS ABOVE.
AYES: BENOIT, CORNEJO, MARTINEZ, MCALLESTER, WHITE, WINTERBOTTOM, MCCALLON, PETTIS.
NOES: NONE

ACTION: MSRC staff will file the final reports and release any retention on the contracts.

Receive and File Items

Agenda Item #3 – MSRC Contracts Administrator's Report

The MSRC AB 2766 Contracts Administrator's Report for February 26 through March 25, 2015, was included in the agenda package.

ON MOTION BY MSRC ALTERNATE BEN BENOIT, AND SECONDED BY MSRC VICE CHAIR LARRY MCCALLON, UNDER APPROVAL OF CONSENT CALENDAR ITEMS 1 THROUGH 4, THE MSRC UNANIMOUSLY VOTED TO RECEIVE AND FILE THE CONTRACTS ADMINISTRATOR'S REPORT FOR FEBRUARY 26 THROUGH MARCH 25, 2015.

AYES: BENOIT, CORNEJO, MARTINEZ, MCALLESTER, WHITE, WINTERBOTTOM, MCCALLON, PETTIS.

NOES: NONE

ACTION: SCAQMD staff will include the MSRC Contracts Administrator's Report in the MSRC Committee Report for the May 1, 2015 SCAQMD Board meeting.

Agenda Item #4 – Financial Report on AB 2766 Discretionary Fund

A financial report on the AB 2766 Discretionary Fund for the period ending March 31, 2015 was included in the agenda package.

ON MOTION BY MSRC ALTERNATE BEN BENOIT, AND SECONDED BY MSRC VICE CHAIR LARRY MCCALLON, UNDER APPROVAL OF CONSENT CALENDAR ITEMS 1 THROUGH 4, THE MSRC UNANIMOUSLY VOTED TO RECEIVE AND FILE THE FINANCIAL REPORT FOR THE PERIOD ENDING MARCH 31, 2015.

AYES: BENOIT, CORNEJO, MARTINEZ, MCALLESTER, WHITE, WINTERBOTTOM, MCCALLON, PETTIS.

NOES: NONE

ACTION: No further action is required.

ACTION CALENDAR (Items 5 through 8)

Agenda Item #5 – Ratification of Actions Taken as a Committee of the Whole at the March 19, 2015 Meeting

Cynthia Ravenstein, MSRC Contracts Administrator, reported that on March 19, 2015, at its regularly scheduled meeting, the MSRC met as a Committee of the Whole, having failed to attain a Quorum, with only three members present. The following are recommendations made by the Committee of the Whole on agenda items at that meeting. This item is for purposes of having the MSRC ratify some or all of these recommendations, which are summarized below:

- Received and approved final reports by MSRC contractors;
- Received and filed the financial report for February 2015;
- Received and filed Contract Administrator's Report for January/February 2015;
- Approved a modified Statement of Work for Waste Management Collection and Recycling, Contract #MS14039, which provides \$75,000 for maintenance facility modifications;

- Approved a modified Statement of Work for Waste Management Collection and Recycling, Contract #MS14040, which provides \$75,000 for maintenance facility modifications; and
- Approved a modified Statement of Work for USA Waste of California, Contract #MS14041, which provides \$175,000 for a limited-access CNG station and maintenance facility modifications;
- **FYs 2014-16 Work Program**
 - Approved the draft Program Announcement for the Local Government Match Program;
 - Approved the draft Program Announcement for the Alternative Fuel Infrastructure Program;
 - Approved the draft Program Announcement for the Major Event Center Transportation Program; and
 - Approved draft Invitation to Negotiate for the Transportation Control Measure CTC Partnership Program.

MSRC Member Michele Martinez and MSRC Alternate Ben Benoit recused themselves from the vote due to campaign contributions from Waste Management.

ON MOTION BY MSRC VICE CHAIR LARRY MCCALLON, AND
SECONDED BY MSRC MEMBER GREG WINTERBOTTOM, THE
MSRC VOTED UNANIMOUSLY TO RATIFY ALL THE
RECOMMENDATIONS MADE AS A COMMITTEE OF THE WHOLE,
AT ITS MARCH 19, 2015 MEETING.
AYES: CORNEJO, MCALLESTER, WHITE, WINTERBOTTOM,
MCCALLON, PETTIS.
NOES: NONE
RECUSALS: MARTINEZ, BENOIT.

ACTION: Staff will file reports, include in the MSRC Committee Report, amend contracts, and include items for consideration by the SCAQMD Board at its May 1, 2015 meeting, as appropriate.

Agenda Item #6 – Approve Expenditures from MSRC Travel Budget for MSRC-TAC Member Withycombe to Attend May 2015 MSRC Meeting

Cynthia Ravenstein, MSRC Contracts Administrator, reported that this item requests approval of travel expenses not to exceed \$325 under the MSRC's Travel Budget. Current MSRC-TAC Member—and former MSRC Member—Earl Withycombe requests to attend the May 21, 2015 MSRC meeting in Diamond Bar in person in order to facilitate and coordinate the transition to a new MSRC Member from his member agency, the California Air Resources Board (CARB), and to receive training from MSRC and consultant in MSRC-TAC subcommittee activities and responsibilities. This would enhance CARB's participation in the work program development process. This item was not considered by the MSRC-TAC.

ON MOTION BY MSRC MEMBER MICHELE MARTINEZ, AND SECONDED BY MSRC ALTERNATE BEN BENOIT, THE MSRC VOTED UNANIMOUSLY TO APPROVE TRAVEL EXPENSES NOT TO EXCEED \$325 FOR MSRC MEMBER EARL WITHYCOMBE TO ATTEND THE MAY 2015 MSRC MEETING.

AYES: BENOIT, CORNEJO, MARTINEZ, MCALLESTER, WHITE, WINTERBOTTOM, MCCALLON, PETTIS.

NOES: NONE.

ACTION: MSRC Member Earl Withycombe's travel and expense reports will be provided following his attendance at the meeting.

FYs 2014-16 Work Program

Agenda Item #7 – Consider Reprise of Rideshare Thursday Public Awareness Campaign and Sole-Source Award Recommendation

Cynthia Ravenstein, MSRC Contracts Administrator, reported on this item on behalf of TCM Subcommittee Chair Kelly Lynn. As part of their FY 2011-12 Work Program, the MSRC allocated \$1.0 million for a regional Rideshare Thursday public awareness campaign. As part of the RFP process, the MSRC required bidders to provide a priced option to implement the campaign for a second year. The MSRC awarded a contract to Fraser Communications to implement the program. The campaign was implemented from July 2013 through May 2014, with the primary focus centered on Rideshare Week in October 2013. In the process, Fraser Communications developed outreach materials in various media including radio, online display advertising, Facebook, and a video. There were over 260 million impressions delivered. The awareness of the Rideshare Thursday slogan increased from 19 percent to 27 percent overall. A short presentation was viewed, outlining some of the highlights from the Rideshare Thursday campaign; and a short video clip was played. In order to leverage the MSRC's previous investment in these materials, the TCM Subcommittee recommends that the MSRC consider conducting a reprise of the campaign, relying primarily on previously-developed materials. The Subcommittee further recommends a sole-source award to Fraser Communications, in an amount not to exceed \$1.0 million, to implement the campaign as part of the FYs 2014-16 Work Program. The MSRC-TAC unanimously recommends approval.

PUBLIC COMMENT: Ms. Ilene Prince, Director of Client Services for Fraser Communications, indicated that they would be delighted to continue the campaign. The video that was shown was developed at the end of the campaign, and wasn't able to be used much. They see a lot of great opportunity of expanding the MSRC's digital media buy into video pre-roll, and being able to put that out in front. They did the Kings Partnership and are looking into expanding that into the Inland Empire. Because the materials already exist, they do not have to go through all the cost and time to implement. They were very careful in the upfront when they created the materials to do full buyouts so there are no re-use fees to worry about. There will be some modifications to add-in the "walker" icon, which will be fun. Facebook also played a big role. The Facebook program was dropped when the program ended, but it could be re-established very quickly. Fraser would like to get started with that first so as they are rolling out the campaign, that dialogue could be happening.

MSRC Member Greg Winterbottom asked if the \$1 million is enough. Ms. Ravenstein indicated that that is what the Subcommittee thought because that was the amount of the original price option, although Fraser would not be doing exactly what they had quoted in the first place, because as the campaign developed with input from the MSRC, they ended up doing something a little bit differently than what they had originally proposed. Mr. Winterbottom asked if that worked better than what was originally proposed.

PUBLIC COMMENT: Ms. Prince replied that it limited the amount of time they could be out there, so that's where they feel they came back with a smart approach, which was to split the campaign into two phases or waves. The first was to go out broad with radio so that they could become top of mind immediately with all of their constituents/residents so that when they hear the message it starts to be familiar; and then they went with a much more targeted approach. That's where the events came in. Facebook became their continuum all the way through, as was digital. The reason they went with the Kings is because that train runs right behind Staples Center. There are 18,000 people sitting in the stadium that could also be taking mass transportation. They did special programs that promoted custom TAP cards. They gave away TAP cards twice. They got the Ice Girls and the Ice Team to do a promotion with them that played in the stadium a lot. They were really great partners. They got well beyond what they ever expected, in added value. At every game they did LEDs around the stadium, which wasn't part of the original buy. Because they have an affiliate in the Inland Empire, they can really build that out there, as well, and maybe look for some other opportunities. They could make the \$1 million work, with a more conservative and limited-time awareness campaign.

MSRC Member Erik White asked that in terms of gauging the success of the program at the end of this next installment, what are the tools that will be used to see whether or not the new video or these other affiliations will build on the success that was seen in the first go-round?

PUBLIC COMMENT: Ms. Prince replied that they do a pre and post survey. They did that the first time and they would recommend doing another pre and post, as well. There has been quite a lag time between the last campaign and this one, so they will see again where they have started. That will be one measure. Also, Facebook. Seeing how they grow their Facebook; watching the conversations. Also, how they expand the digital, using the search as a control means of the digital. Not only will they see who is actually clicking through on the banners, going to the website, and then going further, they will also be able to look at Google search. Folks don't always respond to digital ad banners directly. They like to do things on their own time. That's why they watch search. Since you don't have an active search campaign, that is a beautiful way to track because then you really see how your traction goes. So they will be looking at it multiple ways.

[MSRC Member Michael Antonovich arrived during the discussion of this item, at approximately 2:25 p.m.]

PUBLIC COMMENT: Michael Cacciotti, Councilmember, City of South Pasadena, and SCAQMD Board Member representing Eastern Los Angeles County Cities, commented that he saw this and he spoke to about 25 people of different ages and

ethnicities. Unfortunately, with those 260 million hits, the 25 people he spoke to in the last couple of weeks that heard it, had the same impression he did, very ambiguous and nebulous. It is exciting, but it didn't inspire him or motivate him to do anything. Everybody without exception, Deputy Attorney Generals, bosses, elected officials, youth, young adults, said they can't remember. Do they share a ride with somebody? Do they just carpool with somebody? They can't find somebody to carpool with. That is all it meant. He rode his bike today. Four times a week he rides his bike or the train. He rode the Gold Line this morning. So, we have got to do something. Hold off on this. Give it to our summer interns. Give them some suggestions. You have some good ideas out there, a good base, but it needs some substantial modification. For the first time in nearly half a century, you have a massive transportation system about to open up next September when the Gold Line and Expo Line open up from the beach to the mountains in the San Gabriel Valley and ultimately to San Bernardino and Riverside. It is a good opportunity to do something to inspire people. It has to be transformative to get people to change their positions. Some ideas he wrote down are to focus on rideshare when they open up these major lines that are going to happen. Media buys. You want to have federal officials, federal deputy attorney generals, state attorney general, himself, county employees, elected officials, average people, movie stars, and students. Show them in these media buys, a typical person. He was walking through Garfield Park and he asked two women if they knew about this Rideshare, and they replied that they heard something about it. He asked them if they take the train, and they replied that they never thought about it. How can he inspire those two working mothers to change their habits and take the train? This is an opportunity for \$1 million. We don't get it very often. It is still jingling in his head, but nothing took that next step to move him to take the next step. He did it on his own. It had nothing to do with the program. The same with dozens of other people he has spoken to. Of the 260 million people, maybe you have touched a couple. It is still in their head, but they can't make the connection. He gets the form from the state every year that asks "can you carpool;" "who lives near you?" That is all he associated it with, and every single person he spoke to, also. Get average students to their school; entertainment; Dead Sea Scrolls Exhibit; Angels games, USC, UCLA football. Show people involved doing these things. Example: Four or five months ago at a meeting in the City of Claremont, voting for the Metro Board Member for Metro from the San Gabriel Valley, after the meeting, every single person drove a car, except for him. It was close to the Metrolink station and everybody just said that they never thought about it. That is 30 plus elected officials that spend an hour-and-a-half or two hours in a car, that never thought about taking a train, or walk, or bike. He thinks this is a good idea, but he wants to flesh it out more. He wants to see how much is spent to the consultant. He thinks a big portion of this should be put into media buys and in programs for schools, businesses and employers. For example, last night he attended a two-and-a-half hour parking meeting at a local elementary school because they are impacted so much by traffic in the morning and the afternoon. They are trying to do a program to get kids on their bikes, but they don't have any money. He wants to have incentives, bicycle raffles, a better bicycle facility that they can lock up. We need to look at this \$1 million and really spend it wisely. You have a great idea here; a great foundation, but it has to be fleshed out a little better. It is not just hitting 260 million people, and not really doing much, to be honest, it hasn't. Ninety nine percent of the people that it touched, it didn't move them. He asked that the MSRC hold off on this. Let the kids that put our video together at SCAQMD, which is fantastic, a great video we just saw last week; let them work on it. Let other groups look at this and

say this is how we can really hit these groups. He has major concerns. What he sees now, he doesn't want to happen again. We have an opportunity to change it and move people to the right way; especially with these major Gold Lines opening up.

PUBLIC COMMENT: Ms. Prince commented that \$1 million sounds like a lot of money, but the largest proportion of that budget did go to media. There is an issue. The problem is that there are two 511s, so they really can't give a lot of specifics. The video is going to make a big difference because it is actually going to be able to show what those modes of transportation are, which they didn't have before. Talking about going direct; they went direct with the Kings. That was the whole point. Eighteen thousand people "Have you thought about transportation?" That's where those targeted events really come into play. To change someone's behavior, from "I am not interested," "I am afraid of vanpooling," she does not believe any one ad campaign is going to make that difference. She believes social media can be expanded to do video. People can send in their videos. They can include those on Facebook. That can be part of their contingency to get people involved. But she does think that the message has to keep getting out there. A lot of the ideas the Councilmember has require a lot of different groups and a lot of different people. Truthfully, to make any kind of a difference, if you are going to go that kind of scattershot, you need a lot more money. First you have to place the idea in somebody's head. Action doesn't always come immediately. She knows, in particular. She doesn't work at a time span that she can carpool with anyone else in her entire company. She would if she could, but she can't. But there are others who do, and that can start the conversation. All we can do right now is get the thought in their heads. Make it easy. She is sure Caltrans and everybody else will be promoting the new lines. She doesn't know when they open or if they are opening in time for Rideshare Week. Rideshare Week is a key time because it is a time where there are going to be a lot of organizations talking about ridesharing. The reason they are using that time frame as a time to get into the marketplace is because the more times you hear about the message, the more open you are. Fraser did a lot of behavior change including drought; electricity; Be Water-Wise campaign; and First Five California. Behavior change does not happen overnight. One campaign is not going to make a difference. What does make a difference is talking to a lot of people and reminding people, and telling them what the opportunities are. They send them to the website. The website has to do the hard work right now. It is very hard because you are in two different areas of 511s that have different mechanisms and different programs in place to be able to have absolute specific messaging. If we keep playing off the emotion that driving is a drag, it costs you money, there is stress, and there is an emotional benefit to changing and using carpooling or vanpooling, or whatever shared transportation, and getting out of your car, if that is going to get you a better emotional response, that is the role that Fraser is trying to play, which is to pique interest.

MSRC Member Michele Martinez said Ms. Prince made some very valid points, but when we do talk about rideshare, with government, we are still on the basic tradition of vanpool for our employees, but we have Lyft now, we have Uber, we have bikeshare, we have bus share. You name it, it's out there now. Whether they are in the private industry or not, there is a connection between public transportation and private transportation and that nexus needs to come together in a campaign like this when you talk about rideshare. You need to promote all of that. There are employees that cannot rideshare with some of

their other colleagues because of the time schedule, but it doesn't mean that you cannot take a Lyft or an Uber. You don't have to get in your car any more. You actually can take other forms of shared transportation. That is the kind of messaging she would hope that we would advocate.

PUBLIC COMMENT: Ms. Prince indicated that what they do as an agency is sit down with a group if they are going to kick off a campaign. A year-and-a-half later, the world has changed. They also incorporate radio traffic into their buys. The beauty of radio traffic is that you can provide 10- to 15-second messages and you can change that message on a daily, weekly, monthly basis. We can do a rotation that addresses all of those different points. One of the goals or desires was to not do a lot of extra production, but we can do live week radio 30-second spots. We can take on all these additional messages and build those into the messaging. There is a lot of room for growing and continuing the campaign. None of us thought that we were just going to go in and rubber stamp and do what we did the last time. That isn't our goal. What our goal was to try to use as many of the materials, some of the assets that we have, so that most of the money does go into media so that we can talk to more people for a longer length of time.

MSRC Member Greg Winterbottom indicated that the question about the money is that it sounds like Councilmember Cacciotti wants to do a high-end something that is more than \$1 million, and Mr. Winterbottom doesn't think that what he desires would be feasible for \$1 million, and he would like it if he would come out and help if he can think of any way to assist that, but if we are talking about this major area of counties and two 511s and all the disparate stuff that the agencies do, Mr. Winterbottom doesn't know how we would do it for that amount of money.

Veera Tyagi, Senior Deputy District Counsel, stated that, before the MSRC goes into considering increasing the value of the contract, she would like to take a look at the RFP that was released initially.

Mr. Winterbottom asked if this could be held over. He would like to hear some more from the L.A. end also, if that is available to us.

MSRC Member Michael Antonovich asked why this is a sole-source contract. Ms. Tyagi replied that that is the reason she is concerned because initially an RFP was issued at the last work program year that had an option to extend, and we are exercising essentially that option to extend. Mr. Antonovich replied that \$1 million is a lot of money for a sole source. It is not like acquiring some office supplies for \$20,000. If it is a \$1 million contract you are talking about, then do an open competitive proposal so that we can see if there are other ideas out there. Maybe this is the best company, maybe it is not, but when you do a sole source, you limit yourself to what's before you.

Ms. Tyagi indicated that the RFP initially indicated that there could be an extension but because that contract officially expired, we would have to do a new contract where we would feel we could fit within the sole source, but if the dollar amount is changed, she would want to review it to ensure that we are still within that scope. We can come back and take a look at this and evaluate what our options would be.

Ms. Ravenstein commented that if this is carried over for a month, if there is still a potential that the MSRC would be doing the sole source, we could run into a little bit of timing with bringing the media plan back for MSRC for approval. Oftentimes the MSRC does not meet in July. Any later than July, it would be too late to make it to the Rideshare Week. If the determination of the MSRC is to go out with an open competition, then it will not be for Rideshare Week.

ON MOTION BY MSRC VICE-CHAIR LARRY MCCALLON, AND
SECONDED BY MSRC MEMBER MICHELE MARTINEZ, THE
MSRC VOTED UNANIMOUSLY TO CONTINUE THIS ITEM OVER
TO THE MAY 2015 MSRC MEETING.

AYES: ANTONOVICH, CORNEJO, MARTINEZ, MCALLESTER,
WHITE, WINTERBOTTOM, MCCALLON, PETTIS.

NOES: NONE.

Mr. Antonovich also asked that MSRC Staff also explore how we could have other proposals being offered during this time frame so that we would have the ability to make some decisions relative to not just a sole source contract. Ms. Ravenstein commented that SCAQMD's minimum amount of time for an RFP to be open is 30 days. Without having an RFP already prepared, it cannot be released and close prior to the next MSRC meeting. Chair Pettis said that if we are going to come back in 30 days then give us all those options, and one of those options would be that we are going to miss this year. Staff needs to put that in as one of the options.

ACTION: This item will be returned to the MSRC at its May 2015 meeting.

Agenda Items #8 – Consider Request for Proposals for MSRC Programmatic Outreach Services

Cynthia Ravenstein, MSRC Contracts Administrator, reported on this item on behalf of MSRC-TAC Chair Gretchen Hardison. The current contract with The Better World Group will expire on December 30, 2015. The MSRC-TAC Administrative Subcommittee has drafted a Request for Proposals for MSRC Programmatic Outreach Services. The Subcommittee recommends a targeted funding amount not to exceed \$120,000 for the initial two-year period, with one two-year option period. The MSRC-TAC unanimously recommends approval.

ON MOTION BY MSRC MEMBER MICHELE MARTINEZ, AND
SECONDED BY MSRC VICE CHAIR LARRY MCCALLON, THE
MSRC VOTED UNANIMOUSLY TO APPROVE THE RFP FOR MSRC
PROGRAMMATIC OUTREACH SERVICES WITH A TARGETED
FUNDING AMOUNT NOT TO EXCEED \$120,000 FOR THE INITIAL
TWO-YEAR OPTION, WITH ONE TWO-YEAR OPTION PERIOD.

AYES: ANTONOVICH, CORNEJO, MARTINEZ, MCALLESTER,
WHITE, WINTERBOTTOM, MCCALLON, PETTIS.

NOES: NONE.

ACTION: This item will be included for consideration by the SCAQMD Board at its May 1, 2015 meeting.

OTHER BUSINESS

Agenda Item #9 – Other Business

- MSRC Member Michael Antonovich asked that the MSRC-TAC work with the LA County Chief Executive Office and the Office Workplace Programs to review the transportation needs for the Special Olympics World Games and report back to our Committee in May with recommendations for project partnership or funding opportunities to meet these transit needs while increasing the MSRC visibility in the Community. MSRC Chair Pettis asked that MSRC Staff take that as direction to add this item to the agenda and bring it back to MSRC at its May 2015 meeting.

MSRC Member Greg Winterbottom asked Councilmember Cacciotti if he would share his notes with MSRC staff on the Rideshare Thursday item.

MSRC Member Michele Martinez stated that the MSRC has a great opportunity to move forward in reducing GHG emissions and really providing alternative forms of transportation, specifically with biking and walking. Given the opportunity of adding this component, she hopes that staff could do outreach, and members as well.

MSRC Vice Chair Larry McCallon is concerned that we are calling the campaign Rideshare Thursday. Things have changed. Maybe we ought to rethink what we call it: Active Transportation, Alternate Means of Transportation. We are sharing, but we share bicycles, we share rides with Uber or Lyft. We need to change our focus of what we are doing and what we are calling it.

ADJOURNMENT

THERE BEING NO FURTHER BUSINESS, THE MSRC MEETING
ADJOURNED AT 2:50 P.M.

NEXT MEETING:

Thursday, May 21, 2015, at 2 p.m., Room CC-8.

[Prepared by Ana Ponce]



MSRC Agenda Item No. 3

DATE: May 21, 2015

FROM: Cynthia Ravenstein

SUBJECT: AB 2766 Contracts Administrator's Report

SYNOPSIS: This report covers key issues addressed by MSRC staff, status of open contracts, and administrative scope changes from March 26 to April 29, 2015.

RECOMMENDATION: Receive and file report

WORK PROGRAM IMPACT: None

Contract Execution Status

2014-16 Work Program

On December 5, 2014, the SCAQMD Governing Board approved an award under the AB118 Enhanced Fleet Maintenance Program. This contract is executed.

2012-14 Work Program

On April 5, 2013, the SCAQMD Governing Board approved three awards under the Event Center Transportation Program. These contracts are executed.

On July 5, 2013, the SCAQMD Governing Board approved an additional award to Orange County Transportation Authority under the Event Center Transportation Program. This contract is executed.

On September 6, 2013, the SCAQMD Governing Board approved an award to Transit Systems Unlimited under the Event Center Transportation Program. This contract is executed.

On November 1, 2013, the SCAQMD Governing Board approved two awards under the Event Center Transportation Program. These contracts are executed.

On December 6, 2013, the SCAQMD Governing Board approved 25 awards under the Local Government Match Program, 12 awards under the Alternative Fuel Infrastructure Program, one award under the Alternative Fuel School Bus Incentives Program, and one award under the Event Center Transportation Program. These contracts are awaiting responses from the prospective contractor, with the prospective contractor for signature, or executed.

On January 10, 2014, the SCAQMD Governing Board approved three awards under the Local Government Match Program, one award under the Alternative Fuel Infrastructure Program, and one award under the Alternative Fuel School Bus Incentives Program. These contracts are executed.

On February 7, 2014, the SCAQMD Governing Board approved two awards under the Local Government Match Program and one award under the Alternative Fuel Infrastructure Program. These contracts are executed.

On April 4, 2014, the SCAQMD Governing Board approved two awards under the Local Government Match Program and three awards under the Traffic Signal Synchronization Partnership Program. These contracts are executed.

On May 2, 2014, the SCAQMD Governing Board approved 12 awards under the Local Government Match Program. These contracts are awaiting responses from the prospective contractor, undergoing internal review, with the prospective contractor for signature, or executed.

On June 6, 2014, the SCAQMD Governing Board approved an award under the Traffic Signal Synchronization Partnership Program. This contract is executed.

On July 11, 2014, the SCAQMD Governing Board approved an award under the Traffic Signal Synchronization Partnership Program. This contract is executed.

On September 5, 2014, the SCAQMD Governing Board approved an award under the Event Center Transportation Program. This contract is executed.

On October 3, 2014, the SCAQMD Governing Board approved an award under the Alternative Fuel Infrastructure Program. This contract is executed.

On December 5, 2014, the SCAQMD Governing Board approved 12 awards under the Alternative Fuel Infrastructure Program and two awards under the Event Center Transportation Program. These contracts are awaiting responses from the prospective contractor or with the prospective contractor for signature.

On February 6, 2015, the SCAQMD Governing Board approved 3 awards under the Alternative Fuel Infrastructure Program. These contracts are under development or with the prospective contractor for signature.

Work Program Status

Contract Status Reports for work program years with open and pending contracts are attached. MSRC or MSRC-TAC members may request spreadsheets covering any other work program year.

FY 2004-05 Work Program Contracts

One contract from this work program year is open.

FY 2004-05 Invoices Paid

No invoices were paid during this period.

FY 2005-06 Work Program Contracts

4 contracts from this work program year are open; and 3 are in “Open/Complete” status, having completed all obligations save ongoing operation. One contract passed into “Open/Complete” status during this period: City of Santa Monica, Contract #ML06071 – Purchase 3 Heavy-Duty CNG Trucks and Install CNG Fueling Station.

FY 2005-06 Work Program Invoices Paid

No invoices were paid during this period.

FY 2006-07 Work Program Contracts

4 contracts from this work program year are open; and 14 are in “Open/Complete” status. 6 contracts closed during this period: Los Angeles World Airports, Contract #MS07007 – Purchase 21 CNG Transit Buses; and City of San Bernardino, Contract #MS07051 – Purchase 15 Natural Gas Refuse Trucks; City of Redlands, Contract #MS07052 – Purchase 5 Natural Gas Refuse Trucks; City of Claremont, Contract #MS07053 – Purchase 3 Natural Gas Refuse Trucks; City of Whittier, Contract #MS07056 – Purchase One Natural Gas Refuse Truck; and Griffith Company, Contract #MS07070 – “Showcase” Off-Road Diesel Equipment Retrofit Program.

FY 2006-07 Invoices Paid

One invoice in the amount of \$250,000.00 was paid during this period.

FY 2007-08 Work Program Contracts

11 contracts from this work program year are open; and 26 are in “Open/Complete” status. 7 contracts closed during this period: City of Claremont, Contract #ML08031 – Purchase One Heavy-Duty CNG Vehicle and Upgrade Existing CNG Station; SunLine Transit Agency, Contract #MS08022 – Purchase 15 CNG Buses; Clean Energy Fuels Corporation, Contract #MS08056 – Install New LNG Station at Port of Long Beach; Clean Energy Fuels Corporation, Contract #MS08061 – Install New CNG Station in Los Angeles; Clean Energy Fuels Corporation, Contract #MS08070 – Install New CNG Station in Paramount; Clean Energy Fuels Corporation, Contract #MS08072 – Install New CNG Station in Burbank; and Clean Energy Fuels Corporation, Contract #MS08073 – Install New CNG Station in Norwalk.

FY 2007-08 Invoices Paid

One invoice in the amount of \$80,000.00 was paid during this period.

FY 2008-09 Work Program Contracts

6 contracts from this work program year are open; and 15 are in “Open/Complete” status.

FY 2008-09 Invoices Paid

No invoices were paid during this period.

FY 2009-10 Work Program Contracts

2 contracts from this work program year are open; and 14 are in “Open/Complete” status.

FY 2009-10 Invoices Paid

No invoices were paid during this period.

FY 2010-11 Work Program Contracts

32 contracts from this work program year are open; and 22 are in “Open/Complete” status. One proposed contract with the Los Angeles Unified School District is still with them for signature following MSRC approval of modifications. Lastly, Ivanhoe Energy Services and Development has declined their award under the “Showcase II” Program - \$66,750 has reverted to the AB 2766 Discretionary Fund.

FY 2010-11 Invoices Paid

2 invoices totaling \$17,446.02 were paid during this period.

FY 2011-12 Work Program Contracts

49 contracts from this work program year are open, and 15 are in “Open/Complete” status. 6 contracts closed during this period: City of Rancho Cucamonga, Contract #ML12021 – Purchase 4 Medium-Duty Natural Gas Vehicles; County of Los Angeles Internal Services Department, Contract #ML12023 – Install EV Charging Infrastructure; City of Palm Desert, Contract #ML12054 – Install EV Charging Infrastructure; Anaheim Transportation Network, Contract #MS12064 – Implement Anaheim Circulator Service; City of Ontario, Contract #MS12076 – Maintenance Facility Modifications; and City of Manhattan Beach, Contract #ML12066 – Install EV Charging Infrastructure.

FY 2011-12 Invoices Paid

5 invoices totaling \$68,814.54 were paid during this period.

FYs 2012-14 Work Program Contracts

47 contracts from this work program year are open, and 3 are in “Open/Complete” status. Two contracts closed during this period: City of Cathedral City, Contract #ML14010 – Street Sweeping Operations; Coachella Valley Association of Governments, Contract #ML14015 – Street Sweeping Operations.

FYs 2012-14 Invoices Paid

4 invoices totaling \$772,814.00 were paid during this period.

FYs 2014-16 Work Program Contracts

One contract from this work program year is open.

FYs 2014-16 Invoices Paid

One invoice in the amount of \$25,018.00 was paid during this period.

Administrative Scope Changes

Two administrative scope changes were initiated during the period of March 26 to April 29, 2015:

- MS14046 – Ontario CNG Station (Expand Public Access CNG Station) – One-year no-cost term extension
- MS11082 – Baumot North America (Demonstrate Retrofit Devices on Off-Road Vehicles) – Modification to terminate due to fleet’s sale of vehicles

Attachments

- FY 2004-05 through FYs 2014-16 Contract Status Reports



AB2766 Discretionary Fund Program Invoices

March 26, 2015 to April 29, 2015

Contract Admin.	MSRC Chair	MSRC Liaison	Finance	Contract #	Contractor	Invoice #	Amount
<i>2006-2007 Work Program</i>							
4/28/2015	4/29/2015	4/29/2015	4/30/2015	MS07022	CSULA Hydrogen Station and Research Facility	MIS-08947	\$250,000.00
Total: \$250,000.00							
<i>2007-2008 Work Program</i>							
3/31/2015	4/16/2015	4/16/2015	4/17/2015	MS08058	Clean Energy Fuels Corp.	4	\$80,000.00
Total: \$80,000.00							
<i>2010-2011 Work Program</i>							
4/21/2015	4/29/2015	4/29/2015	4/30/2015	MS11001	Mineral LLC	101047	\$300.00
4/22/2015	4/29/2015	4/29/2015	4/30/2015	MS11056	The Better World Group	1392	\$17,146.02
Total: \$17,446.02							
<i>2011-2012 Work Program</i>							
4/29/2015	4/29/2015	4/29/2015	4/30/2015	MS12089	Riverside County Transportation Commission	896	\$53,415.18
4/16/2015	4/16/2015	4/16/2015	4/17/2015	MS12064	Anaheim Transportation Network	50270 FINAL	\$3,662.88
4/7/2015	4/16/2015	4/16/2015	4/17/2015	ML12066	City of Manhattan Beach	01 FINAL	\$5,900.00
3/26/2015	4/16/2015	4/16/2015	4/17/2015	MS12064	Anaheim Transportation Network	50269	\$3,611.40
3/26/2015	4/16/2015	4/16/2015	4/17/2015	MS12064	Anaheim Transportation Network	50268	\$2,225.08
Total: \$68,814.54							
<i>2012-2014 Work Program</i>							
4/22/2015	4/29/2015	4/29/2015	4/30/2015	MS14008	Orange County Transportation Authority	FR137126	\$601,187.00
4/28/2015				ML14011	City of Palm Springs	2 Final	\$24,627.00
4/22/2015	4/29/2015	4/29/2015	4/30/2015	ML14011	City of Palm Springs	1	\$54,000.00
4/1/2015	4/16/2015	4/16/2015	4/17/2015	MS14009	A-Z Bus Sales, Inc.	B3021	\$93,000.00
Total: \$772,814.00							
<i>2014-2016 Work Program</i>							
4/7/2015	4/16/2015	4/16/2015	4/17/2015	MS14089	Top Shelf Consulting, LLC	002	\$25,018.00
Total: \$25,018.00							

FYs 2004-05 Through 2012-14 AB2766 Contract Status Report

5/14/2015

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
FY 2004-2005 Contracts									
Open Contracts									
ML05014	Los Angeles County Department of	5/21/2007	11/20/2008	3/20/2016	\$204,221.00	\$0.00	Traffic Signal Synchronization	\$204,221.00	No
Total: 1									
Declined/Cancelled Contracts									
ML05005	City of Highland				\$20,000.00	\$0.00	2 Medium Duty CNG Vehicles	\$20,000.00	No
ML05008	Los Angeles County Department of				\$140,000.00	\$0.00	7 Heavy Duty LPG Street Sweepers	\$140,000.00	No
ML05010	Los Angeles County Department of				\$20,000.00	\$0.00	1 Heavy Duty CNG Bus	\$20,000.00	No
Total: 3									
Closed Contracts									
ML05006	City of Colton Public Works	7/27/2005	7/26/2006		\$30,000.00	\$30,000.00	3 Medium Duty CNG Vehicles	\$0.00	Yes
ML05011	Los Angeles County Department of	8/10/2006	12/9/2007	6/9/2008	\$52,409.00	\$51,048.46	3 Heavy Duty LPG Shuttle Vans	\$1,360.54	Yes
ML05013	Los Angeles County Department of	1/5/2007	7/4/2008	1/4/2013	\$313,000.00	\$313,000.00	Traffic Signal Synchronization	\$0.00	Yes
ML05015	City of Lawndale	7/27/2005	7/26/2006		\$10,000.00	\$10,000.00	1 Medium Duty CNG Vehicle	\$0.00	Yes
ML05016	City of Santa Monica	9/23/2005	9/22/2006	9/22/2007	\$350,000.00	\$350,000.00	6 MD CNG Vehicles, 1 LPG Sweep, 13 CNG	\$0.00	Yes
ML05017	City of Signal Hill	1/16/2006	7/15/2007		\$126,000.00	\$126,000.00	Traffic Signal Synchronization	\$0.00	Yes
ML05018	City of San Bernardino	4/19/2005	4/18/2006		\$40,000.00	\$40,000.00	4 M.D. CNG Vehicles	\$0.00	Yes
ML05019	City of Lakewood	5/6/2005	5/5/2006		\$10,000.00	\$10,000.00	1 M.D. CNG Vehicle	\$0.00	Yes
ML05020	City of Pomona	6/24/2005	6/23/2006		\$10,000.00	\$10,000.00	1 M.D. CNG Vehicle	\$0.00	Yes
ML05021	City of Whittier	7/7/2005	7/6/2006	4/6/2008	\$100,000.00	\$80,000.00	Sweeper, Aerial Truck, & 3 Refuse Trucks	\$20,000.00	Yes
ML05022	City of Claremont	9/23/2005	9/22/2006		\$20,000.00	\$20,000.00	2 M.D. CNG Vehicles	\$0.00	Yes
ML05024	City of Cerritos	4/18/2005	3/17/2006		\$10,000.00	\$10,000.00	1 M.D. CNG Vehicle	\$0.00	Yes
ML05025	City of Malibu	5/6/2005	3/5/2006		\$10,000.00	\$10,000.00	1 Medium-Duty CNG Vehicle	\$0.00	Yes
ML05026	City of Inglewood	1/6/2006	1/5/2007	2/5/2009	\$60,000.00	\$60,000.00	2 CNG Transit Buses, 1 CNG Pothole Patch	\$0.00	Yes
ML05027	City of Beaumont	2/23/2006	4/22/2007	6/22/2010	\$20,000.00	\$20,000.00	1 H.D. CNG Bus	\$0.00	Yes
ML05028	City of Anaheim	9/8/2006	9/7/2007	5/7/2008	\$85,331.00	\$85,331.00	Traffic signal coordination & synchronization	\$0.00	Yes
ML05029	Los Angeles World Airports	5/5/2006	9/4/2007		\$140,000.00	\$140,000.00	Seven CNG Buses	\$0.00	Yes
ML05071	City of La Canada Flintridge	1/30/2009	1/29/2011		\$20,000.00	\$20,000.00	1 CNG Bus	\$0.00	Yes
ML05072	Los Angeles County Department of	8/24/2009	5/23/2010	1/23/2011	\$349,000.00	\$349,000.00	Traffic Signal Synchronization (LADOT)	\$0.00	Yes
Total: 19									
Closed/Incomplete Contracts									

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
ML05007	Los Angeles County Dept of Beache	6/23/2006	6/22/2007	12/22/2007	\$50,000.00	\$0.00	5 Medium Duty CNG Vehicles	\$50,000.00	No
ML05009	Los Angeles County Department of	6/22/2006	12/21/2007	9/30/2011	\$56,666.00	\$0.00	2 Propane Refueling Stations	\$56,666.00	No
ML05012	Los Angeles County Department of	11/10/2006	5/9/2008	1/9/2009	\$349,000.00	\$0.00	Traffic Signal Synchronization (LADOT)	\$349,000.00	No
ML05023	City of La Canada Flintridge	3/30/2005	2/28/2006	8/28/2008	\$20,000.00	\$0.00	1 CNG Bus	\$20,000.00	No

Total: 4

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2005-2006 Contracts

Open Contracts

ML06031	City of Inglewood	4/4/2007	6/3/2013	9/3/2015	\$150,000.00	\$65,602.40	Purchase 4 H-D LPG Vehicles & Install LPG	\$84,397.60	No
ML06035	City of Hemet, Public Works	11/10/2006	12/9/2012	1/9/2017	\$338,107.00	\$175,000.00	7 Nat Gas Trucks & New Nat Gas Infrastruct	\$163,107.00	No
ML06054	Los Angeles County Department of	6/17/2009	6/16/2016		\$150,000.00	\$0.00	3 CNG & 3 LPG HD Trucks	\$150,000.00	No
ML06070	City of Colton	4/30/2008	2/28/2015	4/30/2015	\$50,000.00	\$0.00	Two CNG Pickups	\$50,000.00	No

Total: 4

Declined/Cancelled Contracts

ML06018	Los Angeles County Dept of Beache				\$375,000.00	\$0.00	New CNG Station & 2 CNG Dump Trucks	\$375,000.00	No
ML06019	Los Angeles County Dept of Beache				\$250,000.00	\$0.00	New CNG Station & 2 CNG Dump Trucks	\$250,000.00	No
ML06023	City of Baldwin Park	6/16/2006	9/15/2012		\$20,000.00	\$0.00	CNG Dump Truck	\$20,000.00	No
ML06024	City of Pomona	8/3/2007	7/2/2013	7/2/2014	\$286,450.00	\$0.00	New CNG Station	\$286,450.00	No
ML06030	City of Burbank	3/19/2007	9/18/2011		\$287,700.00	\$0.00	New CNG Fueling Station	\$287,700.00	No
ML06037	City of Lynwood				\$25,000.00	\$0.00	1 Nat Gas Dump Truck	\$25,000.00	No
ML06039	City of Inglewood	2/9/2007	2/8/2008	4/8/2011	\$50,000.00	\$0.00	Modify Maintenance Facility for CNG Vehicle	\$50,000.00	No
ML06055	City of Los Angeles, Dept. of Genera				\$125,000.00	\$0.00	5 Gas-Electric Hybrid Buses	\$125,000.00	No
ML06059	City of Fountain Valley				\$25,000.00	\$0.00	One H.D. CNG Truck	\$25,000.00	No
MS06009	Clean Energy Fuels Corp.	6/23/2006	12/22/2012		\$250,000.00	\$0.00	New CNG Station - Laguna Niguel	\$250,000.00	Yes
MS06040	Capistrano Unified School District				\$136,000.00	\$0.00	New CNG Fueling Station	\$136,000.00	No
MS06041	Clean Energy Fuels Corp.	12/1/2006	3/31/2013	6/18/2009	\$250,000.00	\$0.00	New CNG Station-Newport Beach	\$250,000.00	No
MS06046	City of Long Beach, Dept. of Public				\$250,000.00	\$0.00	LNG Fueling Station	\$250,000.00	No
MS06051	Menifee Union School District	3/2/2007	7/1/2014		\$150,000.00	\$0.00	CNG Fueling Station	\$150,000.00	No

Total: 14

Closed Contracts

ML06016	City of Whittier	5/25/2006	5/24/2012	11/24/2012	\$50,000.00	\$50,000.00	2 CNG Refuse Trucks	\$0.00	Yes
ML06017	City of Claremont	8/2/2006	4/1/2012		\$50,000.00	\$50,000.00	2 CNG Refuse Trucks	\$0.00	Yes
ML06020	Los Angeles Department of Water a	3/19/2007	9/18/2013	4/18/2014	\$25,000.00	\$25,000.00	CNG Aerial Truck	\$0.00	Yes
ML06021	Los Angeles World Airports	9/13/2006	5/12/2013		\$150,000.00	\$150,000.00	6 CNG Buses	\$0.00	Yes
ML06022	City of Los Angeles, Bureau of Sanit	5/4/2007	1/3/2014		\$1,250,000.00	\$1,250,000.00	50 LNG Refuse Trucks	\$0.00	Yes
ML06025	City of Santa Monica	1/5/2007	11/4/2012	12/14/2014	\$300,000.00	\$300,000.00	12 H.D. CNG Vehicles	\$0.00	Yes
ML06026	City of Cerritos	10/27/2006	9/26/2010		\$60,500.00	\$60,500.00	CNG Station Upgrade	\$0.00	Yes
ML06027	City of Redondo Beach	9/5/2006	5/4/2012	10/4/2012	\$50,000.00	\$50,000.00	2 Heavy-Duty CNG Trucks	\$0.00	Yes
ML06028	City of Pasadena	9/29/2006	11/28/2012	3/28/2014	\$245,000.00	\$245,000.00	New CNG Station & Maint. Fac. Upgrades	\$0.00	Yes
ML06029	City of Culver City Transportation De	9/29/2006	8/28/2012	12/28/2012	\$50,000.00	\$50,000.00	2 CNG Heavy-Duty Trucks	\$0.00	Yes
ML06032	City of Rancho Cucamonga	2/13/2007	3/12/2013	2/12/2014	\$237,079.00	\$237,079.00	New CNG Station & 2 CNG Dump Trucks	\$0.00	Yes
ML06033	City of Cathedral City	11/17/2006	12/16/2012	12/16/2013	\$125,000.00	\$125,000.00	5 Heavy-Duty CNG Trucks	\$0.00	Yes

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
ML06034	City of South Pasadena	9/25/2006	9/24/2012		\$16,422.42	\$16,422.42	2 Nat. Gas Transit Buses	\$0.00	Yes
ML06036	City of Riverside	3/23/2007	3/22/2013		\$200,000.00	\$200,000.00	8 Heavy-Duty Nat Gas Vehicles	\$0.00	Yes
ML06038	City of Los Angeles, Department of	5/21/2007	1/20/2014		\$625,000.00	\$625,000.00	25 CNG Street Sweepers	\$0.00	Yes
ML06044	City of Pomona	12/15/2006	3/14/2013		\$50,000.00	\$50,000.00	2 CNG Street Sweepers	\$0.00	Yes
ML06052	City of Hemet, Public Works	4/20/2007	2/19/2013		\$25,000.00	\$25,000.00	Purchase One CNG Dump Truck	\$0.00	Yes
ML06053	City of Burbank	5/4/2007	7/3/2013		\$125,000.00	\$125,000.00	Five Nat. Gas Refuse Trucks	\$0.00	Yes
ML06056	City of Los Angeles, Dept. of Genera	11/30/2007	11/29/2008		\$350,000.00	\$350,000.00	Maintenance Facility Mods.	\$0.00	Yes
ML06057	City of Rancho Cucamonga	8/28/2007	6/27/2013	8/27/2014	\$100,000.00	\$100,000.00	4 H.D. Nat. Gas Vehicles	\$0.00	Yes
ML06058	City of Santa Monica	7/12/2007	7/11/2013		\$149,925.00	\$0.00	3 H.D. CNG Trucks & CNG Fueling Station	\$149,925.00	No
ML06060	City of Temple City	6/12/2007	6/11/2013		\$31,885.00	\$0.00	Upgrade existing CNG infrastructure	\$31,885.00	No
ML06061	City of Chino Hills	4/30/2007	4/29/2013		\$25,000.00	\$25,000.00	One H.D. CNG Vehicle	\$0.00	Yes
ML06062	City of Redlands	5/11/2007	5/10/2013		\$100,000.00	\$100,000.00	4 H.D. LNG Vehicles	\$0.00	Yes
ML06063	City of Moreno Valley	3/23/2007	11/22/2012		\$25,000.00	\$25,000.00	One H.D. CNG Vehicle	\$0.00	Yes
ML06064	City of South Pasadena	1/25/2008	11/24/2013	11/24/2014	\$50,000.00	\$50,000.00	2 H.D. CNG Vehicles	\$0.00	Yes
ML06065	City of Walnut	6/29/2007	6/28/2013		\$44,203.00	\$44,203.00	Upgrade Existing CNG Infrastructure	\$0.00	Yes
ML06066	City of Ontario, Housing & Municipal	5/30/2007	1/29/2013		\$125,000.00	\$125,000.00	5 H.D. CNG Vehicles	\$0.00	Yes
ML06067	City of El Monte	3/17/2008	5/16/2014	11/16/2014	\$157,957.00	\$157,957.00	Upgrade existing CNG infrastructure	\$0.00	Yes
ML06068	City of Claremont	8/28/2007	6/27/2013		\$60,000.00	\$60,000.00	Expand existing CNG infrastructure	\$0.00	Yes
ML06069	City of Palos Verdes Estates	11/19/2007	11/18/2013		\$25,000.00	\$25,000.00	One H.D. CNG Vehicle	\$0.00	Yes
MS06001	Riverside County Transportation Co	8/3/2007	9/2/2011		\$825,037.00	\$825,037.00	New Freeway Service Patrol	\$0.00	Yes
MS06002	Orange County Transportation Autho	11/7/2007	11/6/2013		\$928,740.00	\$925,091.00	New Freeway Service Patrol	\$3,649.00	Yes
MS06003	San Bernardino Associated Govern	10/19/2006	6/18/2010		\$804,240.00	\$804,239.87	New Freeway Service Patrol	\$0.13	Yes
MS06004	Los Angeles County MTA	8/10/2006	7/9/2010		\$1,391,983.00	\$1,391,791.98	New Freeway Service Patrol	\$191.02	Yes
MS06010	US Airconditioning Distributors	12/28/2006	6/27/2012		\$83,506.00	\$83,506.00	New CNG Station - Industry	\$0.00	Yes
MS06011	County Sanitation Districts of L.A. C	6/1/2006	7/31/2012		\$150,000.00	\$150,000.00	New CNG Station - Carson	\$0.00	Yes
MS06012	Consolidated Disposal Service	7/14/2006	9/13/2012	9/13/2014	\$297,981.00	\$297,981.00	New LNG Station & Facility Upgrades	\$0.00	Yes
MS06042	Clean Energy Fuels Corp.	1/5/2007	1/4/2013		\$150,000.00	\$150,000.00	New CNG Station-Baldwin Park	\$0.00	Yes
MS06043X	Westport Fuel Systems, Inc.	2/3/2007	12/31/2010	9/30/2011	\$2,000,000.00	\$2,000,000.00	Advanced Natural Gas Engine Incentive Pro	\$0.00	Yes
MS06045	Orange County Transportation Autho	8/17/2007	12/16/2013		\$200,000.00	\$200,000.00	CNG Fueling Station/Maint. Fac. Mods	\$0.00	Yes
MS06047	Hemet Unified School District	9/19/2007	11/18/2013		\$125,000.00	\$125,000.00	CNG Refueling Station	\$0.00	Yes
MS06048	Newport-Mesa Unified School Distric	6/25/2007	8/24/2013	8/24/2014	\$50,000.00	\$50,000.00	CNG Fueling Station	\$0.00	Yes
MS06050	Rossmoor Pastries	1/24/2007	10/23/2012		\$18,750.00	\$14,910.50	CNG Fueling Station	\$3,839.50	Yes

Total: 44

Open/Complete Contracts

ML06071	City of Santa Monica	6/13/2014		11/30/2016	\$149,925.00	\$149,925.00	3 H.D. CNG Trucks & CNG Fueling Station	\$0.00	Yes
MS06013	City of Commerce	1/9/2008	7/8/2014	7/8/2015	\$350,000.00	\$350,000.00	New L/CNG Station - Commerce	\$0.00	Yes
MS06049	Clean Energy Fuels Corp.	4/20/2007	7/19/2013	11/30/2015	\$250,000.00	\$228,491.18	CNG Fueling Station - L.B.P.D.	\$21,508.82	Yes

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2006-2007 Contracts

Open Contracts

ML07044	City of Santa Monica	9/8/2008	3/7/2015	3/7/2017	\$600,000.00	\$50,000.00	24 H.D. Nat. Gas Vehicles	\$550,000.00	No
ML07045	City of Inglewood	2/6/2009	4/5/2015		\$75,000.00	\$25,000.00	3 H.D. Nat. Gas Vehicles	\$50,000.00	No

Total: 2

Declined/Cancelled Contracts

ML07031	City of Santa Monica				\$180,000.00	\$0.00	Upgrade N.G. Station to Add Hythane	\$180,000.00	No
ML07032	City of Huntington Beach Public Wor				\$25,000.00	\$0.00	One H.D. CNG Vehicle	\$25,000.00	No
ML07035	City of Los Angeles, General Service				\$350,000.00	\$0.00	New CNG Refueling Station/Southeast Yard	\$350,000.00	No
ML07038	City of Palos Verdes Estates				\$25,000.00	\$0.00	One H.D. LPG Vehicle	\$25,000.00	No

Total: 4

Closed Contracts

ML07025	City of San Bernardino	8/12/2008	7/11/2010		\$350,000.00	\$350,000.00	Maintenance Facility Modifications	\$0.00	Yes
ML07026	City of South Pasadena	6/13/2008	6/12/2014		\$25,000.00	\$25,000.00	One H.D. CNG Vehicle	\$0.00	Yes
ML07027	Los Angeles World Airports	6/3/2008	7/2/2014		\$25,000.00	\$25,000.00	One H.D. LNG Vehicle	\$0.00	Yes
ML07028	City of Los Angeles, General Service	3/13/2009	3/12/2014		\$350,000.00	\$350,000.00	New CNG Refueling Station/Hollywood Yard	\$0.00	Yes
ML07029	City of Los Angeles, General Service	3/13/2009	3/12/2014		\$350,000.00	\$350,000.00	New CNG Refueling Station/Venice Yard	\$0.00	Yes
ML07033	City of La Habra	5/21/2008	6/20/2014	11/30/2013	\$25,000.00	\$25,000.00	One H.D. Nat Gas Vehicle	\$0.00	Yes
ML07034	City of Los Angeles, General Service	3/13/2009	3/12/2014		\$350,000.00	\$350,000.00	New CNG Refueling Station/Van Nuys Yard	\$0.00	Yes
ML07036	City of Alhambra	1/23/2009	2/22/2015		\$50,000.00	\$50,000.00	2 H.D. CNG Vehicles	\$0.00	Yes
ML07040	City of Moreno Valley	6/3/2008	9/2/2014		\$25,000.00	\$25,000.00	One Heavy-Duty CNG Vehicle	\$0.00	Yes
ML07041	City of La Quinta	6/6/2008	6/5/2014		\$25,000.00	\$25,000.00	One CNG Street Sweeper	\$0.00	Yes
ML07042	City of La Quinta	8/15/2008	9/14/2010		\$100,000.00	\$100,000.00	Street Sweeping Operations	\$0.00	Yes
ML07046	City of Culver City Transportation De	5/2/2008	5/1/2014		\$25,000.00	\$25,000.00	One H.D. Nat. Gas Vehicle	\$0.00	Yes
ML07047	City of Cathedral City	6/16/2008	9/15/2014	3/15/2015	\$225,000.00	\$225,000.00	Two H.D. Nat. Gas Vehicles/New CNG Fueli	\$0.00	Yes
ML07048	City of Cathedral City	9/19/2008	10/18/2010		\$100,000.00	\$84,972.45	Street Sweeping Operations	\$15,027.55	Yes

Total: 14

Open/Complete Contracts

ML07023	City of Riverside	6/20/2008	10/19/2014	7/19/2016	\$462,500.00	\$461,476.42	CNG Station Expansion/Purch. 14 H.D. Vehi	\$1,023.58	No
ML07024	City of Garden Grove	3/7/2008	9/6/2014	7/6/2016	\$75,000.00	\$75,000.00	Three H.D. CNG Vehicles	\$0.00	Yes
ML07030	County of San Bernardino Public Wo	7/11/2008	9/10/2015		\$200,000.00	\$200,000.00	8 Natural Gas H.D. Vehicles	\$0.00	Yes
ML07037	City of Los Angeles, General Service	10/8/2008	10/7/2015		\$255,222.00	\$255,222.00	Upgrade LNG/LCNG Station/East Valley Yar	\$0.00	Yes
ML07039	City of Baldwin Park	6/6/2008	6/5/2014	8/5/2015	\$50,000.00	\$50,000.00	Two N.G. H.D. Vehicles	\$0.00	Yes
ML07043	City of Redondo Beach	9/28/2008	7/27/2014	10/27/2016	\$125,000.00	\$125,000.00	Five H.D. CNG Transit Vehicles	\$0.00	Yes

Total: 6

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2007-2008 Contracts

Open Contracts

ML08028	City of Santa Monica	9/11/2009	9/10/2016	5/10/2019	\$600,000.00	\$0.00	24 CNG Heavy-Duty Vehicles	\$600,000.00	No
ML08030	City of Azusa	5/14/2010	3/13/2016		\$25,000.00	\$0.00	1 LPG Heavy-Duty Vehicle	\$25,000.00	No
ML08040	City of Riverside	9/11/2009	9/10/2016	3/10/2019	\$455,500.00	\$28,124.80	16 CNG Vehicles, Expand CNG Station & M	\$427,375.20	No
ML08043	City of Desert Hot Springs	9/25/2009	3/24/2016		\$25,000.00	\$0.00	1 CNG Heavy-Duty Vehicle	\$25,000.00	No
ML08080	City of Irvine	5/1/2009	5/31/2015		\$50,000.00	\$0.00	Two Heavy-Duty Nat. Gas Vehicles	\$50,000.00	No
MS08007	United Parcel Service West Region	12/10/2008	10/9/2014	4/9/2019	\$300,000.00	\$0.00	10 H.D. Nat. Gas Vehicles	\$300,000.00	No
MS08013	United Parcel Service West Region	12/10/2008	10/9/2014	3/9/2019	\$480,000.00	\$216,000.00	12 H.D. Nat. Gas Yard Tractors	\$264,000.00	No
MS08015	Yosemite Waters	5/12/2009	5/11/2015		\$180,000.00	\$117,813.60	11 H.D. Propane Vehicles	\$62,186.40	No
MS08018	Los Angeles County Department of	8/7/2009	10/6/2016	4/6/2018	\$60,000.00	\$0.00	2 CNG Vehicles	\$60,000.00	No
MS08058	Clean Energy Fuels Corp.	11/26/2009	3/25/2016	3/25/2017	\$400,000.00	\$320,000.00	New CNG Station - Ontario Airport	\$80,000.00	No
MS08068	Regents of the University of Californi	11/5/2010	11/4/2017	11/4/2019	\$400,000.00	\$0.00	Hydrogen Station	\$400,000.00	No

Total: 11

Declined/Cancelled Contracts

ML08032	City of Irvine	5/1/2009	8/31/2010		\$9,000.00	\$0.00	36 Vehicles (Diagnostic)	\$9,000.00	No
ML08041	City of Los Angeles, Dept of Transpo	8/6/2010	7/5/2011	12/5/2011	\$8,800.00	\$0.00	73 Vehicles (Diagnostic)	\$8,800.00	No
ML08049	City of Cerritos	3/20/2009	1/19/2015	2/19/2017	\$25,000.00	\$0.00	1 CNG Heavy-Duty Vehicle	\$25,000.00	No
ML08051	City of Colton				\$75,000.00	\$0.00	3 CNG Heavy-Duty Vehicles	\$75,000.00	No
MS08002	Orange County Transportation Autho				\$1,500,000.00	\$0.00	Big Rig Freeway Service Patrol	\$1,500,000.00	No
MS08008	Diversified Truck Rental & Leasing				\$300,000.00	\$0.00	10 H.D. Nat. Gas Vehicles	\$300,000.00	No
MS08010	Orange County Transportation Autho				\$10,000.00	\$0.00	20 H.D. Nat. Gas Vehicles	\$10,000.00	No
MS08011	Green Fleet Systems, LLC				\$10,000.00	\$0.00	30 H.D. Nat. Gas Vehicles	\$10,000.00	No
MS08052	Burrtec Waste Industries, Inc.	12/24/2008	11/23/2014	11/23/2015	\$100,000.00	\$0.00	New CNG Station - Fontana	\$100,000.00	No
MS08054	Clean Energy Fuels Corp.				\$400,000.00	\$0.00	New LNG Station - Fontana	\$400,000.00	No
MS08055	Clean Energy Fuels Corp.	11/26/2009	3/25/2016	3/25/2017	\$400,000.00	\$0.00	New LNG Station - Long Beach-Pier S	\$400,000.00	No
MS08059	Burrtec Waste Industries, Inc.	12/24/2008	11/23/2014		\$100,000.00	\$0.00	New CNG Station - San Bernardino	\$100,000.00	No
MS08060	Burrtec Waste Industries, Inc.	12/24/2008	11/23/2014		\$100,000.00	\$0.00	New CNG Station - Azusa	\$100,000.00	No
MS08062	Go Natural Gas	9/25/2009	1/24/2016	1/24/2017	\$400,000.00	\$0.00	New CNG Station - Rialto	\$400,000.00	No
MS08074	Fontana Unified School District	11/14/2008	12/13/2014		\$200,000.00	\$0.00	Expansion of Existing CNG station	\$200,000.00	No
MS08077	Hythane Company, LLC				\$144,000.00	\$0.00	Upgrade Station to Hythane	\$144,000.00	No

Total: 16

Closed Contracts

ML08023	City of Villa Park	11/7/2008	10/6/2012		\$6,500.00	\$5,102.50	Upgrade of Existing Refueling Facility	\$1,397.50	Yes
ML08027	Los Angeles County Department of	7/20/2009	1/19/2011	1/19/2012	\$6,901.00	\$5,124.00	34 Vehicles (Diagnostic)	\$1,777.00	No
ML08029	City of Gardena	3/19/2009	1/18/2015		\$25,000.00	\$25,000.00	1 Propane Heavy-Duty Vehicle	\$0.00	Yes

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
ML08031	City of Claremont	3/27/2009	3/26/2013	3/26/2015	\$97,500.00	\$97,500.00	Upgrade of Existing CNG Station, Purchase	\$0.00	Yes
ML08033	County of San Bernardino Public Wo	4/3/2009	2/2/2010		\$14,875.00	\$14,875.00	70 Vehicles (Diagnostic)	\$0.00	Yes
ML08035	City of La Verne	3/6/2009	11/5/2009		\$11,925.00	\$11,925.00	53 Vehicles (Diagnostic)	\$0.00	Yes
ML08036	City of South Pasadena	5/12/2009	7/11/2013		\$169,421.00	\$169,421.00	New CNG Station	\$0.00	Yes
ML08044	City of Chino	3/19/2009	3/18/2015		\$25,000.00	\$25,000.00	1 CNG Heavy-Duty Vehicle	\$0.00	Yes
ML08045	City of Santa Clarita	2/20/2009	6/19/2010		\$3,213.00	\$3,150.00	14 Vehicles (Diagnostic)	\$63.00	Yes
ML08046	City of Paramount	2/20/2009	2/19/2015		\$25,000.00	\$25,000.00	1 CNG Heavy-Duty Vehicle	\$0.00	Yes
MS08001	Los Angeles County MTA	12/10/2010	6/9/2014		\$1,500,000.00	\$1,499,999.66	Big Rig Freeway Service Patrol	\$0.34	Yes
MS08003	A-Z Bus Sales, Inc.	5/2/2008	12/31/2008	2/28/2009	\$1,480,000.00	\$1,400,000.00	Alternative Fuel School Bus Incentive Progr	\$80,000.00	Yes
MS08004	BusWest	5/2/2008	12/31/2008		\$1,440,000.00	\$1,440,000.00	Alternative Fuel School Bus Incentive Progr	\$0.00	Yes
MS08009	Los Angeles World Airports	12/24/2008	12/23/2014		\$870,000.00	\$870,000.00	29 H.D. Nat. Gas Vehicles	\$0.00	Yes
MS08016	TransVironmental Solutions, Inc.	1/23/2009	12/31/2010	9/30/2011	\$227,198.00	\$80,351.34	Rideshare 2 School Program	\$146,846.66	Yes
MS08022	SunLine Transit Agency	12/18/2008	3/17/2015		\$311,625.00	\$311,625.00	15 CNG Buses	\$0.00	Yes
MS08056	Clean Energy Fuels Corp.	11/26/2009	2/25/2015		\$400,000.00	\$400,000.00	New LNG Station - POLB-Anah. & I	\$0.00	Yes
MS08061	Clean Energy Fuels Corp.	12/4/2009	3/3/2015		\$400,000.00	\$400,000.00	New CNG Station - L.A.-La Cienega	\$0.00	Yes
MS08064	Hemet Unified School District	1/9/2009	3/8/2015		\$75,000.00	\$75,000.00	Expansion of Existing Infrastructure	\$0.00	Yes
MS08065	Pupil Transportation Cooperative	11/20/2008	7/19/2014		\$10,500.00	\$10,500.00	Existing CNG Station Modifications	\$0.00	Yes
MS08070	Clean Energy Fuels Corp.	11/26/2009	2/25/2015		\$400,000.00	\$400,000.00	New CNG Station - Paramount	\$0.00	Yes
MS08071	ABC Unified School District	1/16/2009	1/15/2015		\$63,000.00	\$63,000.00	New CNG Station	\$0.00	Yes
MS08072	Clean Energy Fuels Corp.	12/4/2009	3/3/2015		\$400,000.00	\$354,243.38	New CNG Station - Burbank	\$45,756.62	Yes
MS08073	Clean Energy Fuels Corp.	11/26/2009	2/25/2015		\$400,000.00	\$400,000.00	New CNG Station - Norwalk	\$0.00	Yes
MS08075	Disneyland Resort	12/10/2008	2/1/2015		\$200,000.00	\$200,000.00	Expansion of Existing CNG Infrastructure	\$0.00	Yes
MS09002	A-Z Bus Sales, Inc.	11/7/2008	12/31/2009	12/31/2010	\$2,520,000.00	\$2,460,000.00	Alternative Fuel School Bus Incentive Progr	\$60,000.00	No
MS09004	A-Z Bus Sales, Inc.	1/30/2009	3/31/2009		\$156,000.00	\$156,000.00	Alternative Fuel School Bus Incentive Progr	\$0.00	Yes
MS09047	BusWest	7/9/2010	12/31/2010	4/30/2011	\$480,000.00	\$480,000.00	Alternative Fuel School Bus Incentive Progr	\$0.00	Yes

Total: 28

Closed/Incomplete Contracts

ML08025	Los Angeles County Department of	10/30/2009	3/29/2011		\$75,000.00	\$0.00	150 Vehicles (Diagnostic)	\$75,000.00	No
MS08079	ABC Unified School District	1/16/2009	12/15/2009	12/15/2010	\$50,000.00	\$0.00	Maintenance Facility Modifications	\$50,000.00	No

Total: 2

Open/Complete Contracts

ML08024	City of Anaheim	7/9/2010	7/8/2017	1/8/2018	\$425,000.00	\$425,000.00	9 LPG Buses and 8 CNG Buses	\$0.00	No
ML08026	Los Angeles County Department of	7/20/2009	7/19/2016		\$250,000.00	\$250,000.00	10 LPG Heavy-Duty Vehicles	\$0.00	Yes
ML08034	County of San Bernardino Public Wo	3/27/2009	7/26/2015		\$150,000.00	\$150,000.00	8 CNG Heavy-Duty Vehicles	\$0.00	Yes
ML08037	City of Glendale	5/20/2009	5/19/2015		\$325,000.00	\$325,000.00	13 CNG Heavy-Duty Vehicles	\$0.00	Yes
ML08038	Los Angeles Department of Water a	7/16/2010	7/15/2017		\$1,050,000.00	\$1,050,000.00	42 CNG Heavy-Duty Vehicles	\$0.00	Yes
ML08039	City of Rancho Palos Verdes	6/5/2009	8/4/2015		\$50,000.00	\$50,000.00	2 LPG Transit Buses	\$0.00	Yes

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
ML08042	City of Ontario, Housing & Municipal	5/1/2009	1/31/2016		\$175,000.00	\$175,000.00	7 CNG Heavy-Duty Vehicles	\$0.00	Yes
ML08047	City of Culver City Transportation De	5/12/2009	8/11/2015		\$150,000.00	\$150,000.00	6 CNG Heavy-Duty Vehicles	\$0.00	Yes
ML08048	City of Santa Clarita	2/20/2009	6/19/2015		\$25,000.00	\$25,000.00	1 CNG Heavy-Duty Vehicle	\$0.00	Yes
ML08050	City of Laguna Beach Public Works	8/12/2009	4/11/2016	10/11/2016	\$75,000.00	\$75,000.00	3 LPG Trolleys	\$0.00	Yes
MS08005	Burrtec Waste Industries, Inc.	10/23/2008	11/22/2014	10/22/2015	\$450,000.00	\$450,000.00	15 H.D. Nat. Gas Vehicles - Azusa	\$0.00	Yes
MS08006	Burrtec Waste Industries, Inc.	10/23/2008	11/22/2014	10/22/2015	\$450,000.00	\$450,000.00	15 H.D. Nat. Gas Vehicles - Saugus	\$0.00	Yes
MS08012	California Cartage Company, LLC	12/21/2009	10/20/2015	4/20/2016	\$480,000.00	\$480,000.00	12 H.D. Nat. Gas Yard Tractors	\$0.00	Yes
MS08014	City of San Bernardino	12/5/2008	6/4/2015		\$390,000.00	\$360,000.00	13 H.D. Nat. Gas Vehicles	\$30,000.00	Yes
MS08017	Omnitrans	12/13/2008	12/12/2015	12/12/2016	\$900,000.00	\$900,000.00	30 CNG Buses	\$0.00	Yes
MS08019	Enterprise Rent-A-Car Company of L	2/12/2010	7/11/2016		\$300,000.00	\$300,000.00	10 CNG Vehicles	\$0.00	Yes
MS08020	Ware Disposal Company, Inc.	11/25/2008	2/24/2016		\$900,000.00	\$900,000.00	30 CNG Vehicles	\$0.00	Yes
MS08021	CalMet Services, Inc.	1/9/2009	1/8/2016	7/8/2016	\$900,000.00	\$900,000.00	30 CNG Vehicles	\$0.00	Yes
MS08053	City of Los Angeles, Bureau of Sanit	2/18/2009	12/17/2015		\$400,000.00	\$400,000.00	New LNG/CNG Station	\$0.00	Yes
MS08057	Orange County Transportation Autho	5/14/2009	7/13/2015		\$400,000.00	\$400,000.00	New CNG Station - Garden Grove	\$0.00	Yes
MS08063	Go Natural Gas	9/25/2009	1/24/2016	1/24/2017	\$400,000.00	\$400,000.00	New CNG Station - Moreno Valley	\$0.00	Yes
MS08066	Clean Energy Fuels Corp.	11/26/2009	2/25/2015		\$400,000.00	\$400,000.00	New CNG Station - Palm Spring Airport	\$0.00	Yes
MS08067	Trillium CNG	3/19/2009	6/18/2015	6/18/2016	\$311,600.00	\$254,330.00	New CNG Station	\$57,270.00	Yes
MS08069	Perris Union High School District	6/5/2009	8/4/2015	8/4/2016	\$225,000.00	\$225,000.00	New CNG Station	\$0.00	Yes
MS08076	Azusa Unified School District	10/17/2008	11/16/2014	1/31/2017	\$172,500.00	\$172,500.00	New CNG station and maint. Fac. Modificati	\$0.00	Yes
MS08078	SunLine Transit Agency	12/10/2008	6/9/2015	2/9/2016	\$189,000.00	\$189,000.00	CNG Station Upgrade	\$0.00	Yes

Total: 26

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2008-2009 Contracts

Open Contracts

ML09010	City of Palm Springs	1/8/2010	2/7/2016		\$25,000.00	\$0.00	1 Nat. Gas Heavy-Duty Vehicle	\$25,000.00	No
ML09026	Los Angeles County Department of	10/15/2010	10/14/2017	4/14/2019	\$150,000.00	\$0.00	3 Off-Road Vehicles Repowers	\$150,000.00	No
ML09032	Los Angeles World Airports	4/8/2011	4/7/2018		\$175,000.00	\$0.00	7 Nat. Gas Heavy-Duty Vehicles	\$175,000.00	No
ML09033	City of Beverly Hills	3/4/2011	5/3/2017	5/3/2018	\$550,000.00	\$100,000.00	10 Nat. Gas Heavy-Duty Vehicles & CNG St	\$450,000.00	No
ML09036	City of Long Beach Fleet Services B	5/7/2010	5/6/2017	5/6/2020	\$875,000.00	\$525,000.00	Purchase 35 LNG Refuse Trucks	\$350,000.00	No
ML09047	Los Angeles County Department of	8/13/2014	8/12/2015		\$400,000.00	\$0.00	Maintenance Facility Modifications	\$400,000.00	No

Total: 6

Declined/Cancelled Contracts

ML09017	County of San Bernardino Public Wo	1/28/2010	7/27/2016		\$200,000.00	\$0.00	8 Nat. Gas Heavy-Duty Vehicles	\$200,000.00	No
ML09018	Los Angeles Department of Water a	7/16/2010	9/15/2012		\$850,000.00	\$0.00	Retrofit 85 Off-Road Vehicles w/DECS	\$850,000.00	No
ML09019	City of San Juan Capistrano Public	12/4/2009	11/3/2010		\$10,125.00	\$0.00	Remote Vehicle Diagnostics/45 Vehicles	\$10,125.00	No
ML09022	Los Angeles County Department of				\$8,250.00	\$0.00	Remote Vehicle Diagnostics/15 Vehicles	\$8,250.00	No
ML09025	Los Angeles County Department of	10/15/2010	12/14/2012	6/14/2013	\$50,000.00	\$0.00	Remote Vehicle Diagnostics/85 Vehicles	\$50,000.00	No
ML09028	Riverside County Waste Manageme				\$140,000.00	\$0.00	Retrofit 7 Off-Road Vehicles w/DECS	\$140,000.00	No
ML09039	City of Inglewood				\$310,000.00	\$0.00	Purchase 12 H.D. CNG Vehicles and Remot	\$310,000.00	No
ML09040	City of Cathedral City				\$83,125.00	\$0.00	Purchase 3 H.D. CNG Vehicles and Remote	\$83,125.00	No
ML09044	City of San Dimas				\$425,000.00	\$0.00	Install CNG Station and Purchase 1 CNG S	\$425,000.00	No
ML09045	City of Orange				\$125,000.00	\$0.00	Purchase 5 CNG Sweepers	\$125,000.00	No
MS09003	FuelMaker Corporation				\$296,000.00	\$0.00	Home Refueling Apparatus Incentives	\$296,000.00	No

Total: 11

Closed Contracts

ML09007	City of Rancho Cucamonga	2/26/2010	4/25/2012		\$117,500.00	\$62,452.57	Maintenance Facility Modification	\$55,047.43	Yes
ML09013	City of Riverside Public Works	9/10/2010	12/9/2011	7/31/2013	\$144,470.00	\$128,116.75	Traffic Signal Synchr./Moreno Valley	\$16,353.25	Yes
ML09014	City of Riverside Public Works	9/10/2010	12/9/2011	7/31/2013	\$113,030.00	\$108,495.94	Traffic Signal Synchr./Corona	\$4,534.06	Yes
ML09015	City of Riverside Public Works	9/10/2010	12/9/2011	7/31/2013	\$80,060.00	\$79,778.52	Traffic Signal Synchr./Co. of Riverside	\$281.48	Yes
ML09016	County of San Bernardino Public Wo	1/28/2010	3/27/2014		\$50,000.00	\$50,000.00	Install New CNG Station	\$0.00	Yes
ML09020	County of San Bernardino	8/16/2010	2/15/2012		\$49,770.00	\$49,770.00	Remote Vehicle Diagnostics/252 Vehicles	\$0.00	Yes
ML09021	City of Palm Desert	7/9/2010	3/8/2012		\$39,450.00	\$38,248.87	Traffic Signal Synchr./Rancho Mirage	\$1,201.13	Yes
ML09024	Los Angeles County Department of	10/15/2010	12/14/2012	6/14/2013	\$400,000.00	\$0.00	Maintenance Facility Modifications	\$400,000.00	No
ML09027	Los Angeles County Department of	7/23/2010	3/22/2012	6/22/2012	\$150,000.00	\$150,000.00	Freeway Detector Map Interface	\$0.00	Yes
ML09030	City of Los Angeles GSD/Fleet Servi	6/18/2010	6/17/2011		\$22,310.00	\$22,310.00	Remote Vehicle Diagnostics/107 Vehicles	\$0.00	No
MS09001	Administrative Services Co-Op/Long	3/5/2009	6/30/2012	12/31/2013	\$225,000.00	\$150,000.00	15 CNG Taxicabs	\$75,000.00	Yes
MS09005	Gas Equipment Systems, Inc.	6/19/2009	10/18/2010		\$71,000.00	\$71,000.00	Provide Temp. Fueling for Mountain Area C	\$0.00	Yes

Total: 12

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
Open/Complete Contracts									
ML09008	City of Culver City Transportation De	1/19/2010	7/18/2016	7/18/2017	\$175,000.00	\$175,000.00	8 Nat. Gas Heavy-Duty Vehicles	\$0.00	No
ML09009	City of South Pasadena	11/5/2010	12/4/2016	3/4/2019	\$125,930.00	\$125,930.00	CNG Station Expansion	\$0.00	No
ML09011	City of San Bernardino	2/19/2010	5/18/2016		\$250,000.00	\$250,000.00	10 Nat. Gas Heavy-Duty Vehicles	\$0.00	Yes
ML09012	City of Gardena	3/12/2010	11/11/2015		\$25,000.00	\$25,000.00	1 Nat. Gas Heavy-Duty Vehicle	\$0.00	Yes
ML09023	Los Angeles County Department of	12/10/2010	12/9/2017		\$50,000.00	\$50,000.00	2 Heavy-Duty Alternative Fuel Transit Vehic	\$0.00	No
ML09029	City of Whittier	11/6/2009	4/5/2016		\$25,000.00	\$25,000.00	1 Nat. Gas Heavy-Duty Vehicle	\$0.00	Yes
ML09031	City of Los Angeles, Department of	10/29/2010	10/28/2017		\$825,000.00	\$825,000.00	33 Nat. Gas Heavy-Duty Vehicles	\$0.00	Yes
ML09034	City of La Palma	11/25/2009	6/24/2015		\$25,000.00	\$25,000.00	1 LPG Heavy-Duty Vehicle	\$0.00	Yes
ML09035	City of Fullerton	6/17/2010	6/16/2017	12/16/2018	\$450,000.00	\$450,000.00	2 Heavy-Duty CNG Vehicles & Install CNG	\$0.00	Yes
ML09037	City of Redondo Beach	6/18/2010	6/17/2016		\$50,000.00	\$50,000.00	Purchase Two CNG Sweepers	\$0.00	Yes
ML09038	City of Chino	9/27/2010	5/26/2017		\$250,000.00	\$250,000.00	Upgrade Existing CNG Station	\$0.00	Yes
ML09041	City of Los Angeles, Bureau of Sanit	10/1/2010	9/30/2017		\$875,000.00	\$875,000.00	Purchase 35 H.D. Nat. Gas Vehicles	\$0.00	Yes
ML09042	Los Angeles Department of Water a	12/10/2010	12/9/2017		\$1,400,000.00	\$1,400,000.00	Purchase 56 Dump Trucks	\$0.00	Yes
ML09043	City of Covina	10/8/2010	4/7/2017	10/7/2018	\$179,591.00	\$179,591.00	Upgrade Existing CNG Station	\$0.00	Yes
ML09046	City of Newport Beach	5/20/2010	5/19/2016		\$162,500.00	\$162,500.00	Upgrade Existing CNG Station, Maintenance	\$0.00	Yes

Total: 15

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2009-2010 Contracts

Open Contracts

MS10005	Domestic Linen Supply Company, In	10/8/2010	7/7/2016		\$47,444.00	\$0.00	Purchase 5 Gas-Electric Hybrid Vehicles	\$47,444.00	No
MS10015	County of Los Angeles Department o	3/14/2014	5/13/2016		\$37,955.00	\$0.00	Purchase 2 H.D. CNG Vehicles	\$37,955.00	No

Total: 2

Declined/Cancelled Contracts

MS10003	City of Sierra Madre	5/11/2012	3/10/2018		\$13,555.00	\$0.00	Purchase 1 H.D. CNG Vehicle	\$13,555.00	No
MS10013	City of San Bernardino				\$68,834.00	\$0.00	Purchase 9 H.D. LNG Vehicles	\$68,834.00	No
MS10014	Serv-Wel Disposal				\$18,977.00	\$0.00	Purchase 2 H.D. CNG Vehicles	\$18,977.00	No
MS10018	Shaw Transport Inc.				\$81,332.00	\$0.00	Purchase 6 H.D. LNG Vehicles	\$81,332.00	No
MS10022	Los Angeles World Airports				\$123,353.00	\$0.00	Purchase 13 H.D. CNG Vehicles	\$123,353.00	No
MS10023	Dix Leasing				\$105,000.00	\$0.00	Purchase 3 H.D. LNG Vehicles	\$105,000.00	No

Total: 6

Closed Contracts

MS10001	Los Angeles County MTA	3/19/2010	2/28/2011	4/28/2011	\$300,000.00	\$196,790.61	Clean Fuel Transit Bus Service to Dodger St	\$103,209.39	Yes
MS10002	Coachella Valley Association of Gov	6/18/2010	2/17/2011		\$400,000.00	\$400,000.00	Coachella Valley PM10 Reduction Street Sw	\$0.00	Yes
MS10025	Elham Shirazi	2/18/2011	10/17/2012	2/17/2014	\$199,449.00	\$188,413.05	Telework Demonstration Program	\$11,035.95	No

Total: 3

Open/Complete Contracts

MS10004	Linde LLC	3/2/2012	6/1/2018		\$56,932.00	\$56,931.00	Purchase 6 H.D. CNG Vehicles	\$1.00	Yes
MS10006	Nationwide Environmental Services	11/19/2010	4/18/2017	9/18/2019	\$94,887.00	\$94,887.00	Purchase Three Street Sweepers	\$0.00	Yes
MS10007	Enterprise Rent-A-Car Company of L	7/15/2011	10/14/2017		\$18,976.00	\$18,976.00	Purchase 2 H.D. CNG Vehicles	\$0.00	No
MS10008	Republic Services, Inc.	12/10/2010	5/9/2017		\$123,354.00	\$123,354.00	Purchase 4 CNG Refuse Collection Vehicles	\$0.00	Yes
MS10009	Ware Disposal Company, Inc.	10/29/2010	3/28/2017		\$123,353.00	\$123,352.00	Purchase 4 CNG Refuse Trucks	\$1.00	No
MS10010	New Bern Transport Corporation	10/29/2010	3/28/2017		\$113,864.00	\$113,864.00	Repower 4 Heavy-Duty Vehicles	\$0.00	Yes
MS10011	Foothill Transit Agency	3/9/2012	2/8/2018		\$113,865.00	\$113,865.00	Purchase 12 H.D. CNG Vehicles	\$0.00	Yes
MS10012	Foothill Transit Agency	3/9/2012	3/8/2019		\$85,392.00	\$85,392.00	Purchase 9 H.D. Electric Vehicles	\$0.00	Yes
MS10016	Rio Hondo Community College	11/5/2010	5/4/2017		\$16,077.00	\$16,077.00	Purchase 1 CNG Shuttle Bus	\$0.00	Yes
MS10017	Ryder System Inc.	12/30/2011	6/29/2018	12/29/2018	\$651,377.00	\$651,377.00	Purchase 19 H.D. Natural Gas Vehicles	\$0.00	Yes
MS10019	EDCO Disposal Corporation	11/19/2010	2/18/2017		\$379,549.00	\$379,283.81	Purchase 11 H.D. CNG Refuse Trucks	\$265.19	Yes
MS10020	American Reclamation, Inc.	5/6/2011	2/5/2018		\$18,977.00	\$18,977.00	Purchase 1 H.D. CNG Vehicle	\$0.00	Yes
MS10021	City of Glendora	10/29/2010	11/28/2016		\$9,489.00	\$9,489.00	Purchase 1 H.D. CNG Vehicle	\$0.00	Yes
MS10024	Frito-Lay North America	7/29/2011	9/28/2017		\$47,444.00	\$47,444.00	Purchase 5 Electric Vehicles	\$0.00	Yes

Total: 14

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2010-2011 Contracts

Open Contracts

ML11020	City of Indio	2/1/2013	3/31/2019	9/30/2019	\$30,000.00	\$0.00	Retrofit one H.D. Vehicles w/DECS, repower	\$30,000.00	No
ML11023	City of Rancho Cucamonga	4/20/2012	12/19/2018	9/19/2020	\$260,000.00	\$60,000.00	Expand Existing CNG Station, 2 H.D. Vehicl	\$200,000.00	No
ML11024	County of Los Angeles, Dept of Publi	12/5/2014	6/4/2022		\$90,000.00	\$0.00	Purchase 3 Nat. Gas H.D. Vehicles	\$90,000.00	No
ML11025	County of Los Angeles Department o	3/14/2014	9/13/2021		\$150,000.00	\$0.00	Purchase 5 Nat. Gas H.D. Vehicles	\$150,000.00	No
ML11027	City of Los Angeles, Dept. of Genera	5/4/2012	7/3/2015		\$300,000.00	\$0.00	Maintenance Facility Modifications	\$300,000.00	No
ML11029	City of Santa Ana	9/7/2012	3/6/2020		\$262,500.00	\$0.00	Expansion of Existing CNG Station, Install N	\$262,500.00	No
ML11032	City of Gardena	3/2/2012	9/1/2018		\$102,500.00	\$0.00	Modify Maint. Facility, Expand CNG station,	\$102,500.00	No
ML11036	City of Riverside	1/27/2012	1/26/2019	3/26/2021	\$670,000.00	\$0.00	Install New CNG Station, Purchase 9 H.D. N	\$670,000.00	No
ML11038	City of Santa Monica	5/18/2012	7/17/2018		\$400,000.00	\$0.00	Maintenance Facility Modifications	\$400,000.00	No
ML11040	City of South Pasadena	5/4/2012	1/3/2019		\$30,000.00	\$0.00	Purchase 1 Nat. Gas H.D. Vehicle	\$30,000.00	No
ML11041	City of Santa Ana	9/7/2012	11/6/2018	5/6/2020	\$265,000.00	\$34,651.86	Purchase 7 LPG H.D. Vehicles, Retrofit 6 H.	\$230,348.14	No
ML11045	City of Newport Beach	2/3/2012	8/2/2018	8/2/2020	\$30,000.00	\$0.00	Purchase 1 Nat. Gas H.D. Vehicle	\$30,000.00	No
MS11001	Mineral LLC	4/22/2011	4/30/2013	4/30/2015	\$111,827.00	\$103,136.83	Design, Develop, Host and Maintain MSRC	\$8,690.17	No
MS11010	Border Valley Trading	8/26/2011	10/25/2017	4/25/2020	\$150,000.00	\$0.00	New LNG Station	\$150,000.00	No
MS11016	CR&R Incorporated	4/12/2013	10/11/2019		\$100,000.00	\$90,000.00	New CNG Station - Perris	\$10,000.00	No
MS11019	City of Corona	11/29/2012	4/28/2020		\$225,000.00	\$0.00	Expansion of Existing CNG Station	\$225,000.00	No
MS11056	The Better World Group	12/30/2011	12/29/2013	12/29/2015	\$206,836.00	\$154,318.71	Programmatic Outreach Services	\$52,517.29	No
MS11060	Rowland Unified School District	8/17/2012	1/16/2019	1/16/2020	\$175,000.00	\$0.00	New Limited Access CNG Station	\$175,000.00	No
MS11061	Eastern Municipal Water District	3/29/2012	5/28/2015		\$11,659.00	\$1,450.00	Retrofit One Off-Road Vehicle under Showc	\$10,209.00	No
MS11062	Load Center	9/7/2012	1/6/2016	12/6/2016	\$175,384.00	\$169,883.00	Retrofit Six Off-Road Vehicles under Showc	\$5,501.00	No
MS11065	Temecula Valley Unified School Distr	8/11/2012	1/10/2019		\$50,000.00	\$0.00	Expansion of Existing CNG Station	\$50,000.00	No
MS11067	City of Redlands	5/24/2012	11/23/2018	11/23/2019	\$85,000.00	\$0.00	Expansion of Existing CNG Station	\$85,000.00	No
MS11068	Ryder System Inc.	7/28/2012	10/27/2018		\$175,000.00	\$157,500.00	New Public Access L/CNG Station (Fontana	\$17,500.00	No
MS11069	Ryder System Inc.	7/28/2012	8/27/2018		\$175,000.00	\$157,500.00	New Public Access L/CNG Station (Orange)	\$17,500.00	No
MS11071	City of Torrance Transit Department	12/22/2012	1/21/2019	1/21/2020	\$175,000.00	\$0.00	New Limited Access CNG Station	\$175,000.00	No
MS11076	SA Recycling, LLC	5/24/2012	9/23/2015		\$424,801.00	\$0.00	Retrofit of 13 Off-Road Diesel Vehicles with	\$424,801.00	No
MS11081	Metropolitan Stevedore Company	9/7/2012	1/6/2016		\$45,416.00	\$0.00	Install DECS on Two Off-Road Vehicles	\$45,416.00	No
MS11082	Baumot North America, LLC	8/2/2012	12/1/2015		\$65,958.00	\$4,350.00	Install DECS on Four Off-Road Vehicles	\$61,608.00	No
MS11085	City of Long Beach Fleet Services B	8/23/2013	12/22/2016		\$159,012.00	\$0.00	Retrofit Seven H.D. Off-Road Vehicles Unde	\$159,012.00	No
MS11086	DCL America Inc.	6/7/2013	10/6/2016		\$500,000.00	\$0.00	Retrofit Eight H.D. Off-Road Vehicles Under	\$500,000.00	No
MS11091	California Cartage Company, LLC	4/5/2013	8/4/2016	2/4/2018	\$55,000.00	\$0.00	Retrofit Two H.D. Off-Road Vehicles Under	\$55,000.00	No
MS11092	Griffith Company	2/15/2013	6/14/2016	12/14/2017	\$390,521.00	\$0.00	Retrofit 17 H.D. Off-Road Vehicles Under Sh	\$390,521.00	No

Total: 32

Pending Execution Contracts

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
MS11073	Los Angeles Unified School District				\$175,000.00	\$0.00	Expansion of Existing CNG Station	\$175,000.00	No
Total: 1									
Declined/Cancelled Contracts									
MS11013	Go Natural Gas, Inc.				\$150,000.00	\$0.00	New CNG Station - Huntington Beach	\$150,000.00	No
MS11014	Go Natural Gas, Inc.				\$150,000.00	\$0.00	New CNG Station - Santa Ana	\$150,000.00	No
MS11015	Go Natural Gas, Inc.				\$150,000.00	\$0.00	New CNG Station - Inglewood	\$150,000.00	No
MS11046	Luis Castro				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11047	Ivan Borjas				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11048	Phase II Transportation				\$1,080,000.00	\$0.00	Repower 27 Heavy-Duty Vehicles	\$1,080,000.00	No
MS11049	Ruben Caceras				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11050	Carlos Arrue				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11051	Francisco Vargas				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11053	Jose Ivan Soltero				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11054	Albino Meza				\$40,000.00	\$0.00	Repower One Heavy-Duty Vehicle	\$40,000.00	No
MS11059	Go Natural Gas				\$150,000.00	\$0.00	New Public Access CNG Station - Paramou	\$150,000.00	No
MS11063	Standard Concrete Products				\$310,825.00	\$0.00	Retrofit Two Off-Road Vehicles under Show	\$310,825.00	No
MS11070	American Honda Motor Company				\$100,000.00	\$0.00	Expansion of Existing CNG Station	\$100,000.00	No
MS11072	Trillium USA Company DBA Californi				\$150,000.00	\$0.00	New Public Access CNG Station	\$150,000.00	No
MS11077	DCL America Inc.				\$263,107.00	\$0.00	Retrofit of 13 Off-Road Diesel Vehicles with	\$263,107.00	No
MS11083	Cattrac Construction, Inc.				\$500,000.00	\$0.00	Install DECS on Eight Off-Road Vehicles	\$500,000.00	No
MS11084	Ivanhoe Energy Services and Develo				\$66,750.00	\$0.00	Retrofit One H.D. Off-Road Vehicle Under S	\$66,750.00	No
MS11088	Diesel Emission Technologies				\$32,750.00	\$0.00	Retrofit Three H.D. Off-Road Vehicles Under	\$32,750.00	No
MS11089	Diesel Emission Technologies				\$9,750.00	\$0.00	Retrofit One H.D. Off-Road Vehicle Under S	\$9,750.00	No
MS11090	Diesel Emission Technologies				\$14,750.00	\$0.00	Retrofit One H.D. Off-Road Vehicle Under S	\$14,750.00	No
Total: 21									
Closed Contracts									
ML11007	Coachella Valley Association of Gov	7/29/2011	7/28/2012		\$250,000.00	\$249,999.96	Regional PM10 Street Sweeping Program	\$0.04	Yes
ML11035	City of La Quinta	11/18/2011	11/17/2012		\$25,368.00	\$25,368.00	Retrofit 3 On-Road Vehicles w/DECS	\$0.00	Yes
MS11002	A-Z Bus Sales, Inc.	7/15/2011	12/31/2011	6/30/2013	\$1,705,000.00	\$1,705,000.00	Alternative Fuel School Bus Incentive Progr	\$0.00	Yes
MS11003	BusWest	7/26/2011	12/31/2011	12/31/2012	\$1,305,000.00	\$1,305,000.00	Alternative Fuel School Bus Incentive Progr	\$0.00	Yes
MS11004	Los Angeles County MTA	9/9/2011	2/29/2012		\$450,000.00	\$299,743.34	Clean Fuel Transit Service to Dodger Stadiu	\$150,256.66	Yes
MS11006	Orange County Transportation Autho	10/7/2011	2/29/2012	8/31/2012	\$268,207.00	\$160,713.00	Metrolink Service to Angel Stadium	\$107,494.00	Yes
MS11018	Orange County Transportation Autho	10/14/2011	1/31/2012		\$211,360.00	\$211,360.00	Express Bus Service to Orange County Fair	\$0.00	Yes
MS11052	Krisda Inc	9/27/2012	6/26/2013		\$120,000.00	\$120,000.00	Repower Three Heavy-Duty Vehicles	\$0.00	Yes
MS11057	Riverside County Transportation Co	7/28/2012	3/27/2013		\$100,000.00	\$89,159.40	Develop and Implement 511 "Smart Phone"	\$10,840.60	Yes
MS11058	L A Service Authority for Freeway E	5/31/2013	4/30/2014		\$123,395.00	\$123,395.00	Implement 511 "Smart Phone" Application	\$0.00	No
MS11074	SunLine Transit Agency	5/11/2012	7/31/2012		\$41,849.00	\$22,391.00	Transit Service for Coachella Valley Festival	\$19,458.00	Yes

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
MS11080	Southern California Regional Rail Au	4/6/2012	7/31/2012		\$26,000.00	\$26,000.00	Metrolink Service to Auto Club Speedway	\$0.00	Yes
Total: 12									
Closed/Incomplete Contracts									
MS11064	City of Hawthorne	7/28/2012	8/27/2018	8/27/2019	\$175,000.00	\$0.00	New Limited Access CNG Station	\$175,000.00	No
Total: 1									
Open/Complete Contracts									
ML11021	City of Whittier	1/27/2012	9/26/2018	6/26/2019	\$210,000.00	\$210,000.00	Purchase 7 Nat. Gas H.D. Vehicles	\$0.00	No
ML11022	City of Anaheim	3/16/2012	7/15/2018		\$150,000.00	\$150,000.00	Purchase of 5 H.D. Vehicles	\$0.00	No
ML11026	City of Redlands	3/2/2012	10/1/2018		\$90,000.00	\$90,000.00	Purchase 3 Nat. Gas H.D. Vehicles	\$0.00	Yes
ML11028	City of Glendale	1/13/2012	5/12/2018		\$300,000.00	\$300,000.00	Purchase 10 H.D. CNG Vehicles	\$0.00	Yes
ML11030	City of Fullerton	2/3/2012	3/2/2018		\$109,200.00	\$109,200.00	Purchase 2 Nat. Gas H.D. Vehicles, Retrofit	\$0.00	Yes
ML11031	City of Culver City Transportation De	12/2/2011	12/1/2018		\$300,000.00	\$300,000.00	Purchase 10 H.D. Nat. Gas Vehicles	\$0.00	Yes
ML11033	City of Los Angeles, Bureau of Sanit	3/16/2012	1/15/2019		\$1,080,000.00	\$1,080,000.00	Purchase 36 LNG H.D. Vehicles	\$0.00	Yes
ML11034	City of Los Angeles, Department of	5/4/2012	1/3/2019		\$630,000.00	\$630,000.00	Purchase 21 H.D. CNG Vehicles	\$0.00	No
ML11037	City of Anaheim	12/22/2012	12/21/2019		\$300,000.00	\$300,000.00	Purchase 12 Nat. Gas H.D. Vehicles	\$0.00	Yes
ML11039	City of Ontario, Housing & Municipal	1/27/2012	9/26/2018		\$180,000.00	\$180,000.00	Purchase 6 Nat. Gas H.D. Vehicles	\$0.00	Yes
ML11042	City of Chino	2/17/2012	4/16/2018		\$30,000.00	\$30,000.00	Purchase 1 Nat. Gas H.D. Vehicle, Repower	\$0.00	No
ML11043	City of Hemet Public Works	2/3/2012	2/2/2019		\$60,000.00	\$60,000.00	Purchase 2 H.D. Nat. Gas Vehicles	\$0.00	No
ML11044	City of Ontario, Housing & Municipal	1/27/2012	6/26/2019		\$400,000.00	\$400,000.00	Expand Existing CNG Station	\$0.00	Yes
MS11008	USA Waste of California, Inc.	10/24/2013	4/23/2020		\$125,000.00	\$125,000.00	Expansion of Existing LCNG Station	\$0.00	Yes
MS11009	USA Waste of California, Inc.	10/24/2013	4/23/2020		\$125,000.00	\$125,000.00	Expansion of Existing LCNG Station	\$0.00	Yes
MS11011	EDCO Disposal Corporation	12/30/2011	4/29/2019		\$100,000.00	\$100,000.00	New CNG Station - Signal Hill	\$0.00	Yes
MS11012	EDCO Disposal Corporation	12/30/2011	4/29/2019		\$100,000.00	\$100,000.00	New CNG Station - Buena Park	\$0.00	Yes
MS11017	CR&R, Inc.	3/2/2012	2/1/2018		\$100,000.00	\$100,000.00	Expansion of existing station - Garden Grov	\$0.00	Yes
MS11055	KEC Engineering	2/3/2012	8/2/2018	8/2/2019	\$200,000.00	\$200,000.00	Repower 5 H.D. Off-Road Vehicles	\$0.00	Yes
MS11066	Torrance Unified School District	11/19/2012	9/18/2018		\$42,296.00	\$42,296.00	Expansion of Existing CNG Station	\$0.00	Yes
MS11079	Bear Valley Unified School District	2/5/2013	10/4/2019		\$175,000.00	\$175,000.00	New Limited Access CNG Station	\$0.00	Yes
MS11087	Cemex Construction Material Pacific,	10/16/2012	2/15/2016		\$448,766.00	\$448,760.80	Retrofit 13 H.D. Off-Road Vehicles Under Sh	\$5.20	Yes
Total: 22									

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
FY 2011-2012 Contracts									
Open Contracts									
ML12013	City of Pasadena	10/19/2012	3/18/2015	9/18/2015	\$200,000.00	\$0.00	Electric Vehicle Charging Infrastructure	\$200,000.00	No
ML12014	City of Santa Ana	11/8/2013	8/7/2020		\$384,000.00	\$4,709.00	9 H.D. Nat. Gas & LPG Trucks, EV Charging	\$379,291.00	No
ML12015	City of Fullerton	4/25/2013	11/24/2020		\$40,000.00	\$10,000.00	HD CNG Vehicle, Expand CNG Station	\$30,000.00	No
ML12016	City of Cathedral City	1/4/2013	10/3/2019		\$60,000.00	\$0.00	CNG Vehicle & Electric Vehicle Infrastructur	\$60,000.00	No
ML12017	City of Los Angeles, Bureau of Sanit	6/26/2013	5/25/2020	11/25/2021	\$950,000.00	\$0.00	32 H.D. Nat. Gas Vehicles	\$950,000.00	No
ML12018	City of West Covina	10/18/2013	10/17/2020		\$300,000.00	\$0.00	Expansion of Existing CNG Station	\$300,000.00	No
ML12019	City of Palm Springs	9/6/2013	7/5/2015		\$38,000.00	\$16,837.00	EV Charging Infrastructure	\$21,163.00	No
ML12020	City of Los Angeles, Department of	9/27/2012	3/26/2019		\$450,000.00	\$0.00	15 H.D. Nat. Gas Vehicles	\$450,000.00	No
ML12022	City of La Puente	12/6/2013	6/5/2020		\$110,000.00	\$100,000.00	2 Medium-Duty and Three Heavy-Duty CNG	\$10,000.00	No
ML12041	City of Anaheim Public Utilities Depa	4/4/2014	10/3/2015		\$68,977.00	\$0.00	EV Charging Infrastructure	\$68,977.00	No
ML12043	City of Hemet	6/24/2013	9/23/2019		\$60,000.00	\$0.00	Two Heavy-Duty Nat. Gas Vehicles	\$60,000.00	No
ML12045	City of Baldwin Park DPW	2/14/2014	12/13/2020		\$400,000.00	\$0.00	Install New CNG Station	\$400,000.00	No
ML12046	City of Irvine	8/11/2013	3/10/2021		\$30,000.00	\$0.00	One Heavy-Duty Nat. Gas Vehicle	\$30,000.00	No
ML12048	City of La Palma	1/4/2013	11/3/2018		\$20,000.00	\$0.00	Two Medium-Duty LPG Vehicles	\$20,000.00	No
ML12049	City of Rialto Public Works	7/14/2014	9/13/2015		\$30,432.00	\$0.00	EV Charging Infrastructure	\$30,432.00	No
ML12051	City of Bellflower	2/7/2014	2/6/2016		\$270,000.00	\$0.00	EV Charging Infrastructure	\$270,000.00	No
ML12052	City of Whittier	3/14/2013	7/13/2019		\$165,000.00	\$0.00	Expansion of Existing CNG Station	\$165,000.00	No
ML12057	City of Coachella	8/28/2013	8/27/2019		\$57,456.00	\$0.00	Purchase One Nat. Gas H.D. Vehicle/Street	\$57,456.00	No
MS12001	Los Angeles County MTA	7/1/2012	4/30/2013		\$300,000.00	\$0.00	Clean Fuel Transit Service to Dodger Stadiu	\$300,000.00	No
MS12004	USA Waste of California, Inc.	10/24/2013	11/23/2019		\$175,000.00	\$0.00	Construct New Limited-Access CNG Station	\$175,000.00	No
MS12008	Bonita Unified School District	7/12/2013	12/11/2019		\$175,000.00	\$0.00	Construct New Limited-Acess CNG Station	\$175,000.00	No
MS12009	Sysco Food Services of Los Angeles	1/7/2014	4/6/2020		\$150,000.00	\$0.00	Construct New Public-Access CNG Station	\$150,000.00	No
MS12011	Southern California Gas Company	6/14/2013	6/13/2019	6/13/2020	\$150,000.00	\$0.00	Construct New Public-Access CNG Station -	\$150,000.00	No
MS12024	Southern California Gas Company	6/13/2013	12/12/2019		\$150,000.00	\$0.00	Construct New Public-Access CNG Station -	\$150,000.00	No
MS12027	C.V. Ice Company, Inc.	5/17/2013	11/16/2019		\$75,000.00	\$0.00	Purchase 3 Medium-Heavy Duty Vehicles	\$75,000.00	No
MS12029	Community Action Partnership of Or	11/2/2012	11/1/2018		\$25,000.00	\$14,850.00	Purchase 1 Medium-Heavy Duty Vehicle	\$10,150.00	No
MS12031	Final Assembly, Inc.	11/2/2012	11/1/2018		\$100,000.00	\$29,201.40	Purchase 4 Medium-Heavy Duty Vehicles	\$70,798.60	No
MS12033	Mike Diamond/Phace Management	12/22/2012	12/21/2018	6/21/2021	\$500,000.00	\$21,735.00	Purchase 20 Medium-Heavy Duty Vehicles	\$478,265.00	No
MS12034	Ware Disposal Company, Inc.	11/2/2012	11/1/2018	11/1/2020	\$133,070.00	\$74,763.00	Purchase 8 Medium-Heavy Duty Vehicles	\$58,307.00	No
MS12060	City of Santa Monica	4/4/2014	8/3/2017		\$500,000.00	\$0.00	Transit-Oriented Bicycle Sharing Program	\$500,000.00	No
MS12061	Orange County Transportation Autho	3/14/2014	3/13/2017		\$224,000.00	\$81,604.80	Transit-Oriented Bicycle Sharing Program	\$142,395.20	No
MS12067	Leatherwood Construction, Inc.	11/8/2013	3/7/2017		\$122,719.00	\$0.00	Retrofit Six Vehicles w/DECS - Showcase III	\$122,719.00	No
MS12072	99 Cents Only Stores	4/5/2013	9/4/2019		\$100,000.00	\$0.00	Construct New CNG Station	\$100,000.00	No
MS12073	FirstCNG, LLC	7/27/2013	12/26/2019		\$150,000.00	\$135,000.00	Construct New CNG Station	\$15,000.00	No

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
MS12075	CR&R Incorporated	7/27/2013	1/26/2021		\$100,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$100,000.00	No
MS12077	City of Coachella	6/14/2013	6/13/2020		\$225,000.00	\$0.00	Construct New CNG Station	\$225,000.00	No
MS12078	Penske Truck Leasing Co., L.P.	1/7/2014	1/6/2016		\$75,000.00	\$0.00	Maintenance Facility Modifications - Vernon	\$75,000.00	No
MS12079	Penske Truck Leasing Co., L.P.	1/7/2014	1/6/2016		\$75,000.00	\$0.00	Maintenance Facility Modifications - Boyle H	\$75,000.00	No
MS12080	City of Pasadena	11/8/2013	8/7/2020	8/7/2021	\$225,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$225,000.00	No
MS12081	Penske Truck Leasing Co., L.P.	1/7/2014	1/6/2016		\$75,000.00	\$0.00	Maintenance Facility Modifications - Santa A	\$75,000.00	No
MS12082	City of Los Angeles, Bureau of Sanit	11/20/2013	2/19/2021		\$175,000.00	\$0.00	Install New CNG Infrastructure	\$175,000.00	No
MS12084	Airport Mobil Inc.	12/6/2013	5/5/2020		\$150,000.00	\$0.00	Install New CNG Infrastructure	\$150,000.00	No
MS12086	SuperShuttle International, Inc.	3/26/2013	3/25/2019		\$225,000.00	\$202,500.00	Purchase 23 Medium-Heavy Duty Vehicles	\$22,500.00	No
MS12087	Los Angeles County MTA	8/29/2013	11/28/2015		\$125,000.00	\$125,000.00	Implement Rideshare Incentives Program	\$0.00	Yes
MS12088	Orange County Transportation Autho	12/6/2013	3/5/2016		\$125,000.00	\$0.00	Implement Rideshare Incentives Program	\$125,000.00	No
MS12089	Riverside County Transportation Co	10/18/2013	9/17/2015		\$250,000.00	\$53,415.18	Implement Rideshare Incentives Program	\$196,584.82	No
MS12Hom	Mansfield Gas Equipment Systems				\$296,000.00	\$0.00	Home Refueling Apparatus Incentive Progra	\$296,000.00	No

Total: 47

Pending Execution Contracts

MS12083	Brea Olinda Unified School District				\$59,454.00	\$0.00	Install New CNG Infrastructure	\$59,454.00	No
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Total: 1

Declined/Cancelled Contracts

ML12038	City of Long Beach Public Works				\$26,000.00	\$0.00	Electric Vehicle Charging Infrastructure	\$26,000.00	No
ML12040	City of Duarte Transit				\$30,000.00	\$0.00	One Heavy-Duty Nat. Gas Vehicle	\$30,000.00	No
ML12044	County of San Bernardino Public Wo				\$250,000.00	\$0.00	Install New CNG Station	\$250,000.00	No
ML12053	City of Mission Viejo				\$60,000.00	\$0.00	EV Charging Infrastructure	\$60,000.00	No
MS12007	WestAir Gases & Equipment				\$100,000.00	\$0.00	Construct New Limited-Acess CNG Station	\$100,000.00	No
MS12030	Complete Landscape Care, Inc.				\$150,000.00	\$0.00	Purchase 6 Medium-Heavy Duty Vehicles	\$150,000.00	No
MS12070	Valley Music Travel/CID Entertainme				\$99,000.00	\$0.00	Implement Shuttle Service to Coachella Mus	\$99,000.00	No

Total: 7

Closed Contracts

ML12021	City of Rancho Cucamonga	9/14/2012	1/13/2020		\$40,000.00	\$40,000.00	Four Medium-Duty Nat. Gas Vehicles	\$0.00	Yes
ML12023	County of Los Angeles Internal Servi	8/1/2013	2/28/2015		\$250,000.00	\$192,333.00	EV Charging Infrastructure	\$57,667.00	Yes
ML12037	Coachella Valley Association of Gov	3/14/2013	3/13/2014		\$250,000.00	\$250,000.00	Street Sweeping Operations	\$0.00	Yes
ML12050	City of Baldwin Park	4/25/2013	4/24/2014	10/24/2014	\$402,400.00	\$385,363.00	EV Charging Infrastructure	\$17,037.00	No
ML12054	City of Palm Desert	9/30/2013	2/28/2015		\$77,385.00	\$77,385.00	EV Charging Infrastructure	\$0.00	Yes
ML12056	City of Cathedral City	3/26/2013	5/25/2014		\$25,000.00	\$25,000.00	Regional Street Sweeping Program	\$0.00	Yes
ML12066	City of Manhattan Beach	1/7/2014	4/6/2015		\$5,900.00	\$5,900.00	Electric Vehicle Charging Infrastructure	\$0.00	Yes
MS12002	Orange County Transportation Autho	9/7/2012	4/30/2013		\$342,340.00	\$333,185.13	Express Bus Service to Orange County Fair	\$9,154.87	Yes
MS12003	Orange County Transportation Autho	7/20/2012	2/28/2013		\$234,669.00	\$167,665.12	Implement Metrolink Service to Angel Stadiu	\$67,003.88	Yes
MS12005	USA Waste of California, Inc.	10/19/2012	8/18/2013		\$75,000.00	\$75,000.00	Vehicle Maintenance Facility Modifications	\$0.00	Yes

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
MS12006	Waste Management Collection & Re	10/19/2012	8/18/2013		\$75,000.00	\$75,000.00	Vehicle Maintenance Facility Modifications	\$0.00	Yes
MS12012	Rim of the World Unified School Dist	12/20/2012	5/19/2014		\$75,000.00	\$75,000.00	Vehicle Maintenance Facility Modifications	\$0.00	Yes
MS12059	Orange County Transportation Autho	2/28/2013	12/27/2014		\$75,000.00	\$75,000.00	Maintenance Facilities Modifications	\$0.00	No
MS12062	Fraser Communications	12/7/2012	5/31/2014		\$998,669.00	\$989,218.49	Develop & Implement "Rideshare Thursday"	\$9,450.51	Yes
MS12064	Anaheim Transportation Network	3/26/2013	12/31/2014		\$127,296.00	\$56,443.92	Implement Anaheim Circulator Service	\$70,852.08	Yes
MS12065	Orange County Transportation Autho	7/27/2013	11/30/2013		\$43,933.00	\$14,832.93	Ducks Express Service to Honda Center	\$29,100.07	Yes
MS12068	Southern California Regional Rail Au	3/1/2013	9/30/2013		\$57,363.00	\$47,587.10	Implement Metrolink Service to Autoclub Sp	\$9,775.90	Yes
MS12069	City of Irvine	8/11/2013	2/28/2014		\$45,000.00	\$26,649.41	Implement Special Transit Service to Solar	\$18,350.59	Yes
MS12076	City of Ontario, Housing & Municipal	3/8/2013	4/7/2015		\$75,000.00	\$75,000.00	Maintenance Facilities Modification	\$0.00	Yes
MS12085	Bear Valley Unified School District	4/25/2013	6/24/2014		\$75,000.00	\$75,000.00	Maintenance Facility Modifications	\$0.00	Yes

Total: 20

Open/Complete Contracts

ML12039	City of Redlands	2/8/2013	10/7/2019		\$90,000.00	\$90,000.00	Three Heavy-Duty Nat. Gas Vehicles	\$0.00	No
ML12042	City of Chino Hills	1/18/2013	3/17/2017		\$87,500.00	\$87,500.00	Expansion of Existing CNG Station	\$0.00	Yes
ML12047	City of Orange	2/1/2013	1/31/2019		\$30,000.00	\$30,000.00	One Heavy-Duty Nat. Gas Vehicle	\$0.00	No
ML12055	City of Manhattan Beach	3/1/2013	12/31/2018		\$10,000.00	\$10,000.00	One Medium-Duty Nat. Gas Vehicle	\$0.00	Yes
MS12010	Murrieta Valley Unified School Distric	4/5/2013	9/4/2019		\$242,786.00	\$242,786.00	Construct New Limited-Access CNG Station	\$0.00	No
MS12025	Silverado Stages, Inc.	11/2/2012	7/1/2018		\$150,000.00	\$150,000.00	Purchase Six Medium-Heavy Duty Vehicles	\$0.00	Yes
MS12026	U-Haul Company of California	3/14/2013	3/13/2019		\$500,000.00	\$353,048.26	Purchase 23 Medium-Heavy Duty Vehicles	\$146,951.74	Yes
MS12028	Dy-Dee Service of Pasadena, Inc.	12/22/2012	1/21/2019		\$45,000.00	\$40,000.00	Purchase 2 Medium-Duty and 1 Medium-He	\$5,000.00	Yes
MS12032	Fox Transportation	12/14/2012	12/13/2018		\$500,000.00	\$500,000.00	Purchase 20 Medium-Heavy Duty Vehicles	\$0.00	Yes
MS12035	Disneyland Resort	1/4/2013	7/3/2019		\$25,000.00	\$18,900.00	Purchase 1 Medium-Heavy Duty Vehicle	\$6,100.00	Yes
MS12036	Jim & Doug Carter's Automotive/VS	1/4/2013	11/3/2018		\$50,000.00	\$50,000.00	Purchase 2 Medium-Heavy Duty Vehicles	\$0.00	Yes
MS12058	Krisda Inc	4/24/2013	1/23/2019		\$25,000.00	\$25,000.00	Repower One Heavy-Duty Off-Road Vehicle	\$0.00	Yes
MS12063	Custom Alloy Light Metals, Inc.	8/16/2013	2/15/2020		\$100,000.00	\$100,000.00	Install New Limited Access CNG Station	\$0.00	Yes
MS12071	Transit Systems Unlimited, Inc.	5/17/2013	12/16/2018		\$21,250.00	\$21,250.00	Expansion of Existing CNG Station	\$0.00	Yes
MS12074	Arcadia Unified School District	7/5/2013	9/4/2019		\$175,000.00	\$175,000.00	Expansion of Existing CNG Infrastructure	\$0.00	No

Total: 15

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
FY 2012-2014 Contracts									
Open Contracts									
ML14011	City of Palm Springs	6/13/2014	1/12/2016		\$79,000.00	\$78,627.00	Bicycle Racks, Bicycle Outreach & Educatio	\$373.00	No
ML14012	City of Santa Ana	2/13/2015	10/12/2021		\$244,000.00	\$0.00	EV Charging and 7 H.D. LPG Vehicles	\$244,000.00	No
ML14014	City of Torrance	9/5/2014	12/4/2019		\$56,000.00	\$0.00	EV Charging Infrastructure	\$56,000.00	No
ML14016	City of Anaheim	4/3/2015	9/2/2021		\$380,000.00	\$0.00	Purchase 2 H.D. Vehicles, Expansion of Exi	\$380,000.00	No
ML14018	City of Los Angeles, Department of	3/6/2015	9/5/2021		\$810,000.00	\$0.00	Purchase 27 H.D. Nat. Gas Vehicles	\$810,000.00	No
ML14019	City of Corona Public Works	12/5/2014	6/4/2020		\$178,263.00	\$0.00	EV Charging, Bicycle Racks, Bicycle Locker	\$178,263.00	No
ML14021	Riverside County Regional Park and	7/24/2014	12/23/2016		\$250,000.00	\$0.00	Bicycle Trail Improvements	\$250,000.00	No
ML14028	City of Fullerton	9/5/2014	1/4/2022		\$126,950.00	\$0.00	Expansion of Existing CNG Infrastructure	\$126,950.00	No
ML14029	City of Irvine	7/11/2014	6/10/2017		\$90,500.00	\$0.00	Bicycle Trail Improvements	\$90,500.00	No
ML14030	County of Los Angeles Internal Servi	1/9/2015	3/8/2018		\$425,000.00	\$0.00	Bicycle Racks, Outreach & Education	\$425,000.00	No
ML14031	Riverside County Waste Manageme	6/13/2014	12/12/2020		\$90,000.00	\$0.00	Purchase 3 H.D. CNG Vehicles	\$90,000.00	No
ML14032	City of Rancho Cucamonga	1/9/2015	1/8/2022		\$226,770.00	\$18,110.88	Expansion of Existing CNG Infras., Bicycle L	\$208,659.12	No
ML14033	City of Irvine	7/11/2014	2/10/2021		\$60,000.00	\$0.00	Purchase 2 H.D. CNG Vehicles	\$60,000.00	No
ML14034	City of Lake Elsinore	9/5/2014	5/4/2021		\$56,700.00	\$0.00	EV Charging Stations	\$56,700.00	No
ML14049	City of Moreno Valley	7/11/2014	3/10/2021		\$105,000.00	\$30,000.00	One HD Nat Gas Vehicle, EV Charging, Bicy	\$75,000.00	No
ML14050	City of Yucaipa	7/11/2014	9/10/2015		\$84,795.00	\$0.00	Installation of Bicycle Lanes	\$84,795.00	No
ML14051	City of Brea	9/5/2014	1/4/2017		\$450,000.00	\$0.00	Installation of Bicycle Trail	\$450,000.00	No
ML14054	City of Torrance	11/14/2014	4/13/2017		\$350,000.00	\$0.00	Upgrade Maintenance Facility	\$350,000.00	No
ML14055	City of Highland	10/10/2014	3/9/2018		\$500,000.00	\$0.00	Bicycle Lanes and Outreach	\$500,000.00	No
ML14056	City of Redlands	9/5/2014	5/4/2016	5/4/2017	\$125,000.00	\$0.00	Bicycle Lanes	\$125,000.00	No
ML14062	City of San Fernando	3/27/2015	5/26/2021		\$387,091.00	\$0.00	Expand Existing CNG Fueling Station	\$387,091.00	No
ML14064	City of Claremont	7/11/2014	7/10/2020	1/10/2021	\$60,000.00	\$0.00	Purchase Two Heavy-Duty Nat. Gas Vehicle	\$60,000.00	No
ML14065	City of Orange	9/5/2014	8/4/2015		\$10,000.00	\$0.00	Electric Vehicle Charging Infrastructure	\$10,000.00	No
ML14066	City of South Pasadena	9/12/2014	7/11/2016		\$142,096.00	\$0.00	Bicycle Trail Improvements	\$142,096.00	No
ML14068	City of South Pasadena	9/12/2014	10/11/2015		\$10,183.00	\$0.00	Electric Vehicle Charging Infrastructure	\$10,183.00	No
ML14071	City of Manhattan Beach	1/9/2015	11/8/2018		\$22,485.00	\$0.00	Electric Vehicle Charging Infrastructure	\$22,485.00	No
ML14072	City of Cathedral City	8/13/2014	1/12/2021		\$136,000.00	\$0.00	Medium & H.D. Vehicles, EV Charging, Bike	\$136,000.00	No
MS14001	Los Angeles County MTA	3/6/2015	4/30/2015		\$1,227,450.00	\$0.00	Clean Fuel Transit Service to Dodger Stadiu	\$1,227,450.00	No
MS14002	Orange County Transportation Autho	9/6/2013	4/30/2014		\$576,833.00	\$576,833.00	Clean Fuel Transit Service to Orange Count	\$0.00	No
MS14004	Orange County Transportation Autho	9/24/2013	4/30/2014		\$36,800.00	\$35,485.23	Implement Express Bus Service to Solar De	\$1,314.77	No
MS14005	Transit Systems Unlimited, Inc.	4/11/2014	2/28/2016		\$515,200.00	\$253,920.00	Provide Expanded Shuttle Service to Hollyw	\$261,280.00	No
MS14007	Orange County Transportation Autho	6/6/2014	4/30/2015		\$208,520.00	\$0.00	Implement Special Metrolink Service to Ang	\$208,520.00	No
MS14008	Orange County Transportation Autho	8/13/2014	5/31/2015		\$601,187.00	\$601,187.00	Implement Clean Fuel Bus Service to Orang	\$0.00	No
MS14009	A-Z Bus Sales, Inc.	1/17/2014	12/31/2014	3/31/2015	\$388,000.00	\$343,000.00	Alternative Fuel School Bus Incentive Progr	\$45,000.00	No

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
MS14042	Grand Central Recycling & Transfer	6/6/2014	9/5/2021		\$150,000.00	\$0.00	Expansion of Existing CNG Station	\$150,000.00	No
MS14045	TIMCO CNG Fund I, LLC	6/6/2014	12/5/2020		\$150,000.00	\$0.00	New Public-Access CNG Station in Inglewoo	\$150,000.00	No
MS14046	Ontario CNG Station Inc.	5/15/2014	5/14/2020		\$150,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$150,000.00	No
MS14048	BusWest	3/14/2014	12/31/2014	5/31/2015	\$940,850.00	\$816,850.00	Alternative Fuel School Bus Incentive Progr	\$124,000.00	No
MS14052	Arcadia Unified School District	6/13/2014	10/12/2020		\$78,000.00	\$0.00	Expansion of an Existing CNG Fueling Statio	\$78,000.00	No
MS14053	Upland Unified School District	1/9/2015	7/8/2021		\$175,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$175,000.00	No
MS14057	Los Angeles County MTA	11/7/2014	10/6/2019		\$1,250,000.00	\$0.00	Implement Various Signal Synchronization P	\$1,250,000.00	No
MS14058	Orange County Transportation Autho	11/7/2014	4/6/2016		\$1,250,000.00	\$0.00	Implement Various Signal Synchronization P	\$1,250,000.00	No
MS14059	Riverside County Transportation Co	9/5/2014	3/4/2018		\$939,625.00	\$0.00	Implement Various Signal Synchronization P	\$939,625.00	No
MS14072	San Bernardino Associated Govern	3/27/2015	3/26/2018		\$1,250,000.00	\$0.00	Implement Various Signal Synchronization P	\$1,250,000.00	No
MS14073	Anaheim Transportation Network	1/9/2015	4/30/2017		\$221,312.00	\$63,221.60	Anaheim Resort Circulator Service	\$158,090.40	No
MS14074	Midway City Sanitary District	1/9/2015	3/8/2021		\$250,000.00	\$0.00	Limited-Access CNG Station & Facility Modif	\$250,000.00	No
MS14077	County Sanitation Districts of L.A. C	3/6/2015	5/5/2021		\$175,000.00	\$0.00	New Limited Access CNG Station	\$175,000.00	No

Total: 47

Pending Execution Contracts

ML14013	City of Los Angeles, Bureau of Sanit				\$3,840,000.00	\$0.00	Purchase 128 H.D. Nat. Gas Vehicles	\$3,840,000.00	No
ML14022	County of Los Angeles Department o				\$300,000.00	\$0.00	Purchase 10 H.D. Nat. Gas Vehicles	\$300,000.00	No
ML14023	County of Los Angeles Department o				\$230,000.00	\$0.00	Maintenance Fac. Modifications-Westcheste	\$230,000.00	No
ML14024	County of Los Angeles Department o				\$230,000.00	\$0.00	Maintenance Fac. Modifications-Baldwin Par	\$230,000.00	No
ML14025	County of Los Angeles Dept of Publi				\$500,000.00	\$0.00	Construct New CNG Station in Malibu	\$500,000.00	No
ML14026	County of Los Angeles Dept of Publi				\$500,000.00	\$0.00	Construct New CNG Station in Castaic	\$500,000.00	No
ML14027	County of Los Angeles Dept of Publi				\$500,000.00	\$0.00	Construct New CNG Station in Downey	\$500,000.00	No
ML14060	County of Los Angeles Internal Servi				\$104,400.00	\$0.00	Electric Vehicle Charging Infrastructure	\$104,400.00	No
ML14061	City of La Habra				\$60,000.00	\$0.00	Purchase Two Heavy-Duty Nat. Gas Vehicle	\$60,000.00	No
ML14067	City of Duarte Transit				\$60,000.00	\$0.00	Purchase Two Heavy-Duty Nat. Gas Vehicle	\$60,000.00	No
ML14069	City of Beaumont				\$200,000.00	\$0.00	Construct New CNG Infrastructure	\$200,000.00	No
ML14070	City of Rancho Cucamonga				\$365,245.00	\$0.00	Bicycle Trail Improvements	\$365,245.00	No
ML14093	County of Los Angeles Dept of Publi				\$150,000.00	\$0.00	San Gabriel BikeTrail Underpass Improvem	\$150,000.00	No
MS14035	Penske Truck Leasing Co., L.P.				\$75,000.00	\$0.00	Vehicle Maint. Fac. Modifications - Sun Valle	\$75,000.00	No
MS14036	Penske Truck Leasing Co., L.P.				\$75,000.00	\$0.00	Vehicle Maint. Fac. Modifications - La Mirad	\$75,000.00	No
MS14037	Penske Truck Leasing Co., L.P.				\$75,000.00	\$0.00	Vehicle Maint. Fac. Modifications - Carson	\$75,000.00	No
MS14038	Penske Truck Leasing Co., L.P.				\$75,000.00	\$0.00	Vehicle Maint. Fac. Modifications - Fontana	\$75,000.00	No
MS14039	Waste Management Collection and				\$75,000.00	\$0.00	Vehicle Maint. Fac. Modifications - Irvine	\$75,000.00	No
MS14040	Waste Management Collection and				\$75,000.00	\$0.00	Vehicle Maint. Fac. Modifications - Santa An	\$75,000.00	No
MS14041	USA Waste of California, Inc.				\$175,000.00	\$0.00	Limited-Access CNG Station, Vehicle Maint.	\$175,000.00	No
MS14075	Fullerton Joint Union High School Di				\$300,000.00	\$0.00	Expansion of Existing CNG Infrastructure/M	\$300,000.00	No
MS14076	Rialto Unified School District				\$225,000.00	\$0.00	New Public Access CNG Station	\$225,000.00	No

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
MS14078	American Honda Motor Co., Inc.				\$150,000.00	\$0.00	New Public Access CNG Station	\$150,000.00	No
MS14079	Waste Resources, Inc.				\$100,000.00	\$0.00	New Limited Access CNG Station	\$100,000.00	No
MS14080	CR&R Incorporated				\$249,954.00	\$0.00	Expansion of Existing CNG Infrastructure/M	\$249,954.00	No
MS14081	CR&R Incorporated				\$175,000.00	\$0.00	Expansion of Existing CNG Infrastructure/M	\$175,000.00	No
MS14082	Grand Central Recycling & Transfer				\$150,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$150,000.00	No
MS14083	Hacienda La Puente Unified School				\$175,000.00	\$0.00	New Limited Access CNG Station	\$175,000.00	No
MS14084	US Air Conditioning Distributors				\$100,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$100,000.00	No
MS14085	Prologis, L.P.				\$100,000.00	\$0.00	New Limited Access CNG Station	\$100,000.00	No
MS14086	San Gabriel Valley Towing I				\$150,000.00	\$0.00	New Public Access CNG Station	\$150,000.00	No
MS14087	Orange County Transportation Autho				\$239,645.00	\$0.00	Implement Special Metrolink Service to Ang	\$239,645.00	No
MS14088	Southern California Regional Rail Au				\$83,960.00	\$0.00	Special Metrolink Service to Autoclub Speed	\$83,960.00	No
MS14090	City of Monterey Park				\$225,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$225,000.00	No
MS14091	Serv-Wel Disposal				\$100,000.00	\$0.00	New Limited-Access CNG Infrastructure	\$100,000.00	No
MS14092	West Covina Unified School District				\$124,000.00	\$0.00	Expansion of Existing CNG Infrastructure	\$124,000.00	No
Total: 36									
Declined/Cancelled Contracts									
ML14063	City of Hawthorne				\$32,000.00	\$0.00	Expansion of Existng CNG Infrastructure	\$32,000.00	No
MS14043	City of Anaheim				\$175,000.00	\$0.00	Expansion of Existing CNG Station	\$175,000.00	No
Total: 2									
Closed Contracts									
ML14010	City of Cathedral City	8/13/2014	10/12/2015		\$25,000.00	\$25,000.00	Street Sweeping Operations	\$0.00	Yes
ML14015	Coachella Valley Association of Gov	6/6/2014	9/5/2015		\$250,000.00	\$250,000.00	Street Sweeping Operations	\$0.00	Yes
ML14020	County of Los Angeles Dept of Publi	8/13/2014	1/12/2018		\$150,000.00	\$0.00	San Gabriel BikeTrail Underpass Improvem	\$150,000.00	No
MS14003	Orange County Transportation Autho	8/1/2013	4/30/2014	10/30/2014	\$194,235.00	\$184,523.00	Implement Metrolink Service to Angel Stadiu	\$9,712.00	Yes
MS14047	Southern California Regional Rail Au	3/7/2014	9/30/2014		\$49,203.00	\$32,067.04	Special Metrolink Service to Autoclub Speed	\$17,135.96	Yes
Total: 5									
Open/Complete Contracts									
MS14044	TIMCO CNG Fund I, LLC	5/2/2014	11/1/2020		\$150,000.00	\$150,000.00	New Public-Access CNG Station in Santa A	\$0.00	Yes
Total: 1									

Cont.#	Contractor	Start Date	Original End Date	Amended End Date	Contract Value	Remitted	Project Description	Award Balance	Billing Complete?
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FY 2014-2016 Contracts

Open Contracts

MS14089	Top Shelf Consulting, LLC	2/5/2015	8/4/2016		\$200,000.00	\$80,033.00	Enhanced Fleet Modernization Program	\$119,967.00	No
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Total: 1

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 25

REPORT: California Air Resources Board Monthly Meeting

SYNOPSIS: The California Air Resources Board met on May 21, 2015, in Sacramento. The following is a summary of this meeting.

RECOMMENDED ACTION:

Receive and File.

Judith Mitchell, Member
SCAQMD Governing Board

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The Air Resources Board's (ARB or Board) May meeting was held on May 21, 2015, in Sacramento at the California Environmental Protection Agency Headquarters Building. Key items presented are summarized below.

Consent Item

1. Public Meeting to Consider Six Research Proposals

The Board approved six research proposals to meet the Fiscal Year (FY) 2015-2016 Annual Research Plan including an augmentation to a research contract originating from the FY 2011-2012 Annual Research Plan. The proposals include:

- 1) Household Vehicle and Transportation Choice and Usage,
- 2) Women's Cardiovascular Risk from Particulate Matter Exposure,
- 3) Adverse Health Effects from Particulate Exposure Passed on from Mother to Child,
- 4) Greenhouse Gas Measurements at Walnut Grove Tower,

- 5) Certification and In-Use Compliance Testing for Heavy-Duty Diesel Engines, and
- 6) Modeling of PM_{2.5} Episodes in the San Joaquin Valley Air Basin during Recent Years.

Discussion Items

1. Public Hearing to Consider Intermediate Volume Manufacturer Amendments to the Zero Emission Vehicle Regulation (Second Hearing)

The Board adopted amendments to the Zero Emission Vehicle (ZEV) regulation. The amendments will provide flexibility for the intermediate volume manufacturers (IVM) needed to succeed in the ZEV market while maintaining the integrity and goals of the ZEV Program. These amendments result from the Board's direction at the first ZEV program hearing on October 23, 2014, and will allow the IVMs additional time to develop technologies and bring them into the market. The amendments also provide extended credit recovery periods and additional flexibilities such as pooling with other section 177 states

SCAQMD Staff Comments/Testimony: SCAQMD staff provided comments in support of the CARB staff proposal for the intermediate volume manufacturer compliance obligation under the Zero Emission Vehicle (ZEV) regulation. Staff indicated that the zero-emission vehicle element of the ZEV regulation is vitally important for the South Coast Air Basin to attain federal air quality standards. There is a need to have greater numbers of zero emission vehicles produced and deployed in the South Coast Air Basin. Staff thanked the CARB staff for considering the SCAQMD staff's concerns raised in the October 2014 meeting. Lastly, staff indicated that any revision proposals should be considered in the mid-term review scheduled in 2016.

2. Public Hearing to Consider the Greenhouse Gas Quantification Determination for the San Joaquin Council of Governments' Regional Transportation Plan/Sustainable Communities Strategy

The Board accepted the San Joaquin Council of Governments' (SJCOG) determination that its 2014 Sustainable Communities Strategy (SCS), if implemented, will achieve the region's per capita greenhouse gas emissions reduction targets. The 2014 SCS includes strategies to promote mixed-use and infill development, encourage transit-oriented development, to expand Stockton's bus rapid transit system, and to build over 800 miles of new bikeways.

3. Public Meeting to Consider Approval of the San Joaquin Valley PM2.5 State Implementation Plan

The Board approved revisions to the San Joaquin Valley Air Pollution Control District PM2.5 State Implementation Plan (SIP). The SIP revision provides an updated attainment demonstration that accounts for the impact of California's drought. Following provisions in the Clean Air Act, the SIP contains a request for an attainment date extension to 2018 for the 24-hour standard of 65 µg/m³, and 2020 for the annual standard of 15 µg/m³. The attainment demonstration relies preliminarily on the further reductions from the States heavy-duty truck and equipment programs. The SIP also identifies further ARB and District actions to achieve additional near-term reductions.

Attachment

CARB May 21, 2015 Meeting Agenda

PUBLIC MEETING AGENDA

May 21, 2015

[Webcast](#)

LOCATION:

Air Resources Board
Byron Sher Auditorium, Second Floor
1001 I Street
Sacramento, California 95814
<http://www.calepa.ca.gov/EPAbldg/location.htm>

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

TO SUBMIT WRITTEN COMMENTS ON AN AGENDA ITEM IN ADVANCE OF THE MEETING GO TO: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Thursday
May 21, 2015
9:00 a.m.

CONSENT CALENDAR:

The following item on the consent calendar will be presented to the Board immediately after the start of the public meeting, unless removed from the consent calendar either upon a Board member's request or if someone in the audience wishes to speak on it.

Consent Item

15-4-1: Public Meeting to Consider Six Research Proposals

Staff will seek Board approval of five research proposals that were developed in response to the Board-approved Fiscal Year (FY) 2015-2016 Annual Research Plan and an augmentation to a research proposal contract that resulted from the FY 2011-2012 Annual Research Plan.

- 1) "Modeling Household Vehicle and Transportation Choice and Usage," University of California, Davis, Augmentation to Contract Number 11-322.

[More Information](#)

[Proposed Resolution](#)

- 2) "Women's Cardiovascular Risk from Particulate Matter Exposure," University of Irvine, California, Proposal No. 2784-282.

[More Information](#)

[Proposed Resolution](#)

- 3) "Are Adverse Health Effects from Particulate Exposure Passed on from Mother to Child," University of Davis, California, Proposal No. 2785-282.

[More Information](#)

[Proposed Resolution](#)

- 4) "Greenhouse Gas Measurements at Walnut Grove Tower," University of California, Davis, Proposal No. 2786-282.

[More Information](#)

[Proposed Resolution](#)

- 5) "Certification and In-Use Compliance Testing for Heavy-Duty Diesel Engines to Understand High In-Use NO_x," University of California, Riverside, Proposal No. 2787-282.

[More Information](#)

[Proposed Resolution](#)

- 6) "Investigative Modeling of PM2.5 Episodes in the San Joaquin Valley Air Basin During Recent Years," University of California, Davis, Proposal No. 2788-282.

[More Information](#)

[Proposed Resolution](#)

DISCUSSION ITEMS:

Note: The following agenda items may be heard in a different order at the Board meeting.

Agenda Item #

15-4-2: Public Hearing to Consider Intermediate Volume Manufacturer Amendments to the Zero Emission Vehicle Regulation (Second Hearing)

The first hearing on this item occurred on October 23, 2014. Staff now returns to the Board to present a revised regulatory proposal regarding intermediate volume manufacturer compliance obligations under the Zero Emission Vehicle regulation.

[More Information](#)

[Staff Presentation](#)

15-4-3: Public Meeting to Consider the Greenhouse Gas Quantification Determination for the San Joaquin Council of Governments' Regional Transportation Plan/Sustainable Communities Strategy

The Board will consider action to accept or reject the San Joaquin Council of Governments' (SJCOG) determination that its 2014 Sustainable Communities Strategy (SCS), if implemented, would achieve the region's per capita greenhouse gas emissions reduction targets for 2020 and 2035. Staff will present its technical evaluation of SJCOG's greenhouse gas determination for the 2014 SCS, which was adopted by SJCOG on June 26, 2014.

[More Information](#)

[Staff Presentation](#)

15-4-4: Public Meeting to Consider Approval of the San Joaquin Valley PM2.5 State Implementation Plan

The Board will consider revisions to the San Joaquin Valley Air Pollution Control District PM2.5 State Implementation Plan. The revisions provide an updated attainment demonstration for the annual average standard of 15µg/m³ and the 24-hour standard of 65µg/m³.

[More Information](#)

[Staff Presentation](#)

CLOSED SESSION

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

CO-AL Transport v. CalEPA/ARB, U.S. Court of Appeals, Ninth Circuit, Case No. 15-70839.

POET, LLC, et al. v. Corey, et al., Superior Court of California (Fresno County), Case No. 09CECG04850; plaintiffs' appeal, California Court of Appeal, Fifth District, Case No. F064045; California Supreme Court, Case No. S213394. [remanded to trial court].

Rocky Mountain Farmers Union, et al. v. Corey, U.S. District Court (E.D. Cal. Fresno), Case No. 1:09-CV-02234-LJO-DLB; ARB interlocutory appeal, U.S. Court of Appeals, Ninth Circuit, Case No. 09-CV-02234 [remanded to trial court].

American Fuels and Petrochemical Manufacturing Associations, et al. v. Corey, et al., U.S. District Court (E.D. Cal. Fresno), Case No. 1:10-CV-00163-AWI-GSA; ARB's interlocutory appeal, U.S. Court of Appeals, Ninth Circuit, Case No. 10-CV-00163 [remanded to trial court].

California Dump Truck Owners Association v. Nichols, U.S. District Court (E.D. Cal. Sacramento), Case No. 2:11-CV-00384-MCE-GGH; plaintiffs' appeal, U.S. Court of Appeals, Ninth Circuit, Case No. 13-15175.

Engine Manufacturers Association v. California Air Resources Board, Sacramento Superior Court, Case No. 34-2010-00082774; ARB's appeal, California Court of Appeal, Third District, Case No. C071891. EMA Petition for Review, California Supreme Court, Case No. S223544.

Truck and Engine Manufacturers Association v. California Air Resources Board, Sacramento Superior Court, Case No. 34-2013-00150733.

Alliance of Automobile Manufacturers v. California Air Resources Board; Sacramento Superior Court, Case No. 34-2013-00152974.

Citizens Climate Lobby and Our Children's Earth Foundation v. California Air Resources Board, San Francisco Superior Court, Case No. CGC-12-519554, plaintiffs' appeal, California Court of Appeal, First District, Case No. A138830.

California Chamber of Commerce et al. v. California Air Resources Board, Sacramento Superior Court, Case No. 34-2012-80001313; plaintiffs' appeal, California Court of Appeal, Third District, Case No. C075930.

Morning Star Packing Company, et al. v. California Air Resources Board, et al., Sacramento Superior Court, Case No. 34-2013-800001464; plaintiffs' appeal, California Court of Appeal, Third District, Case No. C075954.

Delta Construction Company, et al. v. United States Environmental Protection Agency, U.S. Court of Appeals, District of Columbia Circuit, Case No. 11-1428.

Alliance for California Business v. Nichols et al., Glenn County Superior Court, Case No. 13CV01232.

Dalton Trucking, Inc. v. United States Environmental Protection Agency, U.S. Court of Appeals, District of Columbia Circuit, Case No. 13-1283.

Owner-Operator Independent Drivers Association Inc. et al. v. Richard W. Corey et al., U.S. District Court, (E.D. Cal. Fresno) Case No. 1:13-CV-01998-LJO-SAB (transferred by court to E.D. Cal. Sacramento, Case No. 2:14-CV-00186-MCE-AC).

John R. Lawson Rock & Oil, Inc. et al. v. California Air Resources Board et al., Fresno County Superior Court, Case No. 14-CECG01494.

Transportation Solutions Defense and Education Fund v. California Air Resources Board, Fresno County Superior Court, Case No. 14CECG01788 (plaintiff's transfer to Sacramento Superior).

California Nozzle Specialists, Inc. v. California Air Resources Board, Los Angeles County Superior Court, Case No. BC564965.

California Air Resources Board v. BP West Coast Products LLC, Contra Costa County Superior Court, Case No. C12-00567.

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

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

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

Although no formal Board action may be taken, the Board is allowing an opportunity to interested members of the public to address the Board on items of interest that are within the Board's jurisdiction, but that do not specifically appear on the agenda. Each person will be allowed a maximum of three minutes to ensure that everyone has a chance to speak.

TO ELECTRONICALLY SUBMIT WRITTEN COMMENTS ON AN AGENDA ITEM IN ADVANCE OF THE MEETING GO TO:

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

(Note: not all agenda items are available for electronic submittals of written comments.)

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT THE CLERK OF THE BOARD:

1001 I Street, 23rd Floor, Sacramento, California 95814

(916) 322-5594

ARB Homepage: www.arb.ca.gov

SPECIAL ACCOMMODATION REQUEST

Consistent with California Government Code Section 7296.2, special accommodation or language needs may be provided for any of the following:

- An interpreter to be available at the hearing;
- Documents made available in an alternate format or another language;
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 as soon as possible, but no later than 7 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Consecuente con la sección 7296.2 del Código de Gobierno de California, una acomodación especial o necesidades lingüísticas pueden ser suministradas para cualquiera de los siguientes:

- Un intérprete que esté disponible en la audiencia
- Documentos disponibles en un formato alterno u otro idioma
- Una acomodación razonable relacionados con una incapacidad

Para solicitar estas comodidades especiales o necesidades de otro idioma, por favor llame a la oficina del Consejo al (916) 322-5594 o envíe un fax a (916) 322-3928 lo más pronto posible, pero no menos de 7 días de trabajo antes del día programado para la audiencia del Consejo. TTY/TDD/Personas que necesiten este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

SMOKING IS NOT PERMITTED AT MEETINGS OF THE CALIFORNIA AIR RESOURCES BOARD

 Back to Agenda

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 26

PROPOSAL: California Fuel Cell Partnership Executive Board Meeting Agenda and Quarterly Updates 

SYNOPSIS: This report summarizes the California Fuel Cell Partnership Executive Board meeting held April 14, 2015, and provides updates for quarters beginning October 2014 and January 2015.

COMMITTEE: Technology, May 15, 2015; Recommended for Approval

RECOMMENDED ACTION:

Receive and file the attached Executive Board meeting agenda and quarterly updates.

Clark E. Parker, Ph.D.
SCAQMD Representative to CaFCP

MMM:FM:LHM

The next California Fuel Cell Partnership (CaFCP) Executive Board meeting is scheduled for October 20, 2015, in Sacramento.

Additional information about the CaFCP can be found at <http://www.fuelcellpartnership.org>.

Attachments

- 1) California Fuel Cell Partnership Executive Board April 14, 2015 Meeting Agenda
- 2) California Fuel Cell Partnership Quarterly Update (October–December 2014)
- 3) California Fuel Cell Partnership Quarterly Update (January–March 2015)



AGENDA

CaFCP Executive Board

April 14, 2015 8:00am – 5:00pm

Location: SCAQMD Headquarters, 21865 East Copley Drive, Diamond Bar, CA 91765
GB Conference Room

8:00am – 8:30am

Gathering and registration

8:30am – 8:40am

CaFCP Chair, Justin Ward

1. Welcome

Welcome and remarks from the CaFCP Chair

8:40am – 9:10am

CaFCP, Bill Elrick

2. 2014-2015 Actions for Station Network Activation and Development

The 2014 *Hydrogen Progress, Priorities and Next Steps* (HyPPO) report¹ called for priority actions to address short-term priorities under six broad topics. Speakers will highlight progress made on actions in the hydrogen station network, vehicle deployment and policy development topics.

9:10am – 10:10am

Honda, Steve Ellis
FCEV customers, TBD
CaFCP, Ben Xiong

3. Developing the Customer Experience

A robust FCEV market requires a user-friendly and reliable station network that customers can depend on, consistent with current gasoline fueling experience. Customers and stakeholders present about real-world experience, existing coordination and planning tools, and future needs to enhance the customer experience

10:10am – 10:40 am

BREAK

10:40am – 12:00pm

GO-Biz, Tyson Eckerle
ARB, Mike Kashuba
CaFCP, Joe Gagliano

4. Planning the Network Development

Synchronized station-vehicle planning and implementation is a foundational principal in CaFCP's 2012 *A California Roadmap*² and has guided ongoing activities. Speakers will address tools and projects, coordinated planning, future activities and challenges as the hydrogen station network grows toward 100 stations statewide.

12:00pm – 1:15pm

Lunch – on your own

The Blue Sky Café at SCAQMD only accepts cash payments

¹ <http://cafcp.org/sites/files/Roadmap-Progress-Report2014-FINAL.pdf>

² [http://cafcp.org/sites/files/20120814_Roadmapv\(Overview\).pdf](http://cafcp.org/sites/files/20120814_Roadmapv(Overview).pdf)

1:15pm – 2:15pm

CEC, Jim McKinney
SCAQMD, Lisa Mirisola
Cal State LA, Michael Dray

5. Infrastructure Execution

The timeline for planning and building hydrogen stations continues to improve, but still take considerably longer than a traditional gasoline station. Presenters will address successes, challenges and learnings about the process of building, commissioning and opening a hydrogen station, and what to expect for the future.

2:15pm-3:00pm

CaFCP, Keith Malone
GO-Biz, Tyson Eckerle
Air Liquide, TBD

6. Preparing Communities – Awareness, Education & Training

Education and outreach efforts cut across the designing, building, selling and use of FCEVs and associated infrastructure. Speakers will cover new and updated outreach tools and practices, and gaps that are not currently being filled.

3:00pm – 3:30pm**BREAK**

3:30pm – 4:15pm

CaFCP, Bill Elrick

7. Business items

- Approve Jan 15, 2015 decisions & assignments
- Select 2016 meeting dates
- Confirm 2015 vice-chair nomination
- Report on CaFCP organizational meetings
- HySTEP project proposal
- New member updates

4:15pm – 4:45pm

Chair, Justin Ward

8. Public comment period*

4:45pm – 5:00pm

Chair, Justin Ward

9. Meeting wrap up

A "no-host bar" reception will be held immediately following meeting at Diamond Bar Golf Course, 22751 Golden Springs Drive, Diamond Bar, CA 91765

*** Public comment period**

The public comment period provides an opportunity for members of the public to address the executive board on subject matters within the interest of CaFCP. Each person will be allowed a maximum of three minutes to ensure that everyone has a chance to speak.

Agenda items may be taken out of order and times may vary from those listed in the agenda. The board may choose to limit public comment at the chair's discretion.

This meeting is open to the public and will not be available by phone. This facility is accessible to persons with disabilities. Deadline for requesting ADA modification is April 8, 2015. Meeting materials will be posted at www.cafcp.org. This facility is accessible by public transit. For transit information, call (909) 839-7000 for Diamond Bar Transportation, website: <http://ci.diamond-bar.ca.us/index.aspx?page=496>. And California Transit link: <http://www.apta.com/resources/links/unitedstates/Pages/CaliforniaTransitLinks.aspx>.

CaFCP Quarterly Update
October-December 2014**Background**

The California Fuel Cell Partnership is a unique collaborative of auto manufacturers, energy companies, fuel cell technology companies and government agencies, including SCAQMD. This report summarizes CaFCP activity in or related to Southern California for April to June 2014.

In its fourth phase, 2013-2016, CaFCP members, individually or in groups, will focus on meeting these goals to achieve market launch:

- Prepare for larger-scale manufacturing, which encompasses cost reduction, supply chain and production.
- Work on the customer channel, including identifying and training dealers and service technicians.
- Reduce costs of station equipment, increase supply of renewable hydrogen at lower cost, and develop new retail station approaches.
- Support cost reduction through incentives and targeted RD&D projects
- Continue research, development and demonstration of advanced concepts in renewable and other low-carbon hydrogen.
- Provide education and outreach to the public and community stakeholders on the role of FCVs and hydrogen in the evolution to electric drive.

CaFCP and members' activities fall within three main strategic directions:

1. Support hydrogen station and vehicle deployment to enable commercial market launch in 2015 timeframe
2. Show feasibility and a clear value proposition to consumers, businesses and communities
3. Focus existing resources, engage new groups and pursue innovative concepts to overcome early market challenges

To successfully implement the vision, CaFCP activities must focus on technical, communications and business operations/strategies that require collaboration and coordination. A detailed CaFCP implementation plan is available as a separate document.

2014 Program Plan



Q4 accomplishments




1. Facilitate member collaboration	
The California Fuel Cell Partnership facilitates members and stakeholder coordination on projects and activities of common interest in order to leverage resources, communicate progress, bring together new players, and overcome challenges more quickly than could be accomplished by individual action.	
Heavy duty Fuel Cell Program	<ul style="list-style-type: none"> • Medium and heavy-duty FCEV Roadmap initiative underway, renaming to “Action Plan” due to status MD/HD FCEV technology • Held a Fuel Cell Bus Briefing Dec 2 for new legislators in Sacramento
Strategic Initiatives	<ul style="list-style-type: none"> • Participated in one H2USA meeting.
2. Support Station implementation	
CaFCP will monitor, coordinate and execute the activities to deploy stations for commercialization as outlined in the roadmap document.	
National ER Program	<ul style="list-style-type: none"> • Phase I of program is available (by request) and soon for download on www.h2tools.org • Beginning Phase II development -kickoff meeting Wed. Oct. 29 <ul style="list-style-type: none"> ○ Identify additional resources ○ Being supported by the National Fire Academy and NFPA
Station Performance Codes & Standards	<ul style="list-style-type: none"> • NFPA 2 Second Draft, 2nd meeting (Oct. 23rd) • SAE International in-person meetings first week of November <ul style="list-style-type: none"> ○ FC Interface Working Group <ul style="list-style-type: none"> ▪ In progress: J2719/1 Application Guideline for Use of Hydrogen Quality Specification and J2600 Compressed Hydrogen Surface Vehicle Fueling Connection Devices (revision)- target for ballot 2014 ○ FC Safety Task Force: <ul style="list-style-type: none"> ▪ J2990/1 (Gaseous Hydrogen and Fuel Cell Vehicle First and Second Responder Recommended Practice) expected to be a draft by the end of 2014, and go to ballot Q1, 2015. ▪ SAE J2579 Standard for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles (revision)
Fuel retailers	<ul style="list-style-type: none"> • Held H2 FCEV education panel session with CAFCP members at annual NACS Show on Oct. 9, incl. FCEV on static display. • During Nov 17-19 Fuels Institute Board Meeting in Newport Beach, CaFCP participated as panel speaker and assisted w/H2 station tour.
Station implementation	<ul style="list-style-type: none"> • SOSS (to share station availability status with FCEV drivers) implementation in progress for CalStateLA and West Sacramento H2 stations. • Staff presented on 1. HyPPO 2014, 2. SAE TIR J2601/2 and 3. MD/HD FCEV Roadmap/Action Plan at Fuel Cell Seminar in LA (Nov 10-13). • Staff in five cities were briefed on FCEVs, hydrogen and the fueling network. (see listing below) • GO-Biz and CaFCP permitting workshop in Hayward on Dec 9.




Workforce development	<ul style="list-style-type: none">• Oct 2: Central Coast Clean Cities Best Practices workshop in Santa Barbara.• Oct 2: Long Beach Clean Cities Best Practices workshop• Oct 15: Sacramento Clean Cities Green Fleet Conference• Oct 17: Participated in Rio Hondo Automotive/Alternative Fuels Advisory Committee meeting. Provided tech training/ER materials to integrate.
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3. Implement hydrogen readiness

CaFCP will focus outreach in early market communities with a goal of easing station implementation, including community acceptance and accessibility of funding. The ultimate goal is to increase awareness and understanding of hydrogen and fuel cells, especially regarding progress and next steps in California, with government officials in Sacramento and Washington, D.C.

Activity	Description	Picture
Long Beach Clean Cities Coalition Oct. 2 , 2014	Exhibition	na
Clean Tech OC Oct. 8, 2014	Exhibition	
Northern California Green Fleet Forum, Oct. 15 -16, 2014	Presenter and exhibition and test drive	

<p>CHBC Fall Summit, Oct. 15-16, 2014</p>	<p>Exhibition and test drive</p>	
<p>Advancing Cleantech Innovation in the SFV (Keith) Oct 10, 2014</p>	<p>Exhibit</p>	<p>na</p>
<p>Fuel Cell Seminar, Nov. 10-13, 2014</p>	<p>Presenter and test drive</p>	
<p>Yolo County Air Quality Management District, Nov. 12, 2014</p>	<p>Presenter</p>	<p>na</p>
<p>World Business Academy, Santa Barbara Nov 17, 2014</p>	<p>Exhibitor</p>	

<p>Decarbonizing California 2020-2050 Nov. 17, 2014</p>	<p>Presenter</p>	<p>na</p>
<p>Fuel Cell Bus briefing event Dec. 2, 2014</p>	<p>Exhibition and briefing</p>	
<p>West Sacramento station grand opening Dec. 5, 2014</p>	<p>Speaker, exhibition and test drive</p>	
<p>NREL/GO-Biz/CaFCP permitting workshop Dec. 9, 2014</p>	<p>Presenter, exhibition and test drive</p>	

Legislative, NGO & Policy

Conduct one-on-one meetings with California state and federal elected officials and their staff in district and capitol offices. Conduct one-on-one meetings with influential NGOs at the local, state and national levels. Emphasize California's commitment to hydrogen and provide information about progress and plans. Provide education and information to policy makers.

2014 Q4 Statistics – Meetings and encounter

Elected officials: 3 (2014: 23)

Legislative staff: 17 (2014: 126)

NGOs: 2 (2014: 12)

Event name	Meeting Date	Meeting with
District meeting	10/17/2014	Assembly Member Bonnie Lowenthal (D-Long Beach) and aide, Victoria Chung, soon-to-be aide to Long Beach Councilwoman Lena Gonzalez
District meeting	10/29/2015	Green21 committee meeting with Vickere Murphy, office of State Senator Carol Liu (D-Glendale)
Community meeting	10/30/2014	District office staff of Assembly Member Sharon Quirk-Silva: Javiera Cartagena, district director and Calvin Sung, Tige Richardson, Daisy Campos, Michael Quibuyen, Amy Ramos, Sophie Tran and intern Mariela.
Community meeting	10/30/2014	Kera Seward, district director to State Senator Fran Pavley (D-Woodland Hills)
District Meeting	12/2/2014	Stacey Smith, Sacramento office director for U.S. Senator Barbara Boxer
FCEB briefing	12/2/2015	Hans Hermann, chief of staff to State Senator Loni Hancock, 3 other legislative, Bill Magavern, legislator director for Coalition for Clean Air and Will Barrett, American Lung Association of California
Community meeting	12/4/2014	Cesar Diaz, planning director, and Andrew Pennington, assistant planning director, Jason Levin, communications, John Popoch, legislative director, office of Los Angeles Council Member Bob Blumenfeld (Woodland Hills and SFV)
Station opening	12/10/2014	State Senator Richard Pan (D-Sacramento) attended the opening of the West Sacramento station. Keith staffed him during the event and arranged for Craig Scott to accompany him in the Mirai.
Station opening	12/10/2014	Chris Flores, office of Congresswoman Doris Matsui (D-Sacramento)
Station opening	12/10/2014	Julissa Delgado, office of U.S. Senator Barbara Boxer

Station opening	12/10/2014	Aubrie Fong, office of Assembly Member Kevin McCarty (D-Sacramento)
District office holiday party	12/16/2015	Vickere Murphy, deputy to State Senator Carol Liu (D-Glendale)
District meeting	12/17/2014	Raul Alvarez, district director and Ronald Gonzales-Lawrence, field representative, office of Assembly Member Anthony Rendon (D-South Gate)

Community Relations (Station-related outreach)

Activity	Meeting Date
Meeting with City of Ontario city officials	October 6
Meeting with La Canada Flintridge city officials	October 6
Meeting with Berkeley city officials	December 8
Meeting with Oakland city officials	December 8
GO-Biz and CaFCP permitting workshop in Hayward	December 9
Meeting with Hayward city officials	December 9

Website and Social Media

We provide outreach and education through events, materials, video, web and social media that increase awareness in the general public, build support in early market communities and support other projects' specific goals. Our online strategy is to deliver real-world information about FCEVs and hydrogen stations to early adopter audiences. We use email, blogs, Twitter, YouTube and Facebook to share messages about FCEV commercialization and technology with different audience types.

www.cafcp.org	Oct 14	Nov 14	Dec 14
Number of visits	8,942	16,022	9,239
Average time users spent on site	1:58	1:52	1:53
Most visited pages	Station map Home page FAQ Station Facts A California Road Map	Station map Home page FAQ Station Facts A California Road Map	Station map Home page FAQ Station Facts A California Road Map
Most searched keywords on Google to land on CaFCP website	where does hydrogen come from facts about hydrogen california fuel cell partnership where can you find hydrogen interesting facts about hydrogen	where does hydrogen come from hydrogen fueling stations in california hydrogen fueling stations california fuel cell partnership facts about hydrogen	where does hydrogen come from california fuel cell partnership hydrogen fueling stations hydrogen fueling stations in california interesting facts about hydrogen
Most searched keywords on cafcfp.org search engine	hydrogen price carrer elrick executive board	cost fcev stations in Texas ZEV Mandate cost of hydrogen price	hydrogen 10 facts about fuel cells ac transit OEM price per gallon
Most referred websites	google.com bing yahoo arb.ca.gov bing	google.com cnet.com bing yahoo arb.ca.gov	google.com bing yahoo arb.ca.gov driveclean.ca.gov

FACEBOOK	Oct 14	Nov 14	Dec 14
New likes	19	32	21
Lifetime likes	2,596	2,623	2,638
Lifetime Post Total Reach	11,934	10,201	13,730
Lifetime Engaged Users	368	651	1,062

TWITTER	Oct 14	Nov 14	Dec 14
Total Followers	1846	1889	1964
Total Lifetime Tweets	9806	9984	10,158
Link Clicks	477	268	328

CaFCP Quarterly Update

January – March 2015

Background

The California Fuel Cell Partnership is a unique collaborative of auto manufacturers, energy companies, fuel cell technology companies and government agencies, including SCAQMD. This report summarizes CaFCP activity in or related to Southern California for January to March 2015.

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To successfully implement the vision, CaFCP activities must focus on technical, communications and business operations/strategies that require convening, collaborating and communicating.

2015 Program Plan

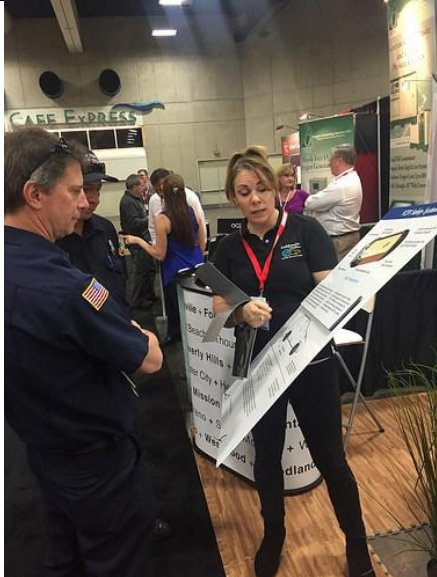

Q1 accomplishments




1. CONVENE	
Convene CaFCP members and stakeholders in a common forum to discuss the challenges and opportunities, exchange experiences and knowledge, and advance group sharing and progress. Build and expand trust among members via open communication. Maintain and enable the organization to achieve its mission and goals.	
Conduct CaFCP standing meetings	<ul style="list-style-type: none"> Jan 15 – completed public Executive Board meeting Completed 2 Steering Team meetings and 1 Working Group meeting
Conduct ad-hoc topical member and industry meetings	<ul style="list-style-type: none"> No meetings for Q1 in this category.
Expand CaFCP membership	<ul style="list-style-type: none"> Initiated discussions on strategy for membership expansion
2. COLLABORATE	
Collaborate to identify and address emerging challenges and translate into comprehensive and durable solutions. Retain the flexibility to address issues quickly as they arise, in the interest of advancing all members and industry.	
Member data and information needs	<ul style="list-style-type: none"> SOSS upgrade underway from SOSS 2.0 to 3.0, moving to consistent minimum 15 minute station status data reporting interval, which improves FCEV customer satisfaction.
Roadmap progress	<ul style="list-style-type: none"> Updates on status of funded stations shared by station implementers and government during in-person meeting, followed by a discussion on how to address challenges identified.
Roadmap 2.0 for stations 69-100	<ul style="list-style-type: none"> CaFCP staff functioning in supporting and facilitating role for discussions on the “69-100” strategy. Main responsibility for planning lies with CARB, as part of AB8 reporting.
Station Implementation Barriers	<ul style="list-style-type: none"> NFPA 2 on schedule for publication SAE International March in-person meetings <ul style="list-style-type: none"> Materials compatibility workshop conducted FC Interface Working Group <ul style="list-style-type: none"> SAE J2601 re-opened for inclusion of the MC Method (Honda) FC Safety Task Force: <ul style="list-style-type: none"> J2990/1 (Gaseous Hydrogen and Fuel Cell Vehicle First and Second Responder Recommended Practice) presented to FC Safety TF. Comments being addressed. Schedule modified; initial ballot by June, 2015 and final ballot in Q4. SAE J2579 Standard for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles proposals being submitted CSA HGV 4.3 (Test Methods for Hydrogen Fueling Parameter Evaluation) in process of being updated to the Standard SAE J2601 <ul style="list-style-type: none"> Anticipated ballot date: December, 2015 CSA HGV 4.9 (Hydrogen Fueling Station Guidelines) comments being addressed with individual stakeholders <ul style="list-style-type: none"> Anticipated ballot date: December, 2015 ISO/TC 197 <ul style="list-style-type: none"> WG 24 (fueling stations)- final Draft document out for review (in April)

	<ul style="list-style-type: none"> ○ WG 5 (materials compatibility) kickoff meeting in Ann Arbor, MI in March
<p>Expand value proposition of H2 and FCEVs</p>	<ul style="list-style-type: none"> ● Submitted a letter to consider H2 as renewable energy storage medium option to CEC docket for CEC Integrated Energy Policy Report (IEPR) effort. ● Initiated discussion about renewable H2 and how to shape a strategy for California on this topic.
<p>Medium- and heavy-duty vehicle and FCEB strategies</p>	<ul style="list-style-type: none"> ● MD/HD FCEV Action Plan timeline approved by members. Publication is targeted for Q1 2016. ● Staff supported organization and participated in International Fuel Cell Bus Workshop at SunLine Transit in Thousand Palms, Feb 24-26.



3. COMMUNICATE

Communicate, educate, inform and promote H2 & FCEVs benefits and opportunities to key outside stakeholders and general public for increased and continued support. Become readily recognized as the face of the industry for trustworthy information and assist.

Activity	Description	Picture
Firehouse World Jan. 26-29, 2015	Exhibitor	
SAE Hybrid & Electric Technology Symposium, Feb. 12, 2015	Speaker	
Global Port Summit (LAEDC) Feb 13, 2015	Exhibitor	

<p>WPMA conference and expo Feb. 17-19, 2015</p>	<p>Exhibitor</p>	
<p>Third Annual California Renewable Energy and Storage Technology Conference, Feb. 21, 2015</p>	<p>Presenter and exhibitor</p>	
<p>European Union FCEB delegation presentations to Governor's office, CARB/CEC, President Pro Tem DeLeon and Asm Speaker Atkins' office Feb. 23, 2015</p>	<p>Member support</p>	

<p>International Fuel Cell Bus Workshop, Feb. 25-26, 2015</p>	<p>Exhibitor and member support</p>	
<p>Woodside Town Hall Meeting GO-Biz/HTEC event, Mar. 16 2015</p>	<p>Exhibition and member support</p>	
<p>Diamond Bar station dedication Mar. 25, 2015</p>	<p>Test drive and member support</p>	

<p>Woodside/Portola Valley Earth Day Festival Mar. 28, 2015</p>	<p>Exhibition</p>	  <p>Mercedes-Benz</p> <p>B-Class F-CELL Technical Data</p> <ul style="list-style-type: none">● Fuel cell system● Electric motor● 7-speed automatic● 100% electric <p>Drive System: Electric motor with Fuel Cell Transmission: 7-speed automatic with regenerative braking Maximum Speed: 100 mph Rated Torque: 214 ft-lb Rated Output: 134 hp Fuel Consumption: 53 mpg CO₂ Emissions: 0.0 g/mi Range: 240 mi</p> <p>PicCOLLAGE</p>
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Legislative, NGO & Policy

Conduct one-on-one meetings with California state and federal elected officials and their staff in district and capitol offices. Conduct one-on-one meetings with influential NGOs at the local, state and national levels. Emphasize California's commitment to hydrogen and provide information about progress and plans. Provide education and information to policy makers.

2015 Q1 Statistics – Meetings and encounter

Elected officials: 6 (2015 to date: 6)

Legislative staff: 37 (2015 to date: 37)

NGOs: 0 (2015 to date: 0)

Event name	Meeting Date	Meeting with (Names and titles of all persons)
District meeting	1/22/2015	State Senator Tony Mendoz (D-Montebello), and staff Alma Marquez, district director and Calvin Sung, field representative
District meeting	2/2/2015	Madeleine Moore, special projects and Timothy Lippman, senior field deputy, office of Los Angeles County Supervisor Sheila Kuehl; and Javier Hernandez and Danielle Valentino, deputies, office of Los Angeles County Supervisor Hilda Solis.
Event	2/3/2015	Victoria Alvarez, consultant, Assembly Transportation Committee (Asm. Jim Frazier, chair)
Capitol meeting	2/23/2015	CARB and CEC staff, including CEC Commissioner Janea Scott, Catherine Dunwoody, CARB and others
Capitol meeting	2/23/2015	Staff of Assembly Speaker Toni Atkins, including Zack Olmstead, a special assistant who deals with transportation issues.

Capitol meeting	2/24/2015	Representatives of the Governor, including Wade Crowfoot, deputy director of the Governor's Office of Planning and Research, Randall Winston, special assist in the Governor's office and Kate White, Deputy Secretary of Environmental Policy and Housing Coordination, California Transportation Agency.
Capitol meeting	2/24/2015	President Pro Tem of the State Senate, Kevin de Leon, Kip Lipper, policy consultant (utilities, environment) and Alexandra Salgado, policy consultant (transportation).
Capitol meeting	2/24/2015	Scott Sellars, science fellow, office of Assembly Member Bill Quirk (D-Hayward)
Capitol meeting	2/24/2015	Ernesto Meza, legislative assistant to Assembly Member Cristina Garcia (D-Downey). Spoke briefly with Vivian Erickson, scienc fellow in office.
Capitol meeting	2/24/2015	Tina Andolina, senior policy consultant, office of State Senator Ben Allen (D-Redondo Beach)
Capitol meeting	2/24/2015	Alex Harold, legislative aide, Assembly Member Kevin McCarty (D-Sacramento)
Capitol meeting	2/24/2015	Erin Riches, principal consultant, Senate Transportation and Housing Committee
Capitol meeting	2/24/2015	John Nam, legislative director, office of Assembly Member Evan Low (D-Campbell)
District meeting	3/5/2015	Los Angeles County Supervisor Sheila Kuehl, 3rd district and her staff, Torie Osborn.
District meeting	3/9/2015	Robert Pullen-Miles, district director of Assembly Member Autumn Burke (D-Inglewood). Robert is also the mayor of Lawndale.

District meeting	3/13/2015	Assembly Member David Hadley (R-Torrance) and Sara Witfong, district director
District meeting	3/13/2015	Brian Mineghino, field representative, office of Assembly Member Patrick O'Donnell's (D-Long Beach) and two interns
District meeting	3/13/2015	Samantha David, district director of State Senator Ben Allen (D-Redondo Beach)
Community meeting	3/18/2015	Ontario Mayor Paul Leon and Mayor Pro Tem Alan Wapner
ZEB Coalition Sac Day	3/25/2015	Andrei Gribakov, legislative aide, transportation, and Henry Stern, principal consultant, office of State Senator Fran Pavley (D-Woodland Hills), chair of Senate Committee on Natural Resources and Water
ZEB Coalition Sac Day	3/25/2015	Alicia Priego, legislative director, Senator Beall (D-Campbell), chair of Senate Transportation and Housing
ZEB Coalition Sac Day	3/25/2015	Bridget Kolakosky, legislative director, Assemblyman Tony Thurmond (D-Richmond)
ZEB Coalition Sac Day	3/25/2015	Reichel Everhart, chief of staff, Assemblyman Kansen Chu (D-San Jose)
ZEB Coalition Sac Day	3/25/2015	Jonathan Feldman, press secretary, Assemblyman Mike Gipson (D-Carson).
ZEB Coalition Sac Day	3/25/2015	Kim Craig, staff member, office of Assembly Speaker Toni Atkins.
ZEB Coalition Sac Day	3/25/2015	Assemblyman Richard Bloom (D-Santa Monica), chair of Assembly Budget Subcommittee on Resources and Transportation and Anthony Molina, legislative aide.

ZEB
Coalition Chris Norden, legislative director for Senator Jeff
Sac Day 3/25/2015 Stone.

ZEB
Coalition Martha Guzman-Aceves representing Governor
Sac Day 3/25/2015 Brown

Community Relations (Station-related outreach)

Activity	Meeting Date
Meetings with City of San Diego council offices	January 14 and 15
Meeting with Lawndale city officials	January 27
Meeting with Palo Alto city officials	February 9
Meeting with Foster City city officials	February 9
Meeting with Los Altos city officials	February 9
Meeting with Woodside city officials	February 9
Meeting with West LA public affairs rep, League of CA Cities	February 12
Present to La Canada Flintridge city council	February 17
Ontario State of the City event	March 18
Hayward Sustainability Committee meeting	March 23

Website and Social Media

We provide outreach and education through events, materials, video, web and social media that increase awareness in the general public, build support in early market communities and support other projects' specific goals. Our online strategy is to deliver real-world information about FCEVs and hydrogen stations to early adopter audiences. We use email, blogs, Twitter, YouTube and Facebook to share messages about FCEV commercialization and technology with different audience types.

www.cafcp.org	Jan 15	Feb 15	Mar 15
Number of visits	12,084	8,927	9,232
Average time users spent on site	1:42	1:38	1:33
Most visited pages	Station map Home page FAQ 10 facts about hydrogen Station Toolkit	Station map Home page FAQ 10 facts about hydrogen Station Toolkit	Station map Home page FAQ 10 facts about hydrogen Station Toolkit
Most searched keywords on Google to land on CaFCP website	where does hydrogen come from hydrogen fueling stations california fuel cell partnership http://cafcp.org/ hydrogen fuel stations	where does hydrogen come from california fuel cell partnership how are fuel cells different from batteries cafcp hydrogen facts	facts about hydrogen where does hydrogen come from difference between fuel cell and battery hydrogen facts hydrogen fuel cell facts
Most searched keywords on cafcp.org search engine	biodiesel cost bus briefing hydrogen HyPPO	40404 well to wheels California Road Map career cost	executive board Hydrogenics how it works hydrogen joe gagliano
Most referred websites	google.com yahoo bing disqus arb.ca.gov	google.com yahoo bing arb.ca.gov semalt.semalt.com	google.com yahoo bing arb.ca.gov www1.social-buttons.com

FACEBOOK	Jan 15	Feb 15	Mar 15
New likes	21	21	35
Lifetime likes	2,655	2,669	2,559
Lifetime Post Total Reach	12,926	10,685	12,571
Lifetime Engaged Users	1,367	1,194	1,182

TWITTER	Jan 15	Feb 15	Mar 15
Total Followers	1994	2042	2090
Total Lifetime Tweets	10252	10457	10676
Link Clicks	336	319	395

E blast Well to Wheels	
Air Benefits – Sept. 16, 2014	
Contacts:	8,564
Opened:	15% - 1,285 contacts
Bounced:	1.7% - 149 contacts
No Info:	83.3% - 7,130
Clicked:	1% - 107 contacts
Unsubscribed:	13

E blast Well to Wheels	
Water Consumption – Oct. 6, 2014	
Contacts:	8,506
Opened:	15.0% - 1,276 contacts
Bounced:	1.4% - 120 contacts
No Info:	83.6% - 7,110 contacts
Clicked:	1% - 126 contacts
Unsubscribed:	9

E blast Well to Wheels	
Climate Change – Sept. 22, 2014	
Contacts:	8,530
Opened:	13.8% - 1,173 contacts
Bounced:	1.7% - 147 contacts
No Info:	84.5% - 7,210 contacts
Clicked:	1% - 95 contacts
Unsubscribed:	6

E blast Well to Wheels	
Energy Security – Oct. 13, 2014	
Contacts:	8,443
Opened:	12.4% - 1,051 contacts
Bounced:	1.9% - 162 contacts
No Info:	85.6% - 7,230 contacts
Clicked:	1% - 53 contacts
Unsubscribed:	6

E blast Well to Wheels	
Energy Efficiency – Sept. 29, 2014	
Contacts:	8,504
Opened:	14.6% - 1,239 contacts
Bounced:	1.7% - 145 contacts
No Info:	83.7% - 7,120 contacts
Clicked:	2% - 146 contacts
Unsubscribed:	11

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 27

PROPOSAL: Potential Serious Area 24-Hour PM2.5 SIP for the South Coast Air Basin

SYNOPSIS: While the long term trend of 24-hour PM2.5 in the South Coast Air Basin (Basin) supported targeting attainment of the 2006 24-hour PM2.5 National Ambient Air Quality Standards in 2015, analysis of recent (2013-2014) particulate measurements and preliminary 2015 data indicate that attainment may not occur as projected. Severe drought conditions during the late fall and winter months have impacted the frequency and number of observed high PM2.5 days that exceed the standard. Failure to attain the standard in 2015, or receive a one-year extension to 2016 from the U.S. EPA, will result in the Basin being reclassified as “serious nonattainment,” thereby requiring a Serious Area 24-hour PM2.5 SIP submittal. While the data is still preliminary, staff is proposing to include a Serious Area SIP as a component of the 2016 Air Quality Management Plan (AQMP) to be submitted to U.S. EPA only if the Basin fails to attain in 2015 or receive the extension to attain in 2016. This action is to direct staff to include a PM2.5 24-hour Serious SIP in the 2016 AQMP.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:

Direct staff to include a Serious Area 24-hour PM2.5 SIP as a component of the 2016 AQMP, to be submitted to CARB and U.S. EPA in the event that the Basin fails to attain the 2006 24-hour Average PM2.5 NAAQS by 2015 or receive an extension to 2016.

Barry R. Wallerstein, D.Env.
Executive Officer

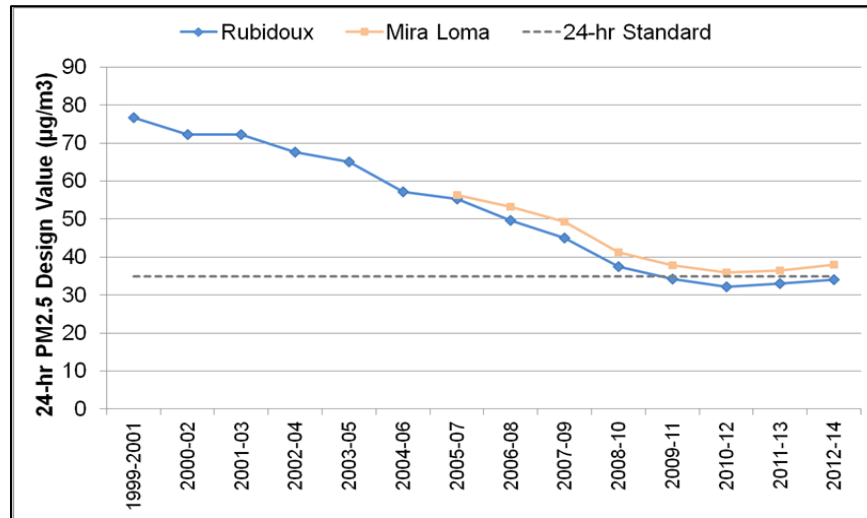
Background

At its February 2015 meeting, the Board approved the "Supplement to 24-Hour PM_{2.5} State Implementation Plan for the South Coast Air Basin" which updated the 2012 AQMP attainment demonstration for the 2006 24-hour PM_{2.5} National Ambient Air Quality Standard (NAAQS) (35 µg/m³) with an attainment date of 2015. The supplement, which was submitted to the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (U.S. EPA) was in response to a court decision (Natural Res. Def. Council v. EPA, 706 F.3d 428 (D.C. Cir. 2013)) which compelled U.S. EPA to evaluate the 24-hour PM_{2.5} SIP under CAA, Title 1, Part D, Subpart 4 (hereafter "Subpart 4") requirements specific to particulate matter. Subpart 4 provides for an attainment year of 2015 for "Moderate" areas, one year later than the ongoing attainment year in the 2012 AQMP (2014). Subpart 4 requirements allow for an additional "extension" year to attain the standard (2016) provided that the single year (2015) ambient 98th percentile PM_{2.5} air quality meets the 24-hour PM_{2.5} NAAQS concentration level of 35 µg/m³. Since the supplement was approved by the Board, analysis of the final 2014 ambient PM_{2.5} air quality data indicates that the South Coast Air Basin (Basin) did not meet the 2006 24-hour PM_{2.5} NAAQS by the end of 2014. At this time, the preliminary PM_{2.5} data for the first quarter of 2015 are not promising for attainment due to the continuing extreme drought conditions that are impacting not only the Basin, but the entire western United States.

Only one monitoring location in the Basin, Mira Loma, exceeds the 24-hr PM_{2.5} NAAQS. As depicted in the graph below, Mira Loma was on course to attain the standard by 2015. The 24-hr. PM_{2.5} standard is based on the three-year average of the 98th percentile concentration. The Basin 2013 design value (based on data from 2011-2013) at Mira Loma was 36 µg/m³. The drought's impact was apparent in 2014 when higher concentrations were measured during the winter months of January and February, typically months characterized by frequent rain events and good atmospheric dispersion. Based on final 2014 data, the 98th percentile concentration (8th highest) measured at Mira Loma was 40.1 µg/m³. PM_{2.5} 24-hour average concentrations measured beyond the 98th percentile dropped precipitously such that the 10th highest reading was 35.0 µg/m³. As outlined in the supplemental submittal, the 50+ year average number of rain events in the first and 4th quarters of the year totals 28. In 2014, the drought limited the number of rain events to 8 days in the first quarter (44 percent of normal) and 10 days in fourth quarter.

Much like the winter of 2014, weather patterns in January and February 2015 shifted expected storms away from California. January of 2015 saw only one-third of the average rainfall and the number of rain events was below normal. As a consequence, cold clear nights lead to strong low-level inversions and stagnation for most of January. Preliminary PM_{2.5} 24-hour average concentrations exceeded 35 µg/m³ on 10 days during the first three weeks of the year. Since the 8th highest preliminary PM_{2.5} 24-hour average concentration has already exceeded 35 µg/m³, attainment as well as

eligibility for the extension may be impossible if the data is finalized as-is. While this data is still preliminary, staff recommends being prepared for a potential “bump-up” to the “Serious” PM_{2.5} nonattainment classification if the final data for 2015 shows failure to attain the standard. 2014 data does indicate that the Basin continued to attain the 1997 annual PM_{2.5} standard of 15 micrograms per cubic meter, and so far, preliminary 2015 data does not threaten continued attainment of that standard.



Implications of Not Attaining the 24-hour NAAQS in 2015

There are several implications for not attaining the 3-year averaged 24-hour NAAQS in 2015 and the 2015 individual year 98th percentile concentration exceeding 35 µg/m³. When data is final and if it shows that the region cannot attain by 2015 or receive an extension, U.S. EPA will change the Basin to a classification of Serious nonattainment. This action will necessitate the development of a new Serious Area SIP including an attainment demonstration, with an attainment deadline as early as practicable but not past 2019. Furthermore, the Serious classification will likely lower the New Source Review (NSR) threshold for PM_{2.5} and precursor emissions from the 100 TPY year level to 70 TPY (potential to emit) level. In addition, the Serious Area SIP will require a Best Available Control Measure/Best Available Control Technology (BACM/BACT) SIP submittal and an updated Reasonable Further Progress (RFP) analysis.

Proposal

Staff is proposing to develop a Serious Area SIP for the 24-hour PM_{2.5} NAAQS as a component of the 2016 AQMP for potential submission to U.S. EPA, if measured PM_{2.5} data shows that the region cannot attain by 2015 or be eligible for extension of attainment date. The Serious Area SIP would address the expanded requirements outlined in the “Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements; Proposed Rule” (FR, Vol. 80, No.55, March 23, 2015), as they are finalized by U.S. EPA. The plan would also incorporate early action items as recommended by the Board at the adoption hearing for the SIP Supplement in

February 2015, including emissions reductions gained from the shave of RECLAIM NOx, and other measures that emerge from the AQMP process.

Resource Impacts

Development of a Serious Area SIP would be concurrent with the development of the 2016 AQMP. This action would require revisions to the PM2.5 attainment demonstration, NSR thresholds, RFP and a new BACT/BACM analysis. In addition, the 2016 AQMP California Environmental Quality Act and Socioeconomic analyses will require contingency analyses to be included in the event the Serious Area plan is submitted. Staff requirements are projected to be adequate to meet this objective.

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 28

PROPOSAL: Proposed Amended Rules 1401 – New Source Review of Toxic Air Contaminants, 1401.1 – Requirements for New and Relocated Facilities Near Schools, Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, and 212 – Standards for Approving Permits and Issuing Public Notice

SYNOPSIS: In March 2015, the Office of Environmental Health Hazard Assessment (OEHHA) approved revisions to their Air Toxics Hot Spots Program Risk Assessment Guidelines. Rule 1401 – New Source Review of Toxic Air Contaminants, Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools, and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources currently rely on the prior OEHHA Risk Assessment Guidelines to calculate health risks. Amendments are proposed to reference the Revised OEHHA Guidelines and to amend specific provisions to harmonize with the Revised OEHHA Guidelines. Proposed Amended Rule 1401 may include provisions for specific source categories or situations that cannot meet the Rule 1401 risk thresholds using the Revised OEHHA Guidelines.

COMMITTEE: Stationary Source, April 17, 2015, May 15, 2015, Reviewed

RECOMMENDED ACTIONS:

1. Adopt the attached resolution:
 - a. Certifying the Final Environmental Assessment for Proposed Amended Rules to Implement OEHHA Revisions to the Air Toxics Hot Spots Program Risk Assessment Guidelines; and
 - b. Amending Rules 1401, 1401.1, 1402, and 212.

2. Receive and file:

- SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (Version 8.0)
- SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (June 5, 2015);
- SCAQMD Facility Prioritization Procedures for AB 2588 Program (June 2015).

Barry R. Wallerstein, D.Env.
Executive Officer

PF:JW:SN:EK

Background

The California Office of Environmental Health Hazard Assessment (OEHHA) establishes risk exposure information (i.e., risk values) for toxic air contaminants (TACs). Additionally, AB2588 requires that OEHHA develop health risk assessment guidelines for implementation of the Hot Spots Program (Health and Safety Code Section 44360(b)(2)). In 2003, OEHHA developed and approved the Health Risk Assessment Guidance (2003 OEHHA Guidelines). Since the adoption of the 2003 Guidelines, new scientific information has shown that early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. Based on this information, OEHHA approved the Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (Revised OEHHA Guidelines) on March 6, 2015. The Revised OEHHA Guidelines incorporate age sensitivity factors which will increase cancer risk estimates to residential and sensitive receptors, based on the change in methodology. Under the Revised OEHHA Guidelines, even though the toxic emissions from a facility have not increased, estimated cancer risk to a residential receptor will increase due to the change in methodology. Cancer risks for off-site worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged.

Proposal

The SCAQMD relies on OEHHA’s health risk assessment guidelines in various aspects of its toxics regulatory program including the permitting program and AB2588 Hot Spots Program. SCAQMD staff is proposing amendments to the following rules affected by the Revised OEHHA Guidelines:

- Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants
- Proposed Amended Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools

- Proposed Amended Rule 1402 – Control of Toxic Air Contaminants from Existing Sources
- Proposed Amended Rule 212 – Standards for Approving Permits and Issuing Public Notice

The proposed amendments will revise definitions and risk assessment procedures to be consistent with the Revised OEHHA Guidelines. Proposed Amended Rule 1401 includes a provision that would allow the following two source categories to use the previous version of the OEHHA Guidelines to allow additional time for staff to analyze these source categories and provide further recommendations for implementation through a proposed rule and/or procedures: (1) spray booths; and (2) retail gasoline stations. The proposed amendments are to ensure SCAQMD staff can implement the Revised OEHHA Guidelines regarding how health risks are calculated. Staff is not recommending revisions to the health risk thresholds in the proposed amended rules. Additionally, staff is updating the following documents to incorporate the Revised OEHHA Guidelines. These documents will be used to implement Rules 1401, 1401.1, 1402, and 212:

- SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (Version 8.0)
- SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act
- SCAQMD Facility Prioritization Procedures for AB 2588 Program

Public Process

PAR 1401, 1401.1, 1402, and 212 were developed through a public process. As part of the generalized work plan presented at the March 2015 Governing Board meeting, SCAQMD staff began an extensive outreach and communication effort to engage all stakeholders regarding the Revised OEHHA Guidelines and the proposed amended rules. The SCAQMD staff held five regional Public Workshops in March and April of 2015 throughout the Basin, and conducted additional workshops to the following business groups that requested further information on the proposed amended rules and the Revised OEHHA Guidelines: Southern California Alliance of Publicly Owned Treatment Works (SCAP), San Gabriel Valley Legislative Coalition of Chambers, California Small Business Alliance, California Health Care Association, California Council for Environmental and Economic Balance, Western States Petroleum Association (WSPA), and the Chambers of Commerce for the cities of Santa Monica, Riverside, and the City of Industry.

Key Outstanding Issues

Several key issues have been brought to staff’s attention during rule development. The most notable issues and their resolutions are summarized below:

The business community is concerned with risk communication to the public. OEHHA’s latest proposed risk notification guidelines could force local businesses to

notify surrounding communities that their estimated health risk has increased – even though their facility emissions have stayed the same or even decreased. It is important that the public realize that air toxics emissions have not increased; rather, the state has changed the way it estimates air toxics risk. Failure to do so will leave the public with the false impression that air emissions have worsened, when the exact opposite is true. SCAQMD staff has worked with industry groups to enhance risk communication in rule-related documents and presentations to clearly explain and discuss health risk estimations and achieved toxic emission reductions to the public. Going forward, SCAQMD staff will develop other risk communication documents in consultation with stakeholders to include in public notifications that result from the implementation of the Revised OEHHA Guidelines.

Through the rule development process, some business representatives have asked for consideration of increasing health risk thresholds. SCAQMD staff believes that Rule 1401 and 1402 thresholds are health protective and is recommending maintaining the existing thresholds. While the risk calculation procedure has been revised, the underlying purpose of minimizing the risk to the public remains the same. Rule 1401 ensures that all new and modified permits issued meet the health protective risk thresholds. Similarly, Rule 1402 addresses existing operations to identify and reduce risk. Increasing the health risk threshold above the existing action risk level of 25 in a million would reduce the number of facilities that would be required to implement risk reductions, however risk reduction would not be required for facilities that are below the higher action risk level. If under Rule 1402, the action risk level was increased from 25 to 30 in a million, the number of facilities affected would be reduced from 22 to 10 facilities with about a 15 percent reduction in implementation costs, and risk reductions from ten facilities would not occur. Staff believes cost issues can best be handled through the Risk Reduction Plan process rather than by raising the health-protective thresholds.

Comments have been received regarding a procedure to allow three years (four years for public facilities) early risk reductions. Under this approach, facilities would commit to reducing their risk to below 10 in one million and not be required to provide public notification. Additionally, the commenters recommend committed facilities should have low-cost, expedited permits. SCAQMD staff has been working with stakeholders to identify potential options to encourage early risk reduction, particularly risk reductions that may not have occurred under the existing regulatory program. However, under AB 2588, some form of public notice must be required, even if a facility commits to early reductions. Different notification strategies that fulfill regulatory requirements and explain the facility's commitment to early, enhanced risk reductions will be explored. However, staff does not agree that permits fees should be discounted as that would merely transfer the cost of risk reduction from the facility creating the risk to other fee-paying facilities.

California Environmental Quality Act

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, SCAQMD staff has evaluated the proposed project and prepared the appropriate CEQA document. The public workshop meetings also served to solicit public input on any potential environmental impacts from the proposed project. Comments received at the public workshops on any environmental impacts were considered when developing the final CEQA document for this rulemaking. The Draft Environmental Assessment (EA) was released for a 30-day public review and comment period beginning on March 20, 2015 and ending on April 22, 2015. No comment letters were received from the public relative to the environmental analysis in the Draft EA.

Since the release of the Draft EA, minor modifications have been made to the document. However, none of the modifications alter any conclusions reached in the Draft EA, nor provide new information of substantial importance relative to the draft document. As a result, these minor revisions do not require recirculation of the Draft EA pursuant to CEQA Guidelines §15073.5 and §15088.5. Therefore, the Draft EA is now a Final EA and is included as an attachment to this Governing Board package. Prior to making a decision on the adoption of the proposed project, the SCAQMD Governing Board must review and certify the Final EA as providing adequate information on the potential adverse environmental impacts of the proposed project.

Socioeconomic Analysis

Compliance costs have been analyzed for additional pollution control equipment and their permitting costs, submitting or updating HRAs, and the costs of issuing additional public notices. Assuming a 4% real interest rate, the estimated annual cost of compliance is \$0.3 million for PAR 1401. The associated annual compliance cost for risk reductions for Rule 1402 is estimated to range from \$1.3 million to \$1.4 million, depending on the real interest rate assumed (1%-4%). The annualized cost of submitting new or updated HRAs is \$0.2 to \$0.3 million depending on the assumed interest rate. Issuance of public notifications associated with PAR 1402 is estimated to have an annual cost of \$7,500 to \$8,800. The estimated total annual cost of compliance with PAR 1402 is therefore \$1.5 to \$1.7 million assuming a 4% real interest rate. The compliance costs conservatively assume that previously reported health risks and emission inventories apply today, even though they were reported in the previously approved HRAs and may not reflect the most recent status at the AB2588 facilities. Additional facilities were included where the calculated risks were near rule thresholds and emissions have remained stable or have increased. PAR 212 also has additional notification costs estimated to be \$17,000 to \$51,000 annually. The overall estimated annual cost is approximately \$1.9 million for implementation of the Revised OEHHA Guidelines for PAR 1401, 1401.1, 1402, and 212.

AQMP and Legal Mandates

Rule 1401, 1401.1, 1402, and 212 are in part mandated by state and federal requirements. The proposed changes are for consistency with the Revised OEHHA Guidelines for estimating health risk.

Implementation and Resource Impact

Existing SCAQMD resources will be used to implement PAR 1401 et al.

Attachments

- A. Summary of Proposal
- B. Key Issues and Responses
- C. Rule Development Process
- D. Key Contacts List
- E. Resolution
- F1-F4. Proposed Amended Rules 1401, 1401.1, 1402, and 212
- G. Staff Report for Proposed Amended Rules 1401, 1401.1., 1402, and 212
- H. Final Environmental Analysis
- I. Socioeconomic Impact Assessment
- J. SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, 1402, and 212 (Version 8.0)
- K. SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (June 5, 2015)
- L. SCAQMD Facility Prioritization for AB 2588 Program (June 2015)

ATTACHMENT A
SUMMARY OF PROPOSAL

Proposed Amended Rules

1401 – New Source Review of Toxic Air Contaminants

1401.1 – Requirements for New and Relocated Facilities Near Schools

1402 – Control of Toxic Air Contaminants from Existing Sources

212 – Standards for Approving Permits and Issuing Public Notice

Proposed Amended Rule 1401

- Revise definition of Maximum Individual Cancer Risk (MICR) to be consistent with the Revised OEHHA Guidelines
- Add provision to allow spray booths and retail gasoline dispensing facilities to continue using the SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) which is based on the previous OEHHA Guidelines until the Board approves revised regulations and/or procedures for these source categories

Proposed Amended Rule 1401.1

- Revise definition of Cancer Risk to be consistent with the Revised OEHHA Guidelines

Proposed Amended Rule 1402

- Revise definition of MICR to be consistent with the Revised OEHHA Guidelines
- Updates to tables for emission reporting thresholds for specific toxic air contaminants and industries for consistency with calculations and methodologies of the Revised OEHHA Guidelines

Proposed Amended Rule 212

- Revise references to MICR to be consistent with the Revised OEHHA Guidelines

Receive and File Items

- Following support documents updated for consistency with the calculations and methodologies of the Revised OEHHA Guidelines:
 - SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (ver. 8.0)
 - SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (June 5, 2015)
 - SCAQMD Facility Prioritization Procedures for AB 2588 Program (June 2015)

ATTACHMENT B
KEY ISSUES AND RESPONSES

Proposed Amended Rules

1401 – New Source Review of Toxic Air Contaminants

1401.1 – Requirements for New and Relocated Facilities Near Schools

1402 – Control of Toxic Air Contaminants from Existing Sources

212 – Standards for Approving Permits and Issuing Public Notice

- Business community concerned with risk communication to the public
 - SCAQMD worked with industry groups to enhance risk communication in rule-related documents and presentations to clearly explain and discuss health risk estimations and achieved toxic emission reductions to the public
 - Going forward, SCAQMD staff will develop other risk communication documents in consultation with stakeholders to include in public notifications that result from the implementation of the Revised OEHHA Guidelines
- Some business representatives asking for consideration to increase health risk thresholds
 - SCAQMD staff believes that Rule 1401 and 1402 thresholds are health protective and is recommending maintaining the existing thresholds
 - Increasing health risk thresholds will require less facilities to reduce health risks and will lower implementation costs, however, risk reductions will not occur from those facilities below an increased action risk level
 - If the action risk threshold is increased from 25 to 30 in a million, the number of facilities that would be affected is reduced from 22 to 10 facilities with an estimated cost reduction of 15%. However, 10 facilities would not be required to reduce their health risk
- SCAP and WSPA are requesting for additional time to make risk reductions
 - SCAQMD staff is supportive of incentives for early and additional risk reductions
 - Resolution includes a commitment to continue working with stakeholders to incentivize early and additional risk reductions and assess current public notification procedures and explore alternatives for such facilities, if necessary

ATTACHMENT C

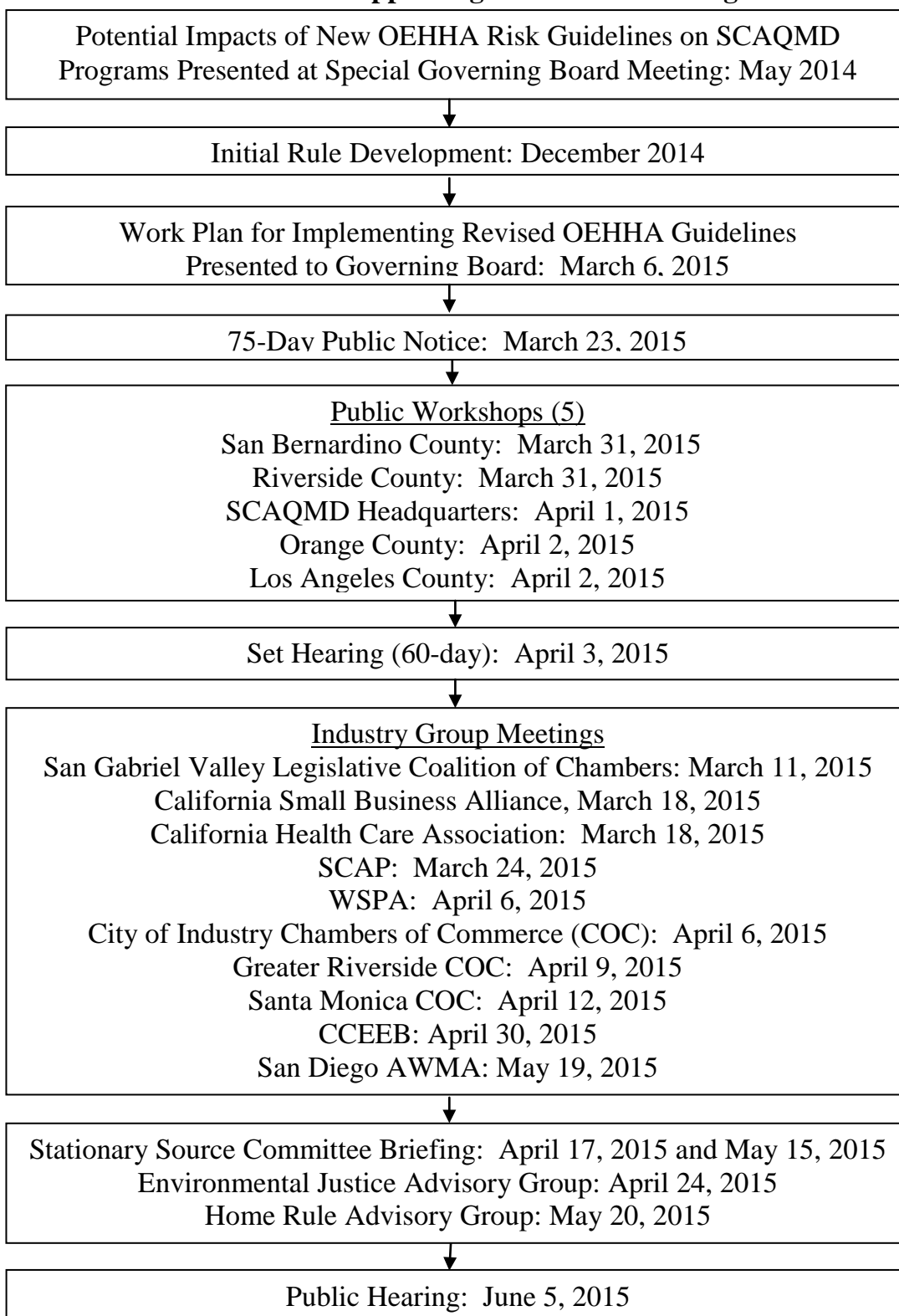
RULE DEVELOPMENT PROCESS

PAR 1401 – New Source Review of Toxic Air Contaminants

PAR 1401.1 – Requirements for New and Relocated Facilities Near Schools

PAR 1402 – Control of Toxic Air Contaminants from Existing Sources

PAR 212 – Standards for Approving Permits and Issuing Public Notice



Seven (7) months spent in rule development.

Five (5) Public Workshops.

Ten (10) Industry Group Meetings.

ATTACHMENT D
KEY CONTACTS LIST

Big Bear Chamber of Commerce	Los Angeles Area Chamber of Commerce
Brea Chamber of Commerce	
California Air Resources Board	Los Angeles County Business Federation (BizFed)
California Chamber of Commerce	Malibu Chamber of Commerce
California Construction & Industrial Materials Association	NAIOP Commercial Real Estate Development Association SoCal Chapter
California Council for Environmental and Economic Balance	Office of Environmental Health Hazard Assessment
California Health Care Association	Ontario Chamber of Commerce
California Hospital Association	Pasadena Chamber of Commerce
California Small Business Alliance	San Gabriel Valley Economic Partnership
California Society for Healthcare Engineering, Inc.	San Gabriel Valley Legislative Coalition of Chambers
Cathedral City Chamber of Commerce	
Cerritos Chamber of Commerce	Southern California Alliance of Publicly Owed Treatment Works
City of Industry Chamber of Commerce	
Coastal Energy Alliance	Southern California Air Quality Alliance
Culver City Chamber of Commerce	Southwest California Legislative Council
Fullerton Chamber of Commerce	Southwest Riverside County Association of Realtors
Gateway Chambers Alliance	Torrance Area Chamber of Commerce
Greater Riverside Chambers of Commerce	Valley Industry & Commerce Association
Indio Chamber of Commerce	Wilmington Chamber of Commerce
Industry Manufacturers Council	Western States Petroleum Association
Inland Empire Economic Partnership	
Irvine Chamber of Commerce	

ATTACHMENT E

RESOLUTION NO. 15-_____

A Resolution of the Governing Board of the South Coast Air Quality Management District (SCAQMD) to certify the Final Environmental Assessment (EA) for Proposed Amended Rules 1401, 1401.1, 1402, and 212 (PAR 1401 et al.).

A Resolution of the SCAQMD Governing Board to Adopt Proposed Amended Rule (PAR) 1401 – New Source Review of Toxic Air Contaminants, PAR 1401.1 – Requirements for New and Relocated Facilities Near Schools, PAR 1402 – Control of Toxic Air Contaminants from Existing Sources, and PAR 212 – Standards for Approving Permits and Issuing Public Notice.

WHEREAS, the SCAQMD Governing Board has determined with certainty that PAR 1401 et al. is a “project” pursuant to the California Environmental Quality Act (CEQA); and

WHEREAS, the SCAQMD staff prepared a Draft EA pursuant to its certified regulatory program and CEQA Guidelines §15251 and §15252, setting forth the potential environmental consequences of PAR 1401 et al.; and

WHEREAS, the Draft EA determined the proposed project would result in no significant adverse environmental impacts; and

WHEREAS, the Draft EA was circulated for 30-day public review and comment period, and there were no public comments, and the Draft EA has been revised such that it is now a Final EA; and

WHEREAS, it is necessary that the adequacy of the Final EA including any responses to comments be determined by the SCAQMD Governing Board prior to its certification; and

WHEREAS, the Final EA reflects the independent judgment of the SCAQMD; and

WHEREAS, the Governing Board prior to voting on PAR 1401 et al., has reviewed and considered the Final EA; and

WHEREAS, the California Office of Environmental Health Hazard Assessment (OEHHA) establishes risk exposure information for toxic air contaminants and develops health risk assessment guidelines for implementation of the Hot Spots Program (Health and Safety Code Section 44360(b)(2)); and

WHEREAS, the SCAQMD uses risk exposure information for toxic air contaminants and health risk assessment guidelines from OEHHA to implement various aspects of its toxics regulatory program; and

WHEREAS, on March 6, 2015, OEHHA approved the Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (Revised OEHHA Guidelines) based on new scientific information showing early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood; and

WHEREAS, the SCAQMD staff evaluated permits received between October 1, 2009 and October 1, 2014 and found that some spray booths may have difficulties meeting the Rule 1401 risk thresholds using the Revised OEHHA Guidelines. Because of the large number of permits issued and consideration that this particular source category tends to be associated with smaller businesses such as wood coating operations and autobody facilities, SCAQMD staff is recommending that spray booths continue to use SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005), which are the previous health risk guidelines for permitting under Rules 1401; and

WHEREAS, additional time is needed to better assess and understand the impacts of using new emissions data received from CARB in March 2015 for gasoline dispensing facilities before use of the Revised OEHHA Guidelines. PAR 1401 allows retail gasoline transfer and dispensing facilities to continue to use SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) and includes a commitment from the Executive Officer to return to the Governing Board as quickly as practicable with Staff's analysis of emissions data from gasoline dispensing activities; and

WHEREAS, a need exists to amend current Rules 1401, 1401.1, 1402, and 212 in order to provide consistency with the Revised OEHHA Guidelines; and

WHEREAS, the SCAQMD staff conducted five regional public workshops and multiple industry group meetings regarding the PAR 1401 et al. and the Revised OEHHA Guidelines; and

WHEREAS, the SCAQMD is not required to prepare a Finding, Statement of Overriding Considerations, or Mitigation Monitoring Plan because the proposed project is not expected to generate significant adverse environmental impacts pursuant to CEQA Guidelines §15091, §15093 and §15097; and

WHEREAS, California Health and Safety Code §40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report; and

WHEREAS, the SCAQMD Governing Board has determined that a need exists to amend Rule 1401 et al. to provide consistency with the methodologies of the Revised OEHHA Guidelines; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1401 et al., as proposed to be amended, are in harmony with, and not in conflict with, or contradictory to, existing statutes, court decisions, or state or federal regulations; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1401 et al. is written and displayed so that the meaning can be easily understood by persons directly affected by it. To ensure clarity in the proposed amended rule language, five public workshops were conducted with significant input received from business groups, environmental organizations, other agencies, and the public at large; and

WHEREAS, the SCAQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 39002, 39560 et seq., 40000, 40001, 40440, 40441, 40463, 40702, 40725 through 40723, 41508, 41700, 41706, 42300, and 44390 through 44394 of the California Health and Safety Code; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1401 et al., as proposed to be amended, do not impose the same requirement as any existing state or federal regulation, and the proposed amended rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD; and

WHEREAS, the SCAQMD Governing Board in amending the regulations, references the following statutes which the SCAQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 39666 (District New Source Review rules for toxics), 41700 (nuisance), 44391 (risk

reduction plans), 44300 et seq. (Air Toxics Hot Spots Act), and Federal Clean Air Act Section 112 (Hazardous Air Pollutants); and

WHEREAS, an analysis as required by Health & Safety Code Section 40727.2 has been prepared and is incorporated in the staff report for PAR 1401 et al.; and

WHEREAS, PAR 1401 et al. are not control measures in the 2012 Air Quality Management Plan (AQMP) and thus, were not ranked by cost-effectiveness relative to other control measures in the 2012 AQMP and further, that cost-effectiveness in terms of dollars per ton of pollutant reduced is not applicable to rules regulating toxic air contaminants; and

WHEREAS, PAR 1401 et al. will not be submitted for inclusion into the State Implementation Plan; and

WHEREAS, Health and Safety Code §40727.2 requires the SCAQMD to prepare a written analysis of existing federal air pollution control requirements applicable to the same source type being regulated whenever it adopts, or amends a rule, and that the SCAQMD's comparative analysis of PAR 1401 et al. is included in the staff report; and

WHEREAS, the SCAQMD Governing Board has determined the Socioeconomic Impact Assessment for PAR 1401 et al. complies with the provisions of Health and Safety Code Sections 40440.8 and 40728.5, and that Section 40920.6 is not applicable to rules regulating toxic air contaminants; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Assessment of PAR 1401 et al. is consistent with the March 17, 1989 and October 14, 1994 Governing Board Socioeconomic Resolutions for rule adoption; and

WHEREAS, the SCAQMD Governing Board has determined that PAR 1401 et al. will result in increased costs, yet are considered to be reasonable, with a total annualized cost as specified in the Socioeconomic Assessment; and

WHEREAS, the SCAQMD specifies the Director of PAR 1401 et al. as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed amendment is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

WHEREAS, a public hearing has been properly noticed in accordance with all provisions of Health and Safety Code Section 40725; and

WHEREAS, the SCAQMD Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the SCAQMD Governing Board voting to adopt PAR 1401 et al. and to receive and file the support documents to implement the proposed amended rules has reviewed and considered the information contained in the Final EA for PAR 1401 et al. and has determined that the document has been completed in compliance with CEQA; and

NOW, THEREFORE BE IT RESOLVED, that the Governing Board directs staff to continue working with stakeholders to incentivize early risk reductions beyond those required under Rule 1402, to assess current public notification procedures and explore alternatives for such facilities. Report back to the Stationary Source Committee at the earliest practicable date, but no later than September 2015, with staff recommendations; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to return to the SCAQMD Governing Board as early as practicable with further rule development and/or procedures to address toxic emission from spray booths; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to continue working with the California Air Resources Board regarding emission factors for retail gasoline dispensing facilities, return to the SCAQMD Governing Board as early as practicable with an analysis of emissions data from gasoline dispensing activities and further rule development and/or procedures, if needed, to address emissions data from gasoline dispensing activities; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board certifies the Final EA for PAR 1401 et al., and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board does hereby amend, pursuant to the authority granted by law, PAR 1401 et al. as set forth in the attached, and incorporated herein by reference, and

BE IT FURTHER RESOLVED, that because no significant adverse environmental impacts were identified as a result of implementing PAR 1401 et al., a Finding, a Statement of Overriding Considerations, and a Mitigation Monitoring Plan are not required; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board does hereby receive and file the following support documents to implement PAR 1401 et al.: 1) SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (ver. 8.0), 2) SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act, and 3) SCAQMD Facility Prioritization Procedures for the AB 2588 Program.

DATE: _____

CLERK OF THE BOARDS

ATTACHMENT F1

(Adopted June 1, 1990)(Amended December 7, 1990)
(Amended July 10, 1998)(Amended January 8, 1999)
(Amended March 12, 1999)(Amended August 13, 1999)
(Amended March 17, 2000)(Amended August 18, 2000)
(Amended June 15, 2001)(Amended May 3, 2002)(Amended February 7, 2003)
(Amended May 2, 2003)(Amended March 4, 2005)(Amended March 7, 2008)
(Amended June 5, 2009)(Amended September 10, 2010)([PAR1401e May 2015](#))

PROPOSED

AMENDED

NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

RULE 1401.

(a) Purpose

This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants listed in Table I. The rule establishes allowable risks for permit units requiring new permits pursuant to Rules 201 or 203.

(b) Applicability

- (1) Applications for new, relocated, and modified permit units which were received by the District on or after June 1, 1990 shall be subject to Rule 1401. Applications shall be subject to the version of Rule 1401 that is in effect at the time the application is deemed complete. Permit units installed without a required permit to construct shall be subject to this rule, if the application for a permit to operate such equipment was submitted after June 1, 1990.
- (2) This rule shall apply to new, relocated, and modified equipment identified in Rule 219 as not requiring a written permit if the risk from the equipment will be greater than identified in subparagraph (d)(1)(A), or paragraphs (d)(2) or (d)(3) in Rule 1401.

(c) Definitions

- (1) ACCEPTABLE STACK HEIGHT for a permit unit is defined as a stack height that does not exceed two and one half times the height of the permit unit or two and one half times the height of the building housing the permit unit, and shall not be greater than 65 meters (213 feet), unless the applicant

demonstrates to the satisfaction of the Executive Officer that a greater height is necessary.

- (2) BEST AVAILABLE CONTROL TECHNOLOGY FOR TOXICS (T-BACT) means the most stringent emissions limitation or control technique which:
 - (A) has been achieved in practice for such permit unit category or class of source; or
 - (B) is any other emissions limitation or control technique, including process and equipment changes of basic and control equipment, found by the Executive Officer to be technologically feasible for such class or category of sources, or for a specific source.
- (3) CANCER BURDEN means the estimated increase in the occurrence of cancer cases in a population subject to a MICR of greater than or equal to one in one million (1.0×10^{-6}) resulting from exposure to toxic air contaminants.
- (4) CONTEMPORANEOUS RISK REDUCTION means any reduction in risk resulting from a decrease in emissions of toxic air contaminants at the facility that is permanent, real, quantifiable and enforceable through District permit conditions. Permit applications associated with the increase and decrease in risk must be submitted together and the reduction of risk must occur before the start of operation of the permit unit that will have an increased risk. A contemporaneous risk reduction shall be calculated based on the actual average annual emissions, as determined by facility records, and annual emissions declarations pursuant to Rule 301 as appropriate, or other data approved by the Executive Officer, whichever is less, which have occurred during the two-year period immediately preceding the date of application.
- (5) FACILITY means any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above-described groupings, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility. Notwithstanding the above, sources or installations involved in

crude oil and gas production in Southern California Coastal or OCS Waters and transport of such crude oil and gas in Southern California Coastal or OCS Waters shall be included in the same facility which is under the same ownership or use entitlement as the crude oil and gas production facility on-shore.

- (6) INDIVIDUAL SUBSTANCE ACUTE HAZARD INDEX (HI) is the ratio of the estimated maximum one-hour concentration of a toxic air contaminant for a potential maximally exposed individual to its acute reference exposure level.
- (7) INDIVIDUAL SUBSTANCE CHRONIC HAZARD INDEX (HI) is the ratio of the estimated long-term level of exposure to a toxic air contaminant for a potential maximally exposed individual to its chronic reference exposure level. The chronic hazard index calculations shall include multipathway consideration, if applicable.
- (8) MAXIMUM INDIVIDUAL CANCER RISK (MICR) is the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants ~~over a period of 70 years~~ for residential receptor locations calculated pursuant to the Risk Assessment Procedures referenced in subdivision (e). The MICR for worker receptor locations shall be calculated pursuant to the Risk Assessment Procedures referenced in subdivision (e). The MICR calculations shall include multipathway consideration, if applicable.
- (9) MODIFICATION means any physical change in, change in method of operation, or addition to an existing permit unit that requires an application for a permit to construct and/or operate. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:
 - (A) an increase in the production rate, unless such increase will cause the maximum design capacity of the equipment to be exceeded; or
 - (B) an increase in the hours of operation; or
 - (C) a change in ownership of a source; or
 - (D) a change in formulation of the materials processed which will not result in a net increase of the MICR, cancer burden, or chronic or acute HI from the associated permit unit.

For facilities that have been issued a facility permit pursuant to Regulation

XX or a Title V permit pursuant to Regulation XXX, modification means any physical change in, change in method of operation of, or addition to an existing individual article, machine, equipment or other contrivance which would have required an application for a permit to construct and/or operate, were the unit not covered under a facility permit or Title V permit.

(10) PERMIT UNIT means any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants, and which requires a written permit pursuant to Rules 201 and/or 203. For facilities that have been issued a facility permit or Title V permit, a permit unit for the purpose of this rule means any individual article, machine, equipment or other contrivance which may cause or control the issuance of air contaminants and which would require a written permit pursuant to Rules 201 and/or 203 if it was not covered under a facility permit or Title V permit. For publicly-owned sewage treatment operations, each process within multi-process permit units at the facility shall be considered a separate permit unit for purposes of this rule.

(11) RECEPTOR LOCATION means

(A) for the purpose of calculating acute HI, any location outside the boundaries of the facility at which a person could experience acute exposure; and

(B) for the purpose of calculating chronic HI and MICR, any location outside the boundaries of the facility at which a person could experience chronic exposure.

The Executive Officer shall consider the potential for exposure in determining whether the location will be considered a receptor location.

(12) RELOCATION means the removal of an existing permit unit from one parcel of land in the District and installation at another parcel of land where two parcels are not in actual physical contact and are not separated solely by a public roadway or other public right-of-way. The removal of a permit unit from one location within a facility and installation at another location within the facility is a relocation only if an increase in maximum individual cancer risk in excess of one in one million (1×10^{-6}) or a Hazard Index of 1.0 occurs at any receptor location.

(13) TOTAL ACUTE HAZARD INDEX (HI) is the sum of the individual substance acute HIs for all toxic air contaminants affecting the same target organ system.

- (14) TOTAL CHRONIC HAZARD INDEX (HI) is the sum of the individual substance chronic HIs for all toxic air contaminants affecting the same target organ system.
- (15) TOXIC AIR CONTAMINANT is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health. For the purpose of this rule, toxic air contaminants are those listed in Table I.

(d) Requirements

~~The requirements of paragraphs (d)(2) and (d)(3) shall become effective September 8, 1998.~~ The Executive Officer shall deny the permit to construct a new, relocated or modified permit unit if emissions of any toxic air contaminant listed in Table I may occur, unless the applicant has substantiated to the satisfaction of the Executive Officer all of the following:

(1) MICR and Cancer Burden

The cumulative increase in MICR which is the sum of the calculated MICR values for all toxic air contaminants emitted from the new, relocated or modified permit unit will not result in any of the following:

- (A) an increased MICR greater than one in one million (1.0×10^{-6}) at any receptor location, if the permit unit is constructed without T-BACT;
- (B) an increased MICR greater than ten in one million (1.0×10^{-5}) at any receptor location, if the permit unit is constructed with T-BACT;
- (C) a cancer burden greater than 0.5.

(2) Chronic Hazard Index

The cumulative increase in total chronic HI for any target organ system due to total emissions from the new, relocated or modified permit unit owned or operated by the applicant for which applications were deemed complete on or after the date when the risk value for the compound is finalized by the state Office of Environmental Health Hazard Assessment (OEHHA), unless paragraph (e)(3) applies, will not exceed 1.0 at any receptor location.

(3) Acute Hazard Index

The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit owned

or operated by the applicant for which applications were deemed complete on or after the date when the risk value for the compound is finalized by OEHHA, unless paragraph (e)(3) applies, will not exceed 1.0 at any receptor location.

~~(4)~~ **Risk Per Year**

~~The risk per year shall not exceed $1/70$ of the maximum allowable risk specified in (d)(1)(A) or (d)(1)(B) divided by the applicable exposure period in the Risk Assessment Procedures referenced in subdivision (e) at any receptor locations in residential areas.~~

~~(54)~~ If a permit contains operating conditions imposed pursuant to Rule 1401, which prohibit or limit the use or emission of toxic air contaminants, those conditions shall apply only to those toxic air contaminants listed in the version of Rule 1401 applicable at the time the permit conditions were imposed.

~~(65)~~ **Federal New Source Review for Toxics**

Pursuant to Section 112(g) of the federal Clean Air Act (CAA), no person shall begin construction or reconstruction of a major stationary source emitting hazardous air pollutants listed in Section 112 (b) of the CAA, unless the source is constructed with Best Available Control Technology for Toxics (T-BACT) and complies with all other applicable requirements, including definitions and public noticing, referenced in 40 CFR 63.40 through 63.44. The requirements of this paragraph shall not apply to:

- (A) any source that is subject to an existing National Emission Standard for Hazardous Air Pollutants (NESHAP) pursuant to sections 112(d), 112(h), or 112(j) of the federal CAA;
- (B) any source that is exempted from regulations under a NESHAP issued pursuant to sections 112(d), 112(h), or 112(j) of the federal CAA;
- (C) any source that has received all necessary air quality permits for such construction or reconstruction before June 29, 1998;
- (D) electric utility steam generating units, unless and until such time as these units are added to the source category list pursuant to the requirements of section 112(c)(5) of the federal CAA;
- (E) any sources that are within a source category that has been deleted from the source category list pursuant to section 112(c)(9) of the federal CAA; or

(F) research and development activities.

Compliance with this paragraph does not relieve any owner or operator of a major stationary source from complying with all other applicable District rules and regulations, including this rule, any applicable state airborne toxic control measure, or other applicable state and federal laws. Exemptions under subdivision (g) of this rule do not apply to this paragraph. This paragraph shall take effect retroactively from June 29, 1998.

(e) Risk Assessment Procedures

- (1) The Executive Officer shall periodically publish procedures for determining health risks under this rule, except as provided in paragraph (e)(5). To the extent possible, the procedures will be consistent with the most recently adopted policies and procedures of the state ~~Office of Environmental Health Hazard Assessment (OEHHA)~~.
- (2) Within 150 days of risk values for compounds not in Table I being finalized by OEHHA, staff will bring proposed amendments to this rule to reflect changes to Table I.
- (3) Within 150 days of risk values for compounds in Table I being updated by OEHHA, staff will:
 - (A) publish a Notice of Intent to change risk values;
 - (B) perform an impact assessment, including socioeconomic effects; and
 - (C) submit a report to the District Governing Board with recommendations for changing the risk values in the procedures for determining risk assessment published pursuant to paragraph (e)(1).
- (4) To calculate the cumulative increase in MICR pursuant to paragraph (d)(1), the increase from each permit unit shall be based on the emissions of toxic air contaminants, the risk values, and risk assessment procedures applicable at the time when each complete application was deemed complete by the District.
- (5) The following equipment or industry source categories shall be allowed to use SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) in order to calculate the cumulative increase in MICR pursuant to paragraph (d)(1):
 - (A) spray booths, until the Executive Officer, as quickly as practicable,

can make a recommendation regarding a regulation and/or procedures conduct rule development, and the Board approves regulations and/or procedures specific to this source category; and
(B) retail gasoline transfer and dispensing facilities as defined in District Rule 461, until the Executive Officer, as quickly as practicable, can provide an analysis of emissions data from gasoline dispensing activities to the Governing Board, and the Board approves regulations and/or procedures, if needed, specific to this industry.

(f) Emissions Calculations

- (1) For the purpose of determining MICR and cancer burden due to a new or relocated permit unit pursuant to this rule, the total Toxic Air Contaminant emissions from the new or relocated permit unit shall be calculated on an annual basis from permit conditions which directly limit the emissions or, when no such conditions are imposed, from:
 - (A) the maximum rated capacity;
 - (B) the maximum possible annual hours of operation;
 - (C) the maximum annual emissions; and
 - (D) the physical characteristics of the materials processed.
- (2) For the purpose of determining chronic HI due to a new or relocated permit unit pursuant to this rule, the total emissions from a permit unit shall be calculated on an annual average basis from permit conditions which directly limit the emissions or, when no such conditions are imposed, from:
 - (A) the maximum rated capacity;
 - (B) the annual average hours of operation;
 - (C) the annual average emissions; and
 - (D) the physical characteristics of the materials processed.
- (3) For the purpose of determining MICR, cancer burden and chronic HI due to a modified permit unit pursuant to this rule, the increase in emissions from the modified permit unit shall be calculated based on the difference between the total permitted emissions after the modification, calculated pursuant to the criteria established in subparagraphs (f)(1)(A), (B), (C), and (D), and:
 - (A) the total permitted emissions prior to the modification as stated in the permit conditions; or
 - (B) if there are no existing permit conditions that limit emissions, the

average annual emissions which have occurred during the two-year period immediately preceding the date of the complete permit application for modification or other appropriate period determined by the Executive Officer to be representative of a permit unit's operation; or

- (C) for modification of any source installed prior to October 8, 1976, resulting from the addition of air pollution controls installed solely to reduce the issuance of air contaminants, emission shall be calculated from permit conditions which directly limit the emissions or, when no such conditions are imposed, from:
 - (i) the maximum rated capacity; and
 - (ii) the maximum proposed daily hours of operation; and
 - (iii) the physical characteristics of the materials processed.

- (4) For the purpose of determining acute HI due to a new, relocated or modified permit unit pursuant to this rule, the total emissions from a permit unit shall be calculated on a maximum hourly basis from permit conditions which directly limit the emissions or, when no such conditions exist, from:
 - (A) the maximum rated capacity;
 - (B) the maximum hourly emissions; and
 - (C) the physical characteristics of the materials processed.

- (5) De Minimus Values

Any permit unit with values at or below the screening levels as specified in the procedures for determining health risks under this rule, published pursuant to paragraph (e)(1), shall be deemed in compliance with the requirements of subdivision (d).

- (g) Exemptions

- (1) The requirements of subdivision (d) shall not apply to:

- (A) Permit Renewal or Change of Ownership

Any permit unit which is in continuous operation, without modification or change in operating conditions, for which a new permit to operate is required solely because of permit renewal or change of ownership.

- (B) Modification with No Increase in Risk

A modification of a permit unit that causes a reduction or no increase in the cancer burden, MICR or acute or chronic HI at any

receptor location.

(C) **Functionally Identical Replacement**

A permit unit replacing a functionally identical permit unit, provided there is no increase in maximum rating or increase in emissions of any toxic air contaminants. For replacement of dry cleaning permit units only, provided there is no increase in any toxic air contaminants.

(D) **Equipment Previously Exempt Under Rule 219**

Equipment which previously did not require a written permit pursuant to Rule 219 that is no longer exempt, provided that the equipment was installed prior to the Rule 219 amendment eliminating the exemption and a complete application for the permit is received within one (1) year after the Rule 219 amendment removing the exemption.

(E) **Modifications to Terminate Research Projects**

Modifications restoring the previous permit conditions of a permit unit, provided that: the applicant demonstrates that the previous permit conditions were modified solely for the purpose of installing innovative control equipment as part of a demonstration or investigation designed to advance the state of the art with regard to controlling emissions of toxic air contaminants; the emission reductions achieved by the demonstration project are not used for permitting any equipment with emission increases under the contemporaneous emission reduction exemption as specified in paragraph (g)(2); the demonstration project is completed within two (2) years; and a complete application is submitted no later than two (2) years after the date of issuance of the permit which modified the conditions of the previous permit for the purpose of the demonstration or investigation.

(F) **Emergency Internal Combustion Engines**

Emergency internal combustion engines that are exempted under Rule 1304.

(G) **Wood Product Stripping**

Wood product stripping permit units, provided that the risk increases due to emissions from the permit unit owned or operated by the applicant for which complete applications were submitted on

or after July 10, 1998 will not exceed a MICR of 100 in one million (1.0×10^{-4}) or a total acute or chronic hazard index of five (5) at any receptor location. This exemption shall not apply to permit applications received after January 10, 2000, or sooner if the Executive Officer makes a determination that T-BACT is available to enable compliance with the requirements of paragraphs (d)(1), (d)(2) and (d)(3).

(H) Gasoline Transfer and Dispensing Facilities

For gasoline transfer and dispensing facilities, as defined in Rule 461 – Gasoline Transfer and Dispensing, the Executive Officer shall not, for the purposes of paragraphs (d)(1) through (d)(~~5~~4), consider the risk contribution of methyl tert-butyl ether for any gasoline transfer and dispensing permit applications deemed complete on or before December 31, 2003. If the state of California extends the phase-out requirement for methyl tert-butyl ether as an oxygenate in gasoline, the limited time exemption shall be extended to that expiration date or December 31, 2004, whichever is sooner.

(2) Contemporaneous Risk Reduction

(A) ~~The requirements of p~~Paragraphs (d)(1) and (d)(~~4~~) shall not apply if the applicant demonstrates that a contemporaneous risk reduction resulting in a decrease in emissions will occur such that both of the following conditions are met:

- (i) no receptor location will experience a total increase in MICR of greater than one in one million (1.0×10^{-6}) due to the cumulative impact of both the permit unit and the contemporaneous risk reduction; and
- (ii) the contemporaneous risk reduction occurs within 100 meters of the permit unit.

T-BACT shall be used on permit units exempted under this subparagraph if the MICR from the permit unit exceeds one in one million (1.0×10^{-6}).

(B) The requirements of paragraphs (d)(2) and (d)(3) shall not apply if the applicant substantiates to the satisfaction of the Executive Officer that a contemporaneous risk reduction will occur such that any increase in individual substance acute or chronic HI from the

permit unit exceeding 1.0 is mitigated with an equal or greater decrease in the same individual substance acute or chronic HI, respectively, from the contemporaneous risk reduction such that both of the following conditions are met:

- (i) no receptor location will experience an increase in total acute or chronic HI of more than 1.0 due to the cumulative impact of both the permit unit and the contemporaneous risk reduction; and
 - (ii) the contemporaneous risk reduction occurs within 100 meters of the permit unit.
- (3) **Alternate Hazard Index Levels**

The requirements of paragraphs (d)(2) and (d)(3) shall not apply if the applicant substantiates to the satisfaction of the Executive Officer that at all receptor locations and for every target organ system, the total chronic and acute HI level resulting from emissions from the new, modified or relocated permit unit owned or operated by the applicant for which applications were submitted on or after July 10, 1998 shall not exceed alternate HI levels which are determined by the Executive Officer in consultation with the Office of Environmental Health Hazard Assessment to be protective against adverse health effects. No alternate HI level shall exceed 10.

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
75-07-0	acetaldehyde	December 7, 1990	September 8, 1998	September 10, 2010
60-35-5	acetamide	January 8, 1999		
107-02-8	acrolein		June 15, 2001	August 13, 1999
79-06-1	acrylamide (or propenamide)	December 7, 1990	**	
79-10-7	acrylic acid		*	August 13, 1999
107-13-1	acrylonitrile (or vinyl cyanide)	December 7, 1990	May 3, 2002	
107-05-1	allyl chloride	January 8, 1999		
117-79-3	aminoanthraquinone, 2-	January 8, 1999		
7664-41-7	ammonia		August 18, 2000	August 13, 1999
62-53-3	aniline	January 8, 1999		
7440-38-2	arsenic and arsenic compounds (inorganic) including, but not limited to: arsenic compounds (inorganic)	December 7, 1990	June 15, 2001	August 13, 1999
7784-42-1	arsine		September 10, 2010	August 13, 1999
1332-21-4	asbestos	June 1, 1990		
71-43-2	benzene (including benzene from gasoline)	June 1, 1990	August 18, 2000	August 13, 1999
92-87-5	benzidine (and its salts)	December 7, 1990	**	
100-44-7	benzyl chloride	September 8, 1998	**	August 13, 1999

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
7440-41-7	beryllium and beryllium compounds	December 7, 1990	May 3, 2002	
111-44-4	bis(2-chloroethyl)ether (DCEE)	December 7, 1990		
117-81-7	bis(2-ethylhexyl)phthalate (DEHP)	September 8, 1998	**	
542-88-1	bis(chloromethyl)ether	December 7, 1990		
7789-30-2	bromine pentafluoride		*	
106-99-0	butadiene, 1,3-	December 7, 1990	June 15, 2001	
7440-43-9	cadmium and cadmium compounds	June 1, 1990	June 15, 2001	
75-15-0	carbon disulfide		May 3, 2002	August 13, 1999
56-23-5	carbon tetrachloride (or tetrachloromethane)	June 1, 1990	June 15, 2001	August 13, 1999
7782-50-5	chlorine		August 18, 2000	August 13, 1999
10049-04-4	chlorine dioxide		June 15, 2001	
95-83-0	chloro-o-phenylenediamine, 4-	January 8, 1999		
95-69-2	chloro-o-toluidine, p-	January 8, 1999		
108-90-7	chlorobenzene		June 15, 2001	
	chlorofluorocarbons			
75-43-4	dichlorodifluoromethane (CFC-12)		*	
75-69-4	trichlorofluoromethane (CFC-11)		*	
76-13-1	trichlorotrifluoroethane (CFC-113)		*	

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
67-66-3	chloroform (trichloromethane)	December 7, 1990	August 18, 2000	August 13, 1999
95-57-8 88-06-2 87-86-5	Chlorophenols chlorophenol, 2- trichlorophenol, 2,4,6- tetrachlorophenols (TECPH) pentachlorophenol	December 7, 1990 September 8, 1998	* **	
76-06-2	chloropicrin		May 3, 2002	August 13, 1999
126-99-8	chloroprene		**	
18540-29-9 7758-97-6	chromium (hexavalent) and chromium compounds including, but not limited to: lead chromate	June 1, 1990 September 8, 1998	June 15, 2001 **	
1333-82-0	chromic trioxide		June 15, 2001	
7440-50-8	copper and copper compounds		*	August 13, 1999
120-71-8	residine, p-	January 8, 1999		
1319-77-3 108-39-4	cresols/cresylic acid (all isomers and mixture) cresol, m-		June 15, 2001 June 15, 2001	

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
95-48-7 106-44-5	cresol, o- cresol, p-		June 15, 2001 June 15, 2001	
135-20-6	cupferron	January 8, 1999		
924-16-3 621-64-7 55-18-5 62-75-9 10595-95-6	dialkylnitrosamines nitrosodi-n-butylamine, n- nitrosodi-n-propylamine, n- nitrosodiethylamine, n- nitrosodimethylamine, n- nitrosomethylethylamine, n-	December 7, 1990 September 8, 1998 December 7, 1990 December 7, 1990 September 8, 1998		
615-05-4	diaminoanisole, 2,4- (sulfate)	January 8, 1999		
95-80-7	diaminotoluene, 2,4-	January 8, 1999		
1746-01-6 40321-76-4 39227-28-6 57653-85-7 19408-74-3 35822-46-9 3268-87-9	dibenzo-p-dioxins (chlorinated) tetrachlorodibenzo-p-dioxin, 2,3,7,8- pentachlorodibenzo-p-dioxin, 1,2,3,7,8- hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8- hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8- hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9- heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8- octachlorodibenzo-p-dioxin,	June 1, 1990 June 1, 1990 June 1, 1990 June 1, 1990 June 1, 1990 June 1, 1990 June 1, 1990	August 18, 2000 August 18, 2000 August 18, 2000 August 18, 2000 August 18, 2000 August 18, 2000 August 18, 2000	

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
41903-57-5	1,2,3,4,5,6,7,8- total tetrachlorodibenzo-p-dioxin	June 1, 1990	August 18, 2000	
36088-22-9	total pentachlorodibenzo-p-dioxin	June 1, 1990	August 18, 2000	
34465-46-8	total hexachlorodibenzo-p-dioxin	June 1, 1990	August 18, 2000	
37871-00-4	total heptachlorodibenzo-p-dioxin	June 1, 1990	August 18, 2000	
	total dioxins, with individual isomers reported	June 1, 1990	August 18, 2000	
	total dioxins, without individual isomers reported	June 1, 1990	August 18, 2000	
	dibenzofurans (chlorinated)			
51207-31-9	tetrachlorodibenzofuran, 2,3,7,8-	June 1, 1990	August 18, 2000	
57117-41-6	pentachlorodibenzofuran, 1,2,3,7,8-	June 1, 1990	August 18, 2000	
57117-31-4	pentachlorodibenzofuran, 2,3,4,7,8-	June 1, 1990	August 18, 2000	
70648-26-9	hexachlorodibenzofuran, 1,2,3,4,7,8-	June 1, 1990	August 18, 2000	
57117-44-9	hexachlorodibenzofuran, 1,2,3,6,7,8-	June 1, 1990	August 18, 2000	
72918-21-9	hexachlorodibenzofuran, 1,2,3,7,8,9-	June 1, 1990	August 18, 2000	
60851-34-5	hexachlorodibenzofuran, 2,3,4,6,7,8-	June 1, 1990	August 18, 2000	
67562-39-4	heptachlorodibenzofuran, 1,2,3,4,6,7,8-	June 1, 1990	August 18, 2000	

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE	EFFECTIVE DATE	EFFECTIVE DATE
		CANCER	CHRONIC	ACUTE
55673-89-7	heptachlorodibenzofuran, 1,2,3,4,7,8,9-	June 1, 1990	August 18, 2000	
39001-02-0	octachlorodibenzofuran, 1,2,3,4,5,6,7,8	June 1, 1990	August 18, 2000	
55722-27-5	total tetrachlorodibenzofuran	June 1, 1990	August 18, 2000	
30402-15-4	total pentachlorodibenzofuran	June 1, 1990	August 18, 2000	
55684-94-1	total hexachlorodibenzofuran	June 1, 1990	August 18, 2000	
38998-75-3	total heptachlorodibenzofuran	June 1, 1990	August 18, 2000	
96-12-8	dibromo-3-chloropropane, 1,2- (DBCP)	September 8, 1998	**	
106-46-7	dichlorobenzene, 1,4- (or p-dichlorobenzene)	September 8, 1998	June 15, 2001	
91-94-1	dichlorobenzidine, 3,3	December 7, 1990		
75-34-3	dichloroethane, 1,1-	January 8, 1999		
75-35-4	dichloroethylene, 1,1-		June 15, 2001	
9901 (emittant ID)	diesel PM – diesel particulate matter from diesel-fueled internal combustion engine exhaust	March 7, 2008	March 7, 2008	
111-42-2	diethanolamine		May 3, 2002	
60-11-7	dimethylaminoazobenzene, p-	January 8, 1999		
68-12-2	dimethylformamide (N,N-)		June 15, 2001	
121-14-2	dinitrotoluene, 2,4-	December 7, 1990		
123-91-1	dioxane, 1,4- (or 1,4-diethylene dioxide)	December 7, 1990	August 18, 2000	August 13, 1999

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
106-89-8	epichlorohydrin (or 1-chloro-2,3-epoxypropane)	December 7, 1990	June 15, 2001	August 13, 1999
106-88-7	epoxybutane,1,2-		June 15, 2001	
140-88-5	ethyl acrylate		*	
100-41-4	ethyl benzene	June 5, 2009	August 18, 2000	
75-00-3	ethyl chloride (or chloroethane)		August 18, 2000	
106-93-4	ethylene dibromide (or 1,2-dibromoethane)	June 1, 1990	May 3, 2002	
107-06-2	ethylene dichloride (or 1,2-dichloroethane)	June 1, 1990	June 15, 2001	
75-21-8	ethylene oxide (or 1,2-epoxyethane)	June 1, 1990	June 15, 2001	
96-45-7	ethylene thiourea	January 8, 1999		
1101	Fluorides (except hydrogen fluoride, listed separately below)		September 10, 2010	
50-00-0	formaldehyde	December 7, 1990	August 18, 2000	August 13, 1999
	gasoline vapors		*	
111-30-8	glutaraldehyde		June 15, 2001	
107-21-1	glycol ethers (and their acetates) ethylene glycol		August 18, 2000	
111-76-2	ethylene glycol butyl ether		*	August 13, 1999

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
110-80-5	ethylene glycol ethyl ether		August 18, 2000	February 10, 1999
111-15-9	ethylene glycol ethyl ether acetate		August 18, 2000	August 13, 1999
109-86-4	ethylene glycol methyl ether		August 18, 2000	August 13, 1999
110-49-6	ethylene glycol methyl ether acetate		August 18, 2000	
118-74-1	hexachlorobenzene	December 7, 1990	**	
608-73-1	hexachlorocyclohexanes (mixed or technical grade)	December 7, 1990	**	
58-89-9	hexachlorocyclohexane, gamma- (lindane)	September 8, 1998	**	
77-47-4	hexachlorocyclopentadiene		*	
110-54-3	hexane		August 18, 2000	
302-01-2	hydrazine	September 8, 1998	June 15, 2001	
122-66-7	hydrazobenzene (or 1,2-diphenylhydrazine)	December 7, 1990		
7647-01-0	hydrochloric acid (or hydrogen chloride)		August 18, 2000	August 13, 1999
7664-39-3	hydrofluoric acid (or hydrogen fluoride)		September 10, 2010	August 13, 1999
10035-10-6	hydrogen bromide (HBR)		*	
74-90-8	hydrogen cyanide		August 18, 2000	August 13, 1999
7783-06-4	hydrogen sulfide		August 18, 2000	February 10, 1999
7783-07-5	hydrogen selenide			August 13, 1999

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
624-83-9	isocyanates methyl isocyanate		May 3, 2002	
78-59-1	isophrone		May 3, 2002	
67-63-0	isopropyl alcohol		August 18, 2000	August 13, 1999
7439-92-1	lead and lead compounds (inorganic, including elemental lead) including, but not limited to:	September 8, 1998	**	
	lead compounds (inorganic)	September 8, 1998	**	
301-04-2	lead acetate	September 8, 1998	**	
7758-97-6	lead chromate	September 8, 1998	**	
7446-27-7	lead phosphate	September 8, 1998	**	
1335-32-6	lead subacetate	September 8, 1998	**	
	lead compounds (other than inorganic)	September 8, 1998	**	
108-31-6	maleic anhydride		May 3, 2002	
7439-96-5	manganese and manganese compounds		August 18, 2000	

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
7439-97-6	mercury and mercury compounds (inorganic) including, but not limited to: mercuric chloride methyl mercury		August 18, 2000	August 13, 1999
7487-94-7			August 18, 2000	
593-74-8			August 18, 2000	
67-56-1	methanol (methyl alcohol)		August 18, 2000	August 13, 1999
74-83-9	methyl bromide (or bromomethane)		August 18, 2000	August 13, 1999
71-55-6	methyl chloroform (or 1,1,1-trichloroethane)		August 18, 2000	August 13, 1999
78-93-3	methyl ethyl ketone		*	August 13, 1999
80-62-6	methyl methacrylate		*	
1634-04-4	methyl tert-butyl ether	May 2, 2003	August 18, 2000	
101-14-4	methylene bis(2-chloroaniline), 4,4- (MOCA)	January 8, 1999		
75-09-2	methylene chloride (or dichloromethane)	June 1, 1990	August 18, 2000	August 13, 1999
101-77-9	methylene dianiline, 4,4'- (and its dichloride)	September 8, 1998	May 3, 2002	
101-68-8	methylene phenyl diisocyanate		June 15, 2001	
1135	mineral fibers (other than man-made)		*	
90-94-8	michler's ketone	January 8, 1999		
7440-02-0	nickel and nickel compounds:	March 12, 1999	August 18, 2000	August 13, 1999

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
373-02-4	including, but not limited to: nickel acetate	March 12, 1999	August 18, 2000	August 13, 1999
3333-67-3	nickel carbonate	March 12, 1999	August 18, 2000	August 13, 1999
13463-39-3	nickel carbonyl	March 12, 1999	August 18, 2000	August 13, 1999
12054-48-7	nickel hydroxide	March 12, 1999	August 18, 2000	August 13, 1999
1313-99-1	nickel oxide	March 12, 1999	August 18, 2000	August 13, 1999
12035-72-2	nickel subsulfide	December 7, 1990	August 18, 2000	August 13, 1999
1271-28-9	nickelocene	March 12, 1999	August 18, 2000	August 13, 1999
	refinery dust from the pyrometallurgical process	December 7, 1990	August 18, 2000	August 13, 1999
7697-37-2	nitric acid		*	August 13, 1999
98-95-3	nitrobenzene		*	
79-46-9	nitropropane, 2-		*	
759-73-9	nitroso-n-ethylurea, n-	December 7, 1990		
684-93-5	nitroso-n-methylurea, n-	December 7, 1990		
86-30-6	nitrosodiphenylamine, n-	December 7, 1990		
156-10-5	nitrosodiphenylamine, p-	September 8, 1998		
59-89-2	nitrosomorpholine, n-	January 8, 1999		

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE	EFFECTIVE DATE	EFFECTIVE DATE
		CANCER	CHRONIC	ACUTE
100-75-4	nitrosopiperidine, n-	January 8, 1999		
930-55-2	nitrosopyrrolidine, n-	December 7, 1990		
108171-26-2	paraffins, chlorinated (average chain length, c12; approx. 60% cl by weight)	January 8, 1999		
127-18-4	perchloroethylene (or tetrachloroethylene)	September 8, 1998	September 8, 1998	August 13, 1999
108-95-2	phenol		August 18, 2000	August 13, 1999
75-44-5	phosgene		*	August 13, 1999
7723-14-0	phosphorus and phosphorus compounds phosphine		*	
7803-51-2			February 7, 2003	
7664-38-2	phosphoric acid		August 18, 2000	
85-44-9	phthalic anhydride		June 15, 2001	
1336-36-3	polychlorinated biphenyls (PCBs) 3,3',4,4' Tetrachlorobiphenyl 3,4,4',5 Tetrachlorobiphenyl 2,3,3',4,4' Pentachlorobiphenyl 2,3,4,4',5 Pentachlorobiphenyl 2,3',4,4',5 Pentachlorobiphenyl 2',3,4,4',5 Pentachlorobiphenyl	December 7, 1990 March 4, 2005*** March 4, 2005*** March 4, 2005*** March 4, 2005*** March 4, 2005*** March 4, 2005***	** March 4, 2005*** March 4, 2005*** March 4, 2005*** March 4, 2005*** March 4, 2005*** March 4, 2005***	

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
	3,3',4,4',5 Pentachlorobiphenyl	March 4, 2005***	March 4, 2005***	
	2,3,3',4,4',5 Hexachlorobiphenyl	March 4, 2005***	March 4, 2005***	
	2,3,3',4,4',5' Hexachlorobiphenyl	March 4, 2005***	March 4, 2005***	
	2,3',4,4',5.5' Hexachlorobiphenyl	March 4, 2005***	March 4, 2005***	
	3,3',4,4',5,5' Hexachlorobiphenyl	March 4, 2005***	March 4, 2005***	
	2,3,3'4,4',5,5' Heptachlorobiphenyl	March 4, 2005***	March 4, 2005***	
	polycyclic aromatic hydrocarbons (PAHs)			
56-55-3	benz[a]anthracene	December 7, 1990		
50-32-8	benzo[a]pyrene	December 7, 1990		
205-99-2	benzo[b]fluoranthene	December 7, 1990		
205-82-3	benzo[j]fluoranthene	January 8, 1999		
207-08-9	benzo[k]fluoranthene	December 7, 1990		
218-01-9	chrysene	December 7, 1990		
226-36-8	dibenz[a,h]acridine	January 8, 1999		
224-42-0	dibenz[a,j]acridine	January 8, 1999		
53-70-3	dibenz[a,h]anthracene	December 7, 1990		
192-65-4	dibenzo[a,e]pyrene	January 8, 1999		

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE	EFFECTIVE DATE	EFFECTIVE DATE
		CANCER	CHRONIC	ACUTE
189-64-0	dibenzo[a,h]pyrene	January 8, 1999		
189-55-9	dibenzo[a,i]pyrene	January 8, 1999		
191-30-0	dibenzo[a,l]pyrene	January 8, 1999		
194-59-2	dibenzo[c,g]carbazole, 7h-	January 8, 1999		
57-97-6	dimethylbenz[a]anthracene, 7,12-	January 8, 1999		
42397-64-8	dinitropyrene, 1,6-	January 8, 1999		
42397-65-9	dinitropyrene, 1,8-	January 8, 1999		
193-39-5	indeno[1,2,3-cd]pyrene	December 7, 1990		
56-49-5	methylcholanthrene, 3-	January 8, 1999		
3697-24-3	methylchrysene, 5-	January 8, 1999		
91-20-3	naphthalene	March 4, 2005***	August 18, 2000	
602-87-9	nitroacenaphthene, 5-	January 8, 1999		
7496-02-8	nitrochrysene, 6-	January 8, 1999		
607-57-8	nitrofluorene, 2-	January 8, 1999		
5522-43-0	nitropyrene, 1-	January 8, 1999		
57835-92-4	nitropyrene, 4-	January 8, 1999		
	polycyclic aromatic hydrocarbons (PAHs), total	September 8, 1998		

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
7758-01-2	potassium bromate	January 8, 1999		
1120-71-4	propane sultone, 1,3-	January 8, 1999		
115-07-1	propylene		August 18, 2000	
107-98-2	propylene glycol methyl ether		August 18, 2000	
75-56-9	propylene oxide (or 1,2-epoxy propane)	September 8, 1998	February 23, 2000	August 13, 1999
7782-49-2	selenium and selenium compounds other than hydrogen selenide		May 3, 2002	
1310-73-2	sodium hydroxide		*	August 13, 1999
100-42-5	styrene (or vinyl benzene)		August 18, 2000	August 13, 1999
7664-93-9	sulfuric acid (and oleum)		May 3, 2002	August 13, 1999
79-34-5	tetrachloroethane, 1,1,2,2-	January 8, 1999		
62-55-5	thioacetamide	January 8, 1999		
108-88-3	toluene (or methyl benzene)		August 18, 2000	August 13, 1999
	toluene diisocyanates			
584-84-9	toluene-2,4-diisocyanate	September 8, 1998	June 15, 2001	
91-08-7	toluene-2,6-diisocyanate	September 8, 1998	June 15, 2001	
79-00-5	trichloroethane, 1,1,2-	January 8, 1999		
79-01-6	trichloroethylene	December 7, 1990	August 18, 2000	
121-44-8	triethylamine		February 7, 2003	August 13, 1999

TABLE I				
TOXIC AIR CONTAMINANTS				
CAS #	SUBSTANCE	EFFECTIVE DATE CANCER	EFFECTIVE DATE CHRONIC	EFFECTIVE DATE ACUTE
51-79-6	urethane (or ethyl carbamate)	September 8, 1998		
1314-62-1	vanadium pentoxide			August 13, 1999
108-05-4	vinyl acetate		May 3, 2002	
75-01-4	vinyl chloride (or chloroethylene)	December 7, 1990	**	August 13, 1999
75-35-4	vinylidene chloride		*	
1330-20-7	xylenes (isomers and mixture)		August 18, 2000	August 13, 1999
108-38-3	xylene, m-		August 18, 2000	August 13, 1999
95-47-6	xylene, o-		August 18, 2000	August 13, 1999
106-42-3	xylene, p-		August 18, 2000	August 13, 1999
7440-66-6	zinc and zinc compounds including, but not limited to:		*	
1314-13-2	zinc oxide		*	

* Compounds not classified as carcinogenic, but have chronic risk values proposed by OEHHA that have not yet been finalized. The effective date is the date the Scientific Review Panel approves the chronic risk value, unless paragraph (e)(3) applies. Paragraph (e)(3) applies when the finalized chronic risk value differs from the value in the latest version of the Risk Assessment Procedures published pursuant to paragraph (e)(1).

** Compounds are classified as carcinogenic, but have chronic risk values proposed by OEHHA that have not yet been finalized. The effective date for use of chronic risk values is the date the Scientific Review Panel approves the chronic risk value, unless paragraph (e)(3) applies.

*** Effective date for these risk values will be March 4, 2005 or date of implementation of the applicable Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0), whichever is later.

TABLE II	
TOXIC AIR CONTAMINANTS WITH PROPOSED RISK VALUES	
CAS #	SUBSTANCE
79-10-7	acrylic acid
107-05-1	allyl chloride
7783-20-2	ammonium sulfate
62-53-3	Aniline
1309-64-4	antimony trioxide
	arsenic compounds (other than inorganic)
532-27-4	chloroacetophenone, 2-
75-45-6	chlorodifluoromethane (HCFC-22)
7440-48-4	cobalt and cobalt compounds
74-85-1	Ethylene
96-45-7	ethylene thiourea
	fluorides and fluoride compounds
87-68-3	hexachlorobutadiene
67-72-1	hexachloroethane
822-06-0	hexamethylene-1,6-diisocyanate
78-93-3	methyl ethyl ketone (or 2-butanone)
7697-37-2	nitric acid
156-10-5	nitrosodiphenylamine, p-
7440-22-4	silver and silver compounds
96-09-3	styrene oxide
79-00-5	trichloroethane, 1,1,2-
593-60-2	vinyl bromide

ATTACHMENT F2

(Adopted November 4, 2005)
(PAR1401.1b – March 2015)

PROPOSED REQUIREMENTS FOR NEW AND RELOCATED FACILITIES AMENDED NEAR SCHOOLS

RULE 1401.1

(a) Purpose

The purpose of this rule is to provide additional health protection to children at schools or schools under construction from new or relocated facilities emitting toxic air contaminants.

(b) Applicability

This rule applies to new and relocated, but not to existing facilities. Applications for Permit to Construct/Operate from such new or relocated facilities shall be evaluated under this rule using the list of toxic air contaminants in the version of Rule 1401 and the risk assessment procedures that ~~is~~-are in effect at the time the application is deemed complete.

(c) Definitions

- (1) CANCER RISK means, for the purpose of this rule, the estimated probability of an exposed individual contracting cancer as a result of exposure to toxic air contaminants at a school or a school under construction calculated pursuant to Rule 1401 (d) ~~assuming an exposure duration of 70 years.~~
- (2) CALIFORNIA ENVIRONMENTAL QUALITY ACT NOTICE (CEQA NOTICE) means, for the purpose of this rule, a Notice of Preparation of project level Environmental Impact Report was sent to the appropriate agencies pursuant to Section 15082 of the CEQA Guidelines or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration was provided to the parties pursuant to Section 15072 pursuant to the CEQA Guidelines.
- (3) EXISTING FACILITY means any facility that:
 - (A) demonstrates to the satisfaction of the Executive Officer that it had equipment requiring a Permit to Construct/Operate that was in operation prior to November 4, 2005 or
 - (B) has an application for Permit to Construct/Operate that is deemed

complete prior to February 2, 2006.

- (4) **FACILITY** means any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above-described groupings, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility. Notwithstanding the above, sources or installations involved in crude oil and gas production in Southern California Coastal or OCS Waters and transport of such crude oil and gas in Southern California Coastal or OCS Waters shall be included in the same facility which is under the same ownership or use entitlement as the crude oil and gas production facility on-shore.
- (5) **FACILITY-WIDE ACUTE HAZARD INDEX** means the sum of the calculated individual substance acute hazard indices for the target organ due to all toxic air contaminants emitted from all equipment requiring a written permit to operate at the facility.
- (6) **FACILITY-WIDE CANCER RISK** means the sum of the calculated cancer risk values for all toxic air contaminants emitted from all equipment requiring a written permit to operate at the facility.
- (7) **FACILITY-WIDE CHRONIC HAZARD INDEX** means the sum of the calculated individual substance chronic hazard indices for the target organ due to all toxic air contaminants emitted from all equipment requiring a written permit to operate at the facility.
- (8) **INDIVIDUAL SUBSTANCE ACUTE HAZARD INDEX (HI)** means the ratio of the estimated maximum one-hour concentration of a toxic air contaminant for a potential maximally exposed individual at the school to its acute reference exposure level.
- (9) **INDIVIDUAL SUBSTANCE CHRONIC HAZARD INDEX (HI)** means the ratio of the estimated long-term level of exposure to a toxic air contaminant for a potential maximally exposed individual at the school to its chronic reference exposure level. The chronic hazard index calculations shall include multipathway consideration, if applicable.
- (10) **MODIFICATION** means any physical change in, change in method of

operation, or addition to an existing permit unit that requires an application for a Permit to Construct/Operate. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:

- (A) an increase in the production rate, unless such increase will cause the maximum design capacity of the equipment to be exceeded; or
- (B) an increase in the hours of operation; or
- (C) a change in ownership of a source; or
- (D) a change in formulation of the materials processed which will not result in a net increase of the MICR, cancer burden, or chronic or acute HI from the associated permit unit.

For facilities that have been issued a facility permit pursuant to Regulation XX or a Title V permit pursuant to Regulation XXX, modification means any physical change in, change in method of operation of, or addition to an existing individual article, machine, equipment or other contrivance which would have required an application for a permit to construct and/or operate, were the unit not covered under a facility permit or Title V permit.

- (11) **NEW FACILITY** means a facility or an operation that is not an existing or relocated facility.
- (12) **PERMIT UNIT** means any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants, and which requires a written permit pursuant to Rules 201 and/or 203. For facilities that have been issued a facility permit or Title V permit, a permit unit for the purpose of this rule means any individual article, machine, equipment or other contrivance which may cause or control the issuance of air contaminants and which would require a written permit pursuant to Rules 201 and/or 203 if it were not covered under a facility permit or Title V permit. For publicly-owned sewage treatment operations, each process within multi-process permit units at the facility shall be considered a separate permit unit for purposes of this rule.
- (13) **RELOCATED FACILITY** means the removal of all existing permitted equipment, remaining under the same ownership, from one parcel of land and installation of the same equipment or functionally identical

replacement of the equipment at another parcel of land where the two parcels are not in actual physical contact and are not separated solely by a public roadway or other public right-of-way.

- (14) **SCHOOL** means any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including in kindergarten and grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property, but does not include unimproved school property.
- (15) **SCHOOL UNDER CONSTRUCTION** means any property that meets any of the following conditions and the Executive Officer has been notified:
- (A) construction of a school has commenced; or
 - (B) of a CEQA Notice for the construction of a school; or
 - (C) a school has been identified in an approved local government specific plan.

A school under construction is effective upon the date in which any one of the activities specified in either subparagraph (c)(15)(A), (c)(15)(B), or (c)(15)(C) occurs or the date the Executive Officer has received notification of the activities, whichever is later.

(d) **Risk Requirements for New Facilities**

The Executive Officer shall deny a Permit to Construct/Operate at a new facility for any permit unit that emits any toxic air contaminant listed in Table I of Rule 1401 unless the applicant has substantiated to the satisfaction of the Executive Officer that all of the following requirements, as applicable, have been achieved. For the purpose of this rule, the cancer risk and hazard indices shall be calculated pursuant to Rule 1401 and the applicable risk assessment procedures. Requirements for new facilities are summarized in Table 1 – Summary of Requirements for New Facilities.

- (1) A new facility with a toxic-emitting source that is within 500 feet from the outer boundary of a school or school under construction shall comply with all of the following requirements.

(A) **Cancer Risk**

The facility-wide cancer risk shall not exceed one in one million

(1×10^{-6}) at any school or school under construction within 500 feet of the toxic-emitting permit unit(s) at the facility; and

(B) Chronic Hazard Index

The facility-wide chronic HI for any target organ system shall not exceed 1.0 at any school or school under construction within 500 feet of the toxic-emitting permit unit(s) at the facility; and

(C) Acute Hazard Index

The facility-wide acute HI for any target organ system shall not exceed 1.0 at any school or school under construction within 500 feet of the toxic-emitting permit unit(s) at the facility.

- (2) For a new facility where the closest outer boundary of a school or school under construction is between 500 to 1,000 feet from the toxic-emitting permit unit(s) and there is no residential or sensitive receptor within 150 feet of the proposed toxic-emitting permit unit(s), the facility shall not exceed the risk levels specified in subparagraphs (d)(1)(A), (d)(1)(B), and (d)(1)(C) at any school or school under construction within 1,000 feet of the toxic-emitting permit unit(s) at the facility.

(e) Risk Requirements for Relocated Facilities

The Executive Officer shall deny a Permit to Construct/Operate at a relocated facility for any permit unit that emits any toxic air contaminant listed in Table I of Rule 1401 unless the applicant has substantiated to the satisfaction of the Executive Officer that all of the following requirements, as applicable, have been achieved. For the purpose of this rule, the cancer risk and hazard indices shall be calculated pursuant to Rule 1401 and the applicable risk assessment procedures. Requirements for relocated facilities are summarized in Table 2 – Summary of Requirements for Relocated Facilities. For each school or school under construction whose outer boundary is within 500 feet of the toxic-emitting permit unit(s) at a relocated facility, the relocated facility shall demonstrate that either:

- (1) The facility-wide cancer risk and hazard indices at each school or school under construction do not exceed the risk values at the same school or school under construction when the facility was at its previous location; or
- (2) The facility-wide cancer risk at the school or school under construction does not exceed 1 in one million and the facility-wide chronic and acute hazard indices for any target organ system do not exceed 1.0.

(f) Risk Calculations for New and Relocated Facilities

- (1) The owner or operator of a new facility complying with the requirements specified under paragraphs (d)(1) or (d)(2), or the owner or operator of a relocated facility complying with the requirements specified under paragraphs (e)(1) or (e)(2), shall calculate the risk for any schools or schools under construction at the time of a CEQA Notice for the new or relocated facility or, if there is no CEQA Notice for the new or relocated facility, at the time the first permit application is deemed complete.
- (2) If the owner or operator of a new or relocated facility subject to (f)(1) does not commence construction within three years of the CEQA Notice for the new or relocated facility, the owner or operator shall calculate the risk for any schools or schools under construction at the time the application for Permit to Construct/Operate is deemed complete, unless the owner or operator has submitted written verification to the Executive Officer that the CEQA Notice is still applicable for the new or relocated facility.

(g) Requirements for New or Relocated Facilities for Additional Information in Rule 212 Notices

When ~~Rule 212~~public notice is required by subparagraph (c)(1) of Rule 212, any new or relocated facility with toxic-emitting permit unit(s) within 1,000 feet of the outer boundary of a school that has a facility-wide cancer risk exceeding one in one million at any such school shall include in the notice the facility-wide cancer risk at that school in addition to the information required pursuant to Rule 212 – Standards for Approving Permits and Issuing Public Notice.

(h) Requirements for New or Relocated Facilities for New Equipment, Modification, Alteration, and Change of Condition

For any subsequent application for new equipment or modification, alteration, and change of conditions of a permit to operate, regardless of whether it remains under the same ownership, any new or relocated facility subject to Rule 1401.1 shall:

- (1) meet the requirements of subdivisions (d), (e), (f), and (g), as applicable; and
- (2) be required to calculate cancer and non-cancer risk or add risk values for Rule 212 notices for any school specified in subdivisions (d), (e), (f), and

(g), whichever is applicable.

(i) Exemptions

- (1) The following equipment is exempt from inclusion in the facility-wide cancer risk, facility-wide acute hazard index, and facility-wide chronic hazard index for this rule.
 - (A) Emergency internal combustion engines that are exempted from modeling and offset requirements under Rule 1304.
 - (B) Engines subject to Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion Engines and Other Compression Ignition Engines.
 - (C) Equipment permitted solely for in-situ remediation of contaminated soil and/or groundwater.
 - (D) Equipment permitted for use at various locations throughout the District and that does not remain at one site for more than 12 consecutive months.
 - (E) Experimental research operations permitted under Rule 441 – Research Operations operating for one year or less.
 - (F) Equipment located at new or relocated facilities that are exempted from a written permit under Rule 219.
- (2) If the Executive Officer has been notified and can confirm that a school will not be constructed at a specific location, that property is no longer considered a school under construction pursuant to paragraph (c)(15).

Table 1 – Summary of Requirements for New Facilities

Distance from New Facility to Nearest School or School Under Construction	Other Residential or Sensitive Receptor at < 150 ft	*Risk Demonstration at School at < 500 ft	*Risk Demonstration at School at 500 – 1,000 ft	Rule 212 Additional Information	Meet Requirements for Future Applications
		Paragraph (d)(1)	Paragraph (d)(2)	Subdivision (f)	Subdivision (g)
< 500 feet	N/A	Yes	N/A	N/A	Yes
500 – 1,000 ft	Yes	N/A	N/A	Yes	Yes
500 – 1,000 ft	No	N/A	Yes	N/A	Yes

*Risk Demonstration at school or school under construction for New Facility:
 ≤ 1 in one million cancer risk and hazard indices ≤ 1.0

Table 2 – Summary of Requirements for Relocated Facilities

Distance from Relocated Facility to Nearest School or School Under Construction	*Risk Demonstration at School at < 500 ft	Rule 212 Additional Information	Meet Requirements for Future Applications
	Subdivision (e)	Subdivision (f)	Subdivision (g)
< 500 feet	Yes	Yes	Yes
500 – 1,000 ft	N/A	Yes	Yes

*Risk Demonstration at school or school under construction for Relocated Facility:
 ≤ 1 in one million cancer risk and hazard indices ≤ 1.0
 or no increase in cancer risk or hazard indices

ATTACHMENT F3

(Adopted April 8, 1994)(Amended March 17, 2000)
(Amended March 4, 2005)([PAR1402c – May 2015](#))

PROPOSED
AMENDED
RULE 1402.

CONTROL OF TOXIC AIR CONTAMINANTS FROM EXISTING SOURCES

(a) Purpose

The purpose of this rule is to reduce the health risk associated with emissions of toxic air contaminants from existing sources by specifying limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) applicable to total facility emissions and by requiring facilities to implement risk reduction plans to achieve specified risk limits, as required by the Hot Spots Act and this rule. The rule also specifies public notification and inventory requirements.

(b) Applicability

This rule shall apply to any facility subject to the Hot Spots Act and to any facility for which the impact of total facility emissions exceeds any significant or action risk level as indicated in one of the following:

- (1) A health risk assessment prepared by the District or for the purpose of this rule for a facility or category of facilities, including but not limited to facilities for which the District has prepared an industrywide emissions inventory pursuant to the Hot Spots Act; or
- (2) A health risk assessment pursuant to paragraph (b)(2), the risk reduction requirements of this rule shall not apply to facilities which have not been notified by the District to prepare a health risk assessment pursuant to this rule or the Hot Spots Act.

(c) Definitions

- (1) **ACCEPTABLE STACK HEIGHT** for a permit unit is defined as a stack height that does not exceed two and one half times the height of the permit unit or two and one half times the height of the building housing the permit unit, and shall not be greater than 65 meters (213 feet), unless the operator demonstrates to the satisfaction of the Executive Officer that a greater height is necessary.

- (2) ACTION RISK LEVEL for purpose of this rule is a MICR of twenty-five in one million (25×10^{-6}), cancer burden of 0.5, or a total acute or chronic HI of three (3.0) for any target organ system at any receptor location.
- (3) CANCER BURDEN means the estimated increase in the occurrence of cancer cases in a population subject to a MICR of greater than or equal to one in one million (1×10^{-6}) resulting from exposure to toxic air contaminants.
- (4) FACILITY means any permit unit or grouping of permit units or other air contaminant-emitting activities which are located in one or more contiguous properties within the District, in actual physical contact or separately solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or persons under common control). Such above-described groupings, if remotely located and connected only by land carrying a pipeline, shall not be considered one facility.
- (5) HOT SPOTS ACT means the Air Toxics "Hot Spots" Information and Assessment Act of 1987, incorporated at Part 6, Division 26 of the Health and Safety Code, and amendments to this act
- (6) INDIVIDUAL SUBSTANCE ACUTE HAZARD INDEX (HI) is the ratio of the estimated maximum one-hour, or other time period as specified by the Executive Officer, concentration of a toxic air contaminant at a receptor location to its acute reference exposure level.
- (7) INDIVIDUAL SUBSTANCE CHRONIC HAZARD INDEX (HI) is the ratio of the long-term level of exposure to a toxic air contaminant for a potential maximally exposed individual to the chronic reference exposure level for the toxic air contaminant.
- (8) INITIAL PLAN SUBMITTAL DATE is the date that the initial risk reduction plan is submitted to the District, but no later than 180 days following notification by the Executive Officer that a risk reduction plan is required.
- (9) MAXIMUM INDIVIDUAL CANCER RISK (MICR) is the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants ~~over a period of 70 years~~ calculated pursuant to the Risk Assessment Procedures referenced in subdivision (j) for residential receptor locations. The MICR for worker receptor locations shall be calculated pursuant to the Risk Assessment

Procedures referenced in subdivision (j). The MICR calculations shall include multi-pathway consideration if applicable.

- (10) OPERATOR means the person who owns or operates a facility or part of a facility.
- (11) PHASE I FACILITY is any facility that either emitted more than 25 tons per year of any criteria pollutant or was listed in a toxics emitters list, and was required to submit emissions inventory reports pursuant to the Hot Spots Act for the calendar year 1989.
- (12) RECEPTOR LOCATION means
 - (A) for the purpose of calculating acute HI, any location outside the boundaries of the facility at which a person could experience acute exposure; and
 - (B) for the purpose of calculating chronic HI, MICR, or cancer burden any location outside the boundaries of the facility at which a person could experience chronic exposure.

The Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location.

- (13) RISK REDUCTION MEASURE is a control measure which will reduce or eliminate the health risk associated with emissions of toxic air contaminants, is real, permanent, quantifiable, and enforceable through District permit conditions if applicable, and meets the requirements of the Hot Spots Act. Risk reduction measures may include, but are not limited to feedstock modification; product reformulations; production system modifications; system enclosure, emissions control, capture or conversion; operational standards or practices modifications; emissions collection and exhaust; source control; or alternative technologies.
- (14) SIGNIFICANT RISK LEVEL for purpose of this rule is a MICR of one hundred in one million (1.0×10^{-4}), or a total acute or chronic HI of five (5.0) for any target organ system at any receptor location.
- (15) TOTAL ACUTE HAZARD INDEX (HI) is the sum of the individual substance acute HIs for all toxic air contaminants identified in the risk assessment guidelines as affecting the same target organ system.
- (16) TOTAL CHRONIC HAZARD INDEX (HI) is the sum of the individual substance chronic HIs for all toxic air contaminants identified in the risk assessment guidelines as affecting the same target organ system.

(17) TOXIC AIR CONTAMINANT is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health.

(d) Requirements

Notwithstanding the requirements of subdivision (n), within 150 days of the date of notification by the Executive Officer, an operator shall submit to the District a health risk assessment for total facility emissions. The Executive Officer may require a health risk assessment or an emissions inventory from a facility when, based upon investigation, the Executive Officer determines that emission levels from the facility could potentially cause exceedance of the action risk levels.

(e) Risk Reduction Requirements

The following requirements shall apply to the operator of any facility whose emissions ~~cause an~~cause an exceedance of any significant or action risk level as indicated in a health risk assessment approved or prepared by the District:

- (1) Any operator whose facility-wide risk is greater than or equal to the action risk level shall implement the risk reduction measures specified in a risk reduction plan approved by the Executive Officer to reduce the impact of total facility emissions below the action risk level as quickly as feasible but by no later than three (3) years from the initial plan submittal date.
- (2) For any operator whose facility-wide risk is less than the significant risk level, the Executive Officer may approve time extensions to comply with paragraph (e)(1) in increments of up to two (2) additional years to implement risk reduction measures and achieve required risk reductions, provided the operator demonstrates one or more of the following criteria:
 - (A) there is no known technology or risk reduction measure that is commercially available or can achieve required risk reductions within the required time period; or
 - (B) the only known technology or risk reduction measure that can be implemented within the facility that will meet the facility-wide risk reduction requirements within the required time period will result in a cost impact that exceeds both of the following:
 - (i) \$4,000,000 per cancer case avoided; and
 - (ii) \$18,000 per ton of pollutant reduced if the TAC is also a criteria pollutant.

- (C) Any extension beyond the first two year extension for each facility must be approved by the Governing Board in a public hearing before going into effect.
- (3) The operator shall implement risk reduction measures in an approved plan by the dates specified in the plan for each risk reduction measure.
- (f) **Submittal of Risk Reduction Plans**
 - (1) The Executive Officer will publish procedures for preparing risk reduction plans under this rule. The procedures will include self-conducted audits and checklists which may be used by certain categories of facilities in lieu of preparing a risk reduction plan.
 - (2) An operator shall submit a risk reduction plan to the Executive Officer as specified in Table A.

Table A
Risk Reduction Plan Submittal Dates

Applicability	Health Risk Assessment (HRA) Approval Date	Plan Submittal Date
Any Facility \geq Action Risk Level	Before March 17, 2000	180 Days After March 17, 2000
	On and After March 17, 2000	180 Days After HRA Approval Date
Notification by Executive Officer	Not Applicable	180 Days from date of notification from Executive Officer

- (3) The operator shall submit to the Executive Officer for approval a risk reduction plan which includes at a minimum all of the following:
 - (A) The name, address, SCAQMD identification number and SIC code of the facility;
 - (B) A facility risk characterization which includes an updated air toxics emission inventory and health risk assessment, if the risk due to total facility emissions has increased above or decreased below the levels indicated in the previously approved health risk assessment;
 - (C) Identification of each source from which risk needs to be reduced in order to achieve a risk below the action risk level.
 - (D) For each source identified in subparagraph (f)(3)(C), an evaluation of the risk reduction measures available to the operator, including emission and risk reduction potential, estimated costs, and time necessary for implementation;

- (E) Specification of the risk reduction measures that shall be implemented by the operator to comply with the requirements of subdivision (e) to achieve the action risk level or the lowest achievable level;
- (F) A schedule for implementing the specified risk reduction measures as quickly as feasible. The schedule shall include the submittal of all necessary applications for permits to construct or modify within 180 days of approval of the plan, or in accordance with another schedule subject to approval of the Executive Officer, and specify the dates for other increments of progress associated with implementation of the risk reduction measures;
- (G) If requesting a time extension, information required to demonstrate that the request meets the required criteria specified under paragraph (e)(2) and the length of time up to two years requested;
- (H) An estimation of the residual health risk after implementation of the specified risk reduction measures;
- (I) Proof of certification of the risk reduction plan as meeting all requirements by an individual who is officially responsible for the processes and operations of the facility.

(g) Approval of Risk Reduction Plans

- (1) The Executive Officer shall approve or reject the plan within three (3) months of submittal based on the complete information contained in paragraph (f)(3). The operator may appeal the rejection of a plan or the failure of the Executive Officer to act on a plan submittal to the Hearing Board under Rule 216 - Appeals. If the Hearing Board denies the appeal, plans shall be revised and resubmitted within 90 days after the decision. The revised plan shall correct all deficiencies identified by the Executive Officer. The approved plan shall be subject to Rule 221 - Plans.
- (2) If the risk reduction plan contains a facility risk characterization demonstrating to the satisfaction of the Executive Officer that the facility does not exceed the action risk level, the plan may be approved without the inclusion of the plan components specified in subparagraphs (f)(3)(C) through (H).
- (3) Measures to achieve risk reductions required by the approved plan shall be incorporated by the Executive Officer through enforceable permit

conditions or compliance plans.

(h) **Progress Reports**

The operator shall submit to the Executive Officer for review annual progress report(s), starting no later than 12 months after approval of the plan pursuant to subdivision (g), on the emissions and risk reduction achieved by the plan which include at a minimum all of the following:

- (1) The increments of progress achieved in implementing the risk reduction measures specified in the plan;
- (2) A schedule indicating dates for future increments of progress;
- (3) Identification of any increments of progress that have been or will be achieved later than specified in the plan and the reason for achieving the increments late;
- (4) A description of any increases or decreases in emissions of toxic air contaminants that have occurred at the facility, including a description of any associated permits that were subject to Rule 1401, since approval of the plan.

(i) **Updating and Modification of Risk Reduction Plans**

- (1) If information becomes known to the Executive Officer after the last submitted plan that would substantially impact risks to exposed persons, implementation, or effectiveness of the risk reduction plan, the Executive Officer may require the plan to be updated and resubmitted.
- (2) Prior to a change in the risk reduction measures or schedule specified in the currently approved plan, the operator shall submit to the Executive Officer for approval an application for plan modification. The application shall include a demonstration that the change in the risk reduction measures is necessary and will result in compliance with this rule to achieve the risk level as specified in the approved plan. Any request for a time extension shall be made at least 180 days before the end of the applicable deadline to achieve the required facility-wide risk level that is specified in the approved risk reduction plan.

(j) **Risk Assessment Procedures**

- (1) The Executive Officer shall periodically publish or designate procedures for determining health risks under this rule. To the extent possible, the procedures shall be consistent with the policies and procedures of the

Office of Environmental Health Hazard Assessment (OEHHA). Such procedures shall specify:

- (A) Acute and chronic reference exposure levels and upper bound estimates of carcinogenic potency that shall be used in evaluating risks;
 - (B) Compounds that must be subject to a multiple pathway risk assessment. A compound is subject to multiple pathway analysis if the Executive Officer determines that it may reasonably be expected to cause health risk through ingestion exposure, if it is expected to deposit and persist in the environment after emission, and if a quantitative oral cancer potency estimate or reference exposure level has been derived for the compound;
 - (C) Health protective assumptions that shall be used in evaluating exposure to compounds from inhalation and other routes of exposure. ~~This will include an assumption of a 70 year period of operation for the sources of toxic air contaminants;~~
 - (D) Risk for the potential maximally exposed individual ~~shall be based upon continuous exposure for 70 years~~ in residential areas and health protective estimates of exposure duration in nonresidential areas;
 - (E) Estimates of pollutant dispersion and risk from a source shall not be based upon stack height in excess of acceptable stack height as defined in (c)(1).
- (2) Within 120 days of publication of risk assessment guidelines required to be published by the OEHHA pursuant to the Air Toxics "Hot Spots" Information and Assessment Act of 1987, the Executive Officer shall report to the District Governing Board if there are any material differences between the OEHHA guidelines and the criteria specified in this rule and recommend for Board approval whether to proceed with amendments to this rule in order to make the rule consistent with the OEHHA guidelines before their designation as the risk assessment guidelines under this rule.
 - (3) Promptly after OEHHA finalizes the identification of a new TAC or revises a risk value for an existing TAC, staff will provide notice to the Governing Board and affected industries. Use of any new TAC or a more stringent risk value in health risk assessments for this rule shall be 12 months after the Governing Board receives and files the report containing

such notification, unless the Governing Board approves another implementation schedule through an official Board action.

- (4) Also, within 150 days of new chemicals being identified or changes in risk values being finalized by OEHHA, staff will report to the District's Governing Board regarding preliminary estimates of Rule 1402 program impacts that are associated with the new values.
 - (5) The Executive Officer will publish procedures for determining the emissions estimates to be used in risk assessments in cases in which a compound has not been detected in analyses which have been conducted according to District-approved methods, including procedures for excluding such compounds from risk assessments. The procedures shall provide methods for estimating the most likely emission levels of non-detected compounds based on consideration of the likelihood of presence and the method detection limits of compounds.
- (k) **Alternate Hazard Index Levels**
An alternate hazard index level may be used as the action risk level for a particular total acute or chronic HI if the Executive Officer, in consultation with the Office of Environmental Health Hazard Assessment, determines that such alternate hazard index level is protective against adverse health effects. The alternate HI level shall not in any case exceed 10. The facility operator shall attain the alternate HI level for the action risk level.
- (l) Compliance with this rule does not authorize the emission of a toxic air contaminant in violation of any federal, state, local or District law or regulation or exempt the operator from any law or regulation.
- (m) Risk reduction measures implemented in order to comply with other regulatory requirements are acceptable risk reduction measures for the purposes of this rule, provided they are consistent with the requirements of this rule.
- (n) **Emissions Inventory Requirements**
(1) These emission inventory requirements are applicable to the operator of any facility that has not yet submitted a total facility toxic emissions inventory under the Hot Spots Program, where:
(A) the facility emits one or more toxic air contaminants on Table I and its annual emissions exceed one or more of the threshold(s) identified in Table I; or

- (B) the primary business operation of the facility is listed in Table II and its annual emissions exceed one or more of the threshold(s) identified in Table II.
 - (2) The operator of any facility subject to subparagraph (n)(1)(A) shall submit an emissions inventory within 60 days of notification from the Executive Officer.
 - (3) The operator of any facility subject to subparagraph (n)(1)(B) shall submit an inventory within 60 days of notification from the Executive Officer, unless the AQMD Governing Board adopts a source-specific rule prior to three years after March 17, 2000 that specifically exempts the industry, of which the facility is a member, from the inventory provisions of this rule.
 - (4) The operator of any facility that is required to submit an emissions inventory pursuant to subparagraph (n)(1)(A) shall submit an inventory that includes the toxic air contaminant(s) identified in Table I applicable to the facility. The operator of any facility that is required to submit an emissions inventory pursuant to subparagraph (n)(1)(B) shall submit an inventory that includes: (1) the toxic air contaminant(s) listed in Table II within the industry category that is applicable to the facility; and (2) the toxic air contaminants listed in Table I applicable to the facility, if applicable. The emissions inventory shall be prepared consistent with the emissions inventory methodology specified by “ARB’s Emissions Inventory Criteria and Guidelines” (July 1997) and/or any subset of these Guidelines as specified by the Executive Officer.
- (o) Phase I Facility Health Risk Assessment Revision Requirements
- (1) Any operator of a Phase I facility that was required to submit a Hot Spots health risk assessment and has not received District approval on the health risk assessment, due to a request by the operator to update the inventory, shall submit to the District by July 1, 2000 or earlier, as requested by the Executive Officer, a revised total facility inventory for the year 1995 or later which meets the requirements of the Hot Spots Act.
 - (2) Phase I facilities requested to provide a revised facility inventory pursuant to paragraph (o)(1), that fail to do so, shall be subject to public notification requirements on the most recent inventory data and OEHHA reviewed risk assessment that is subject to District approval that the facility submitted to the District pursuant to the Hot Spots Act.

(p) **Public Notification Requirements**

- (1) The operator of any facility for which total facility risk, as determined through a District approved HRA or progress report, exceeds the action risk level shall provide the following public notification 12 months after the Executive Officer approves the risk reduction plan and every 12 months thereafter, until the total facility risk is below the action risk level:
 - (A) written public notification to report the progress of risk reductions pursuant to the most recent Board approved “Public Notification Procedures for Phase I and II Facilities Under the Air Toxics Hot Spots Information and Assessment Act” Section III.C.2. Public Notice Materials, which requires notice materials written in both English and Spanish, and additional languages as deemed appropriate by the Executive Officer; Section III.C.3. Area of Distribution (Area of Impact); Section III.C.4. Method of Distribution; and Section III.C.5. Verification of Distribution.; and
 - (B) public meetings if the total facility risk, as determined through a District approved HRA or the progress report, exceeds a MICR of one hundred in one million (100×10^{-6}), pursuant to the “Public Notification Procedures for Phase I and II Facilities Under the Air Toxics Hot Spots Information and Assessment Act” Section III.D. Public Meetings.
- (2) Any operator with a facility-wide risk that exceeds an MICR of 10 in one million or a Hazard Index of 1.0 (0.5 for lead) as determined through a District approved HRA, shall notice the public in accordance with California Health and Safety Code Section 44362 and the most recently District approved “Public Notification Procedures for Phase I and II Facilities Under the Air Toxics Hot Spots Information and Assessment Act”.

TABLE I
EMISSIONS REPORTING THRESHOLDS FOR SPECIFIC TACs

TAC	THRESHOLD
1,3 Butadiene	5 <u>2</u> lb/yr
Benzene	25 <u>14</u> lb/yr
Cadmium	0.20 <u>0.09</u> lb/yr
Formaldehyde	150 <u>67</u> lb/yr
Hexavalent Chromium	0.005 <u>0.002</u> lb/yr
Methylene Chloride	825 <u>400</u> lb/yr
Nickel	3 <u>31.5</u> lb/yr
Perchloroethylene	140 <u>67</u> lb/yr

TABLE II
EMISSIONS REPORTING THRESHOLDS FOR SPECIFIC INDUSTRIES

INDUSTRY	TAC	THRESHOLD
Biomedical Sterilizing Operations	Ethylene Oxide	10 <u>4.5</u> lb/yr
Dry Cleaning	Perchloroethylene	140 <u>67</u> lb/yr
	Methylene Chloride	825 <u>400</u> lb/yr
Gasoline Stations	Benzene in Gasoline	25 <u>14</u> lb/yr
Metal Finishing	Hexavalent Chromium	0.005 <u>0.002</u> lb/yr
	Cadmium	0.20 <u>0.09</u> lb/yr
	Nickel	3 <u>31.5</u> lb/yr
	Copper	500 lb/yr
Motion Picture Film Processing	Perchloroethylene	140 <u>67</u> lb/yr
Rubber	Chlorinated Dibenzofurans, Benzene, Xylenes, Toluene, Phenol, and Methylene Chloride	1,000 lb of rubber product cured/ processed per year
Wood Stripping/Refinishing,	Methylene Chloride	825 <u>400</u> lb/yr
	DEHP	350 <u>32</u> lb/yr
	Glycol ethers and their acetates, Ethylene Glycol (Mono)Methyl Ether, and Ethylene Glycol (Mono)Ethyl Ether Acetate	500 lb/yr
	Ethylene Glycol (Mono)Butyl Ether and Ethylene Glycol (Mono)Ethyl Ether	2,000 lb/yr
	Ethylene Glycol (Mono)Methyl Ether Acetate and Ethylene Glycol (Mono)Methyl Ether	15,000 <u>1,000</u> lb/yr

ATTACHMENT F4

(Adopted January 9, 1976)(Amended July 6, 1984)
(Amended May 17, 1985)(Amended May 1, 1987)
(Amended July 10, 1987)(Amended March 3, 1989)
(Amended June 28, 1990)(Amended September 6, 1991)
(Amended August 12, 1994)(Amended December 7, 1995)
(Amended November 14, 1997)(PAR 212c – March 2015)

PROPOSED **STANDARDS FOR APPROVING PERMITS AND ISSUING**
AMENDED **PUBLIC NOTICE**
RULE 212.

- (a) The Executive Officer shall deny a Permit to Construct or a Permit to Operate, except as provided in Rule 204, unless the applicant shows that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code or of these rules.
- (b) If the Executive Officer finds that the equipment has not been constructed in accordance with the permit and provides less effective air pollution control than the equipment specified in the Permit to Construct, he shall deny the Permit to Operate.
- (c) Prior to granting a Permit to Construct or permit modification for a project requiring notification, all addresses within the area described in subdivision (d) of this rule shall be notified of the Executive Officer's intent to grant a Permit to Construct or permit modification at least 30 days prior to the date action is to be taken on the application. For the purpose of this rule, a project requiring notification is:
 - (1) any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX that may emit air contaminants located within 1000 feet from the outer boundary of a school. This subdivision shall not apply to a modification of an existing facility if the Executive Officer determines that the modification will result in a reduction of emissions of air contaminants from the facility and no increase in health risk at any receptor location. (This paragraph shall not apply to modifications that have no potential to affect emissions.); or,
 - (2) any new or modified facility which has on-site emission increases exceeding any of the daily maximums specified in subdivision (g) of this

rule; or

- (3) any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX with increases in emissions of toxic air contaminants, for which the Executive Officer has made a determination that a person may be exposed to:
- (A) a maximum individual cancer risk greater than, or equal to:
- (i) one in a million (1×10^{-6}), per guidelines published by the Executive Officer under Rule 1401 (e), during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^{-6}) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or,
 - (ii) ten in a million (10×10^{-6}), per guidelines published by the Executive Officer under Rule 1401 (e), during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX; or
- (B) quantities or concentrations of other substances that pose a potential risk of nuisance.

Unless otherwise stated, toxic and potentially toxic air contaminants are substances listed in Table I of Rule 1401 and their cancer risk shall be evaluated using Rule 1401 risk assessment procedures. Toxic air contaminants may also include other substances determined by the Executive Officer to be potentially toxic. Paragraph (c)(2) of this rule shall not apply if the Executive Officer determines that modifications to the existing facility will not result in an increase in health risk at any receptor location.

- (d) Except as provided for in subdivision (g) of this rule, the notification of the proposed construction of a project specified under subdivision (c) of this rule, which is to be prepared by the District, is to contain sufficient detail to fully describe the project. The applicant shall provide verification to the Executive Officer that public notice has been distributed as required by this subdivision. In the case of notifications performed under paragraphs (c)(2) and (c)(3) of this rule,

the applicant for the Permit to Construct or permit modification shall be responsible for the distribution of the public notice to each address within a 1/4 mile radius of the project or such other area as determined appropriate by the Executive Officer. In the case of notifications performed under paragraph (c)(1) of this rule, distribution of the public notice shall be to the parents or legal guardians of children in any school within 1/4 mile of the facility and the applicant shall provide distribution of the public notice to each address within a radius of 1000 feet from the outer property line of the proposed new or modified facility.

- (e) Any person may file a written request for notice of any decision or action pertaining to the issuance of a Permit to Construct. The Executive Officer shall provide mailed notice of such decision or action to any person who has filed a written request for notification. Requests for notice shall be filed pursuant to procedures established by the Executive Officer. The notice shall be mailed at the time that the Executive Officer notifies the permit applicant of the decision or action. The ~~10-day~~ period to appeal, as specified in subdivision (b) of Rule 216, shall commence on the third day following mailing of the notice pursuant to this subdivision. The requirements for public notice pursuant to this subdivision are fulfilled if the Executive Officer makes a good faith effort to follow procedures established pursuant to this subdivision for giving notice and, in such circumstances, failure of any person to receive the notice shall not affect the validity of any permit subsequently issued by the Executive Officer.
- (f) An application for a Permit to Operate, for a permit unit installed or constructed without a required Permit to Construct, shall be subject to the requirements of this rule.
- (g) For new or modified sources subject to Regulation XIII, RECLAIM facilities, or Outer Continental Shelf (OCS) facilities located within 25 miles of the State's seaward boundary and for which the District has been designated as the corresponding onshore area (COA), which undergo construction or modifications resulting in an emissions increase exceeding any of the daily maximums specified as follows:

<u>Air Contaminant</u>	<u>Daily Maximum</u> <u>in lbs per Day</u>
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM ₁₀	30
Sulfur Dioxide	60

Carbon Monoxide
Lead

220
3

The process for public notification and comment shall include all of the applicable provisions of 40 Code of Federal Regulations (CFR) Part 51, Section 51.161(b), and 40 CFR Part 124, Section 124.10. The federal public notice and comment procedures for these facilities require that the public notice be distributed to the broadest possible scope of interested parties, and include at a minimum:

- (1) Availability of information submitted by the owner or operator and of District analyses of the effect on air quality for public inspection in at least one location in the area affected;
 - (2) Notice by prominent advertisement in the area affected of the location of the source information and the District's analyses of the effect on air quality;
 - (3) Mailing a copy of the notice required in paragraph (g)(2) of this rule to the following persons: The applicant, the Administrator of U. S. EPA through Region 9, the Air Resources Board, affected local air pollution control districts, the chief executives of the city and county or the onshore area that is geographically closest to where the major stationary source or major modification would be located, any comprehensive regional land use planning agency, and State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the regulated activity; and,
 - (4) A 30-day period for submittal of public comments.
- (h) The Executive Officer may combine public notices to avoid duplication provided that all required public notice requirements are satisfied.

ATTACHMENT G

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

~~Draft~~ Staff Report

Proposed Amended Rules

212 – Standards for Approving Permits and Issuing Public Notice

1401 – New Source Review of Toxic Air Contaminants

1401.1 – Requirements for New and Relocated Facilities Near Schools, and

1402 – Control of Toxic Air Contaminants from Existing Sources

~~March~~June 2015

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

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Speaker of the Assembly Appointee

VICE CHAIRMAN: DENNIS YATES
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Cities of San Bernardino

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Los Angeles County

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Cities of Riverside County

JOHN BENOIT
Supervisor, Fourth District
County of Riverside

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County of Orange

DR. CLARK E. PARKER, SR.
Senate Rules Appointee

MIGUEL PULIDO
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JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

EXECUTIVE OFFICER: BARRY R. WALLERSTEIN, D.Env.

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EXECUTIVE SUMMARY

BACKGROUND

PROPOSED AMENDMENTS TO RULES 212, 1401, 1401.1, AND 1402

PUBLIC PROCESS AND OUTREACH EFFORTS

CALIFORNIA ENVIRONMENTAL QUALITY ACT ANALYSIS

BACKGROUND

The California Office of Environmental Health Hazard Assessment (OEHHA) establishes risk exposure information (i.e., risk values) for toxic air contaminants (TACs). Additionally, AB2588 requires that OEHHA develop health risk assessment guidelines for implementation of the Hot Spots Program (Health and Safety Code Section 44360(b)(2)). In 2003, OEHHA developed and approved the Health Risk Assessment Guidance (2003 OEHHA Guidelines). Since the adoption of the 2003 guidelines, new scientific information has shown that early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. Based on this information, OEHHA approved the Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (Revised OEHHA Guidelines) on March 6, 2015. The Revised OEHHA Guidelines incorporate age sensitivity factors which will increase estimated cancer risk estimates to residential and sensitive receptors, based on the change in methodology, by approximately 3 times, and more than 3 times in some cases depending on whether the toxic air contaminant has multiple pathways of exposure in addition to inhalation. Under the Revised OEHHA Guidelines, even though the toxic emissions from a facility have not increased, estimated cancer risk to a residential receptor will increase. Cancer risks for off-site worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged.

PROPOSED AMENDMENTS TO RULES 1401, 1401.1, 1402, AND 212

The SCAQMD relies on OEHHA's health risk assessment guidelines in various aspects of its toxics regulatory program including the permitting program, AB2588 Hot Spots Program, and existing regulatory program. Amendments to the following rules are being proposed to reference the Revised OEHHA Guidelines for estimation of health risks:

- Rule 1401 – New Source Review of Toxic Air Contaminants
- Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools
- Rule 1402 – Control of Toxic Air Contaminants from Existing Sources
- Rule 212 – Standards for Approving Permits and Issuing Public Notice

The proposed amended rules will revise definitions and risk assessment procedures to be consistent with the Revised OEHHA Guidelines. Proposed amendments are to ensure SCAQMD staff can implement the Revised OEHHA Guidelines regarding how health risks are calculated. Staff is not recommending revisions to the health risk thresholds in Rules 1401, 1401.1 or 1402. Staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588). Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212.

The California Air Resources Board (CARB) and the California Air Pollution Control Officers Association's (CAPCOA) are finalizing Risk Management Guidelines for Permitting and AB2588 to be consistent with the Revised OEHHA Guidelines that are expected to recommend ~~the~~ using the 95th percentile breathing rate for children under two years of age to the last trimester of pregnancy and the 80th percentile breathing rate for all other ages. CARB and CAPCOA's Risk Management Guidelines are expected to be considered by the CARB Board in ~~May~~ 2015.

The SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212 and the Supplemental Guidelines for Preparing Risk Assessments for AB2588 will also incorporate these modified breathing rates.

PUBLIC PROCESS AND OUTREACH EFFORTS

Development of PAR 212, 1401, 1401.1, and 1402 is being conducted through a public process. As part of the generalized work plan presented at the March 2015 Governing Board meeting, SCAQMD staff ~~began~~has begun an extensive outreach and communication effort, including mailing 22,000 public workshop notices, to immediately engage all stakeholders regarding the Revised OEHHA Guidelines, including amendments to Rules 212, 1401, 1401.1, and 1402. SCAQMD staff has ~~been meeting~~met with industry groups to discuss the Revised OEHHA Guidelines. As part of the outreach efforts, staff ~~will~~hosted five regional Public Workshops in March and April of 2015 throughout the Basin. The five public workshops ~~were~~are as follows:

- **March 31, 2015 at 10:00 a.m.**
Norton Regional Events Center
Auditorium
1601 E. 3rd Street, San Bernardino, CA 92408
- **March 31, 2015 at 2:00 p.m.**
Louis Robidoux Public Library
Community Room
5840 Mission Boulevard, Riverside, CA 92509
- **April 1, 2015 at 10:00 a.m.**
SCAQMD Auditorium
21865 Copley Drive, Diamond Bar, CA 91765
- **April 2, 2015 at 10:00 a.m.**
Buena Park Community Center Ballroom
6688 Beach Boulevard, Buena Park, CA 90621
- **April 2, 2015 at 4:00 p.m.**
Wilmington Senior Citizen Center
Community Room
1371 Eubank Avenue, Wilmington, CA 90744

All responses to comments received at the Public Workshops ~~have~~will ~~been~~ included in ~~an~~ Appendix A of this report to the Final Staff Report. The SCAQMD also conducted additional workshops for the following business groups requesting further information on the subject rule development and the Revised OEHHA Guidelines:

- Southern California Alliance of Publicly Owned Treatment Works (SCAP)
- San Gabriel Valley Legislative Coalition of Chambers
- California Small Business Alliance
- California Health Care Association
- California Council for Environmental and Economic Balance
- Western States Petroleum Association
- City of Industry Chamber of Commerce
- Greater Riverside Chambers of Commerce
- City of Santa Monica Chamber of Commerce

CALIFORNIA ENVIRONMENTAL QUALITY ACT ANALYSIS

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, SCAQMD staff has evaluated the proposed project and made the appropriate CEQA determination. The public workshop meetings ~~will~~ also ~~solicit~~ solicited public input on any potential environmental impacts from the proposed project. Comments received at the public workshops on any environmental impacts ~~will~~ were ~~be~~ considered when developing the final CEQA document for this rulemaking.

CHAPTER 1: BACKGROUND

INTRODUCTION

SCAQMD'S AIR TOXIC REGULATORY PROGRAM

PROPOSED AMENDMENTS TO RULES 1401, 1401.1, 1402, AND 212

PUBLIC PROCESS AND OUTREACH EFFORTS

OEHHA

TOXIC AIR CONTAMINANTS

HEALTH RISK ASSESSMENT

SCAQMD RISK ASSESSMENT PROCEDURES

SUMMARY OF SCAQMD RISK-BASED RULES

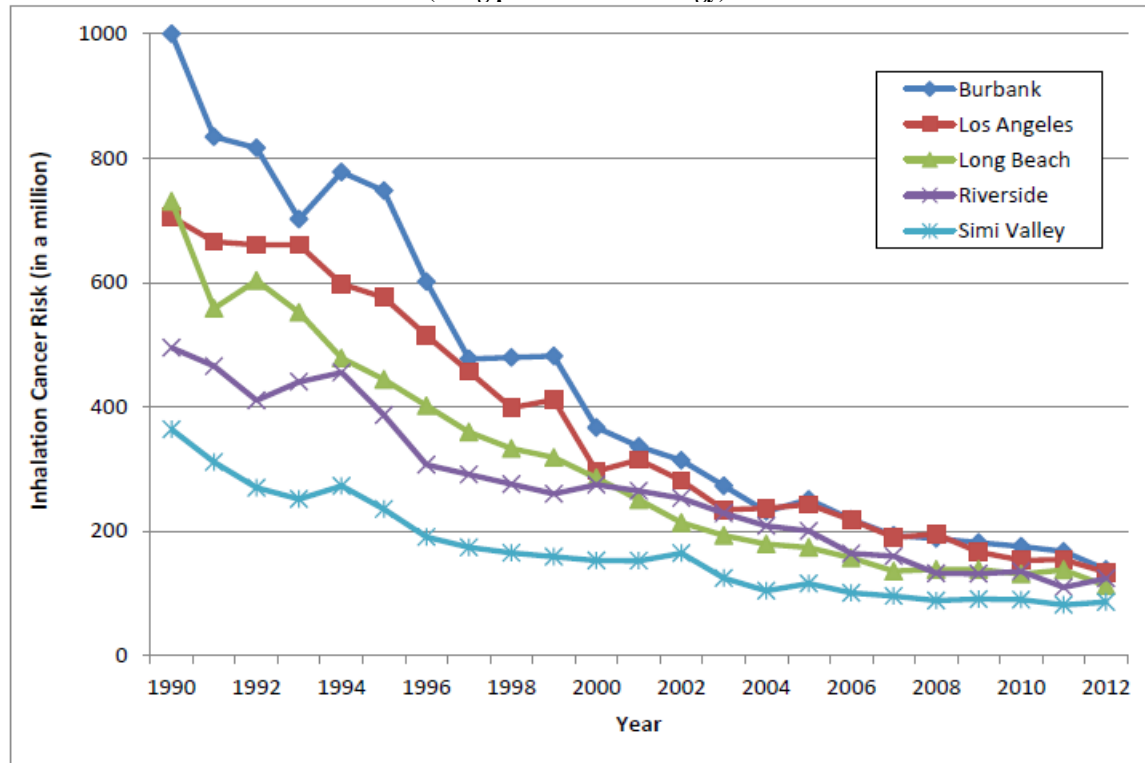
INTRODUCTION

On March 6, 2015, the California Office of Environmental Health Hazard Assessment (OEHHA) approved revisions to their Risk Assessment Guidelines (Revised OEHHA Guidelines). The Revised OEHHA Guidelines were triggered by the passage of the Children’s Health Protection Act of 1999 (SB 25, Escutia) requiring OEHHA to ensure infants and children are explicitly addressed in assessing risk. Over the past decade, advances in science have shown that early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer, or other adverse health effects, compared to exposures that occur in adulthood. The new risk assessment methodology addresses this greater sensitivity and incorporates the most recent data on infants and childhood and adult exposure to air toxics. The Revised OEHHA Guidelines incorporate age sensitivity factors and other changes which will increase estimated cancer risk estimates to residential and sensitive receptors, based on the change in methodology, by approximately 3 times, and more than 3 times in some cases depending on whether the toxic air contaminant has multiple pathways of exposure in addition to inhalation. Health risks for off-site worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged. Even though there may be no increase in toxic emissions at a facility, the estimated cancer risk using the Revised OEHHA Guidelines is expected to increase.

SCAQMD’S AIR TOXICS REGULATORY PROGRAM

The SCAQMD has a robust and comprehensive air toxics regulatory program that consists of rules to address new and modified toxic sources, AB2588 facilities (existing toxic sources), and source-specific toxic rules. Rules 1401, 1401.1, and 1402 are referred to as the “umbrella” rules that specify requires-requirements for all new and modified permitted sources (Rules 1401 and 1401.1 for sources near schools) and requirements for the existing sources under the Air Toxics Hot Spots program (Rule 1402). In addition to these umbrella toxics rules, the SCAQMD’s regulatory program includes over fifteen source-specific toxic rules regulating specific equipment or industry categories such as chrome plating, asbestos remediation, lead emission reductions, perchloroethylene dry cleaners, diesel internal combustion engines, and others. Over the past few decades, implementation of these programs by the SCAQMD has resulted in significant reductions in toxic emissions by businesses throughout the Basin from a variety of sources. Since the development of SCAQMD’s Air Toxics Program in 1990, trends in estimated non-diesel inhalation cancer risks, as illustrated in Figure 1-1, have greatly declined. Although the Revised OEHHA Guidelines would change the estimated cancer risk values in Figure 1-1, this does not change the fact that estimated cancer risks have been significantly reduced between 75 to 86 percent, depending on the location within the Basin. The Revised OEHHA Guidelines do not change the toxic emission reductions already achieved by facilities in the Basin, nor do they change the overall percent reduction in estimated cancer risks. Rather, the Revised OEHHA Guidelines represents a change to the methodologies and calculations used to estimate health risk based on the most recent scientific data on exposure, childhood sensitivity, and breathing rates.

Figure 1-1
Trends in Non-Diesel Inhalation Cancer Risks in the South Coast Air Basin
 (using previous methodology)*



*values do not consider OEHHA Revised Guidelines

PROPOSED AMENDMENTS TO RULES 1401, 1401.1, 1402, AND 212

The SCAQMD relies on OEHHA's health risk assessment guidelines in various aspects of its toxics regulatory program including the permitting program, AB2588 Hot Spots Program, and existing regulatory program. Amendments to the following rules are being proposed to reference the Revised OEHHA Guidelines for estimation health risks:

- Rule 1401 – New Source Review of Toxic Air Contaminants;
- Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools;
- Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; and
- Rule 212 – Standards for Approving Permits and Issuing Public Notice

The proposed amended rules will revise definitions and risk assessment procedures to be consistent with the Revised OEHHA Guidelines. Proposed amendments are to ensure SCAQMD staff can implement the Revised OEHHA Guidelines regarding how health risks are calculated, and staff is not recommending revisions to the health risk thresholds in Rules 1401, 1401.1 or 1402. The SCAQMD staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and the 2015 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588). Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212.

The California Air Resources Board (CARB) and the California Air Pollution Control Officers Association's (CAPCOA) are finalizing Risk Management Guidelines for Permitting and AB2588 to be consistent with the Revised OEHHA Guidelines that are expected to maintain the breathing rate using the 95th percentile breathing rate for children under two years of age and the 80th percentile breathing rate for all other ages. CARB and CAPCOA's Risk Management Guidelines are expected to be approved by the CARB Board in ~~May~~ 2015. The SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212 and the Supplemental Guidelines for Preparing Risk Assessments for AB2588 will also incorporate these modified breathing rates. These modified breathing rates are consistent with CARB's 2003 Interim Risk Management Policy for Residential-Based Cancer Risk that was applied for Health Risk Assessments (HRAs) prepared using OEHHA's 2003 version of its HRA Guidance Manual. This policy recommended that HRAs utilize an 80th percentile breathing rate for inhalation residential cancer risks instead of the 95th percentile recommended in OEHHA's 2003 HRA Guidance Manual. This approach has been used in risk assessments state-wide since that time.

PUBLIC PROCESS AND OUTREACH EFFORTS

At the Governing Board Meeting on May 16, 2014, SCAQMD staff presented *Potential Impacts of the New OEHHA Risk Guidelines on SCAQMD Programs*. The presentation explained that several SCAQMD toxic rules that establish permitting requirements and implement the SCAQMD's Toxics Hot Spots Program, reference the OEHHA's health risk assessment guidelines and that the Revised OEHHA Guidelines would affect these programs. In addition, at the March 6, 2015 Governing Board Meeting, SCAQMD staff presented a Work Plan for implementing the OEHHA's Revised Air Toxics Hot Spots Program Risk Assessment Guidelines. The Work Plan included the following recommendations:

- Implement enhanced outreach and risk communication activities;
- Proceed with development of adjustments to SCAQMD's various programs related to Risk Assessment (Proposed Amended Rules 1401, 1401.1, 1402, and 212); and
- Provide updates to the Stationary Source Committee during rule development process.

Development of PAR 1401, 1401.1, 1402, and 212 is being conducted through a public process. As part of the generalized work plan presented at the March 2015 Governing Board meeting, SCAQMD staff ~~began~~~~has begun~~ an extensive outreach and communication effort, including mailing 22,000 public workshop notices, to immediately engage all stakeholders regarding the Revised OEHHA Guidelines, including amendments to Rules 212, 1401, 1401.1, and 1402. SCAQMD staff has ~~met~~~~been meeting~~ with industry groups to discuss the Revised OEHHA Guidelines. As part of the outreach efforts, staff ~~will~~~~hosted~~ five regional Public Workshops in March and April of 2015 throughout the Basin. The five public workshops ~~were~~~~are~~ as follows:

- **March 31, 2015 at 10:00 a.m.**
Norton Regional Events Center
Auditorium
1601 E. 3rd Street, San Bernardino, CA 92408
- **March 31, 2015 at 2:00 p.m.**
Louis Robidoux Public Library
Community Room
5840 Mission Boulevard, Riverside, CA 92509

- **April 1, 2015 at 10:00 a.m.**
SCAQMD Auditorium
21865 Copley Drive, Diamond Bar, CA 91765
- **April 2, 2015 at 10:00 a.m.**
Buena Park Community Center Ballroom
6688 Beach Boulevard, Buena Park, CA 90621
- **April 2, 2015 at 4:00 p.m.**
Wilmington Senior Citizen Center
Community Room
1371 Eubank Avenue, Wilmington, CA 90744

All responses to comments received at the Public Workshops ~~have~~will ~~been~~ included in Appendix A ~~of this report of the Final Staff Report.~~ The SCAQMD also conducted additional workshops to the following business groups requesting further education on the subject rule development and the Revised OEHHA Guidelines:

- Southern California Alliance of Publicly Owned Treatment Works (SCAP)
- San Gabriel Valley Legislative Coalition of Chambers
- California Small Business Alliance
- California Health Care Association
- California Council for Environmental and Economic Balance
- Western States Petroleum Association
- City of Industry Chamber of Commerce
- Greater Riverside Chambers of Commerce
- City of Santa Monica Chamber of Commerce

OEHHA

OEHHA is a state agency under the California Environmental Protection Agency that establishes risk exposure information (i.e., risk values) for toxic air contaminants and is responsible for developing health risk assessment guidance for the state of California. The Scientific Review Panel (SRP) reviews and approves the methodologies used to develop these risk values, thereby finalizing the values for use by state and local agencies in assessing health risks related ~~with-to~~ exposure to toxic air contaminants. In addition, AB2588 requires that OEHHA develop health risk assessment guidelines for implementation of the Hot Spots Program (Health and Safety Code Section 44360(b)(2)). In 2003, OEHHA developed and approved the Health Risk Assessment Guidance document (2003 OEHHA Guidelines) supported by Technical Support ~~documents~~ Documents (TSDs) reviewed and approved by OEHHA and the SRP. Since 2003, OEHHA and the SRP developed and approved three additional TSDs: TSD for the Derivation of Noncancer Reference Exposure Levels (2008), TSD for Cancer Potency Factors (2009), and TSD for Exposure Assessment and Stochastic Analysis (2012). The three TSDs provide new scientific information showing that early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. As a result, OEHHA developed and adopted the Revised OEHHA Guidelines on March 6, 2015 which incorporates the new scientific information.

TOXIC AIR CONTAMINANTS

A substance is considered toxic if it has the potential to cause adverse health effects in humans. A toxic substance released to the air is considered a toxic air contaminant (TAC) or “air toxic”. TACs are identified by state and federal agencies based on a review of available scientific evidence. Federal agencies also use the term hazardous air pollutant.

Exposure to TACs can potentially increase the estimated risk of contracting cancer or result in other adverse health effects. Compounds with cancer risk values (carcinogens) may cause an increase in the probability that an exposed individual would develop cancer. Compounds with non-cancer risk values (chronic and acute) may cause other health effects including nausea or difficulty breathing and may contribute to immunological, neurological, reproductive, developmental, and respiratory problems. Rules 1401, 1401.1, and 1402 are designed to help protect the public from the health risks posed by TACs that are emitted by stationary sources. A health risk assessment is used to estimate the increased probability that an individual would contract cancer or experience other adverse health effects as a result of exposure to listed TACs. TACs are regulated by the SCAQMD based on risk values identified pursuant to the recommendations by OEHHA.

HEALTH RISK ASSESSMENT

A health risk assessment is used to estimate the likelihood that an individual would contract cancer or experience adverse health effects as a result of exposure to TACs. Risk assessment is a methodology for estimating the probability or likelihood that an adverse health effect will occur. OEHHA is the state agency with primary responsibility for developing and recommending risk assessment methods.

Risk assessment consists of four components:

- **Hazard identification:** The evaluation of compounds to determine whether they may cause adverse health effects;
- **Dose-response assessment:** The estimation of the biological response to a given exposure to a compound;
- **Exposure assessment:** The estimation of the level of exposure to a compound; and
- **Risk characterization:** The estimation of the health risk to individuals based on the estimate of exposure and the dose-response relationship.

Hazard identification and dose-response assessments are the responsibility of other regulatory agencies, such as OEHHA. Health risk assessments for particular facilities are conducted by integrating this information with a site-specific exposure assessment to develop an estimate of health risk from the facility’s emissions. The latter two elements are conducted or reviewed by the air permitting agencies. To determine the potential health risk, factors such as the emission rate of the TAC, facility location, type of receptor (resident/worker), receptor distance, and meteorology in the area are used. Rule 1401 relies on OEHHA guidelines for calculating toxic risks. These guidelines are incorporated in the SCAQMD’s Risk Assessment Procedures for Rule 1401 and 212.

SCAQMD RISK ASSESSMENT PROCEDURES

The SCAQMD staff ~~is preparing~~has prepared revisions to its risk assessment procedures used for permitting and the AB2588 Hot Spots program. Both risk assessment procedures have been based on OEHHA's risk assessment procedures. Revisions to Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and the 2015 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588) ~~are~~ were being-developed to incorporate the Revised OEHHA Guidelines as well as incorporate CARB's proposed modified breathing rates. Both documents ~~will~~-incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212.

SCAQMD Risk Assessment Procedures for Rules 1401 and 212

The SCAQMD Risk Assessment Procedures for Rules 1401 and 212, Version 7.0 (July 1, 2005) are used by SCAQMD permitting staff and the regulated community to estimate toxic risk from new, relocated, and modified permitted sources. The SCAQMD's Risk Assessment Procedures incorporate OEHHA's previous guidance for determining health risks. The SCAQMD's Risk Assessment Procedures provide four levels of screening risks: Tiers 1, 2, 3, and 4. The tiers are progressively more complex, require increasingly more site-specific details, and give increasingly more refined estimates of risk. Tier 1 uses a table of emission levels for screening based on worst-case assumptions and back-calculating to 1 in one million cancer risk or a hazard index of 1.0, whichever is more stringent. The user determines the emission level for the source and compares it to the table. If it is less than the screening level, no further analysis is needed and no control is required for toxics. Tier 2 provides a formula and the user inputs basic site-specific information to calculate risks. If the source does not pass Tier 2, then dispersion modeling (Tier 3 or Tier 4) can be used to do a more accurate site-specific risk analysis.

The current SCAQMD Risk Assessment Procedures are based on the 2003 OEHHA Guidelines. As a result, the SCAQMD staff is ~~working to update~~has updated these procedures to incorporate the Revised OEHHA Guidance and CARB's proposed modified breathing rates in Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0. In addition to refining Tier screening tables for consistency with the Revised OEHHA Guidelines, additional tables ~~may~~ have been added for specific parameters for select source categories and equipment, including adding modified breathing rates consistent with the California Air Resources Board (CARB) and the California Air Pollution Control Officers Association's (CAPCOA) Risk Management Guidelines for Permitting and AB2588 to the Risk Assessment Procedures, to ensure consistency with the Revised OEHHA Guidelines. The CARB and CAPCOA document is expected to be approved by the CARB Board in ~~May~~-2015.

Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act

District staff ~~is updating~~has updated its Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588 Supplemental Guidelines) to be consistent with the updated OEHHA Guidelines. Revisions to the AB2588 Supplemental Guidelines include updated SCAQMD-specific guidance on default parameters to use in HARP2 software, default exposure parameters (e.g., breathing rates, exposure durations, etc.), and guidance for dispersion modeling conducted with AERMOD. The AB2588

Supplemental Guidelines ~~will~~ also incorporate^s the adjusted breathing rates provided in ARB's updated Risk Management Guidance.

Exposure Assessment

The estimated probability of contracting cancer due to exposure to a carcinogen is a function of the dose received, which is based on the airborne concentration of the toxic air contaminant in the vicinity of the source. This is usually estimated through air dispersion modeling. For some TACs, additional receptor exposure can occur due to deposition from the air onto surfaces such as skin, soil, or vegetation, which can then be ingested or otherwise absorbed by the exposed population. These exposures are also quantified. Since exposures to individuals will vary with distance from the source and other factors (such as meteorological or geographical conditions), exposure estimates are calculated for the most exposed individual. Based on the Revised OEHHA Guidelines, this estimate assumes that the potential maximally exposed individual will be exposed continuously for a 30-year lifetime if exposure occurs in a residential area. It should be noted that this is change from the 2003 OEHHA Guidelines assumption of a 70-year lifetime exposure. At commercial and industrial locations, under the Revised OEHHA Guidelines, the exposure duration is a 25 years. The 2003 OEHHA Guidelines assumed a worker exposure of 40 years.

Cancer Risk Characterization

Exposure to TACs can potentially increase the estimated risk of contracting cancer or result in other adverse health effects. Compounds with cancer risk values (carcinogens) may cause an increase in the probability that an exposed individual would develop cancer. Compounds with non-cancer risk values (chronic and acute) may cause other health effects including nausea or difficulty breathing and may contribute to immunological, neurological, reproductive, developmental, and respiratory problems. Rule 1401 is designed to help protect the public from the health risks posed by TACs that are emitted by stationary sources.

Risks from carcinogens are expressed as an added lifetime probability of contracting cancer as a result of a given exposure. For example, if the emissions from a facility are estimated to produce a risk of 1 in one million to the most exposed individual, this means that the individual's chance of contracting cancer has been increased by one chance in one million over and above his or her chance of contracting cancer from all other factors (for example, diet, smoking, heredity and other factors). This added risk to a maximally exposed individual is referred to as a "maximum individual cancer risk" or MICR. In Rule 1401, the risk to the exposed population is also characterized as an estimate of the number of excess cancer cases which may occur in the population as a result of exposure, or "cancer burden." For example, if one million people were subjected to an increased estimated risk of one in one million due to a given exposure, it would be estimated that over a lifetime, one excess cancer case may result in this population from this exposure.

SUMMARY OF SCAQMD RULES 1401, 1401.1, 1402, AND 212

RULE 1401

Rule 1401 – New Source Review for Toxic Air Contaminants was adopted by the SCAQMD Governing Board in June 1990. The rule establishes cancer and non-cancer health risk

requirements for new, relocated, or modified permitted sources of toxic air pollutants. Under Rule 1401, new and modified permitted sources cannot exceed an MICR of 1 in one million, if the source is not equipped with best available control technology for toxics (T-BACT). If T-BACT is installed, the MICR cannot exceed 10 in one million. The MICR is the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants. Rule 1401 also has requirements for cancer burden which represents the estimated increase in the occurrence of cancer cases in a given population due to exposure to TACs as well as non-cancer chronic and acute hazard thresholds. Rule 1401 has been amended several times to add or modify new compounds or risk values to the list of TACs as they are identified and risk values are finalized or amended by the state.

RULE 1401.1

Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools was adopted by the SCAQMD Governing Board in November 2005. The rule is designed to be more health protective for school children by establishing more stringent risk requirements related to facility-wide cancer risk and non-cancer acute and chronic HI for new and relocated facilities emitting toxic air contaminants located near schools, thereby reducing the exposure of toxic emissions to school children. For new facilities, the rule requires the facility-wide cancer risk to be less than 1 in one million at any school or school under construction within 500 feet of the facility. If there are no schools within 500 feet, the same risk levels must be met at any school or school under construction within 500 to 1,000 feet unless there is a residential or sensitive receptor within 150 feet of the facility. For relocated facilities, if a facility is relocating, the facility must demonstrate, for each school or school under construction within 500 feet of the facility, that either: 1) the risk at the school from the facility in its new location is no greater than the risk at that same school when the facility was at its previous location, or 2) the facility-wide cancer risk at the school does not exceed 1 in one million. Unlike other SCAQMD risk-based rules, the required risk thresholds of Rule 1401.1 do not change based on whether or not the source is equipped with T-BACT.

RULE 1402

Rule 1402 – Control of Toxic Air Contaminants from Existing Sources was adopted in April 1994. Rule 1402 establishes facility-wide risk requirements for existing facilities that emit TACs and implements the state AB2588 Air Toxics “Hot Spots” program. It contains requirements for toxic emissions inventories, health risk assessments, public notification and risk reduction. A maximum individual cancer risk exceeding 10 in one million, as demonstrated by an approved HRA, triggers the need for public notice. A maximum individual cancer risk of 25 in one million, as demonstrated by an approved HRA, triggers the need for the facility to reduce their facility-wide risk. Any facility whose facility-wide emissions of TACs exceed the significant risk level of 100 in one million is required to achieve risk reductions to achieve a level below 100 in one million within three years from initial risk reduction plan submittal.

RULE 212

Rule 212 – Standards for Approving Permits and Issuing Public Notice was adopted in January 1976 and contains public notification requirements for new, modified, or relocated sources of air contaminants based on proximity to schools, increases to emissions above rule-specified daily maximums, and increases in toxic air contaminant emissions resulting in a MICR of greater than

or equal to 10 in one million for single permitted source facilities, or 1 in one million for facilities with more than one permitted source, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide cancer risk is below 10 in one million.

CHAPTER 2: SUMMARY OF PROPOSED AMENDED RULES

OVERVIEW

PROPOSED AMENDMENTS TO RULE 1401

PROPOSED AMENDMENTS TO RULE 1401.1

PROPOSED AMENDMENTS TO RULE 1402

PROPOSED AMENDMENTS TO RULE 212

OVERVIEW

The primary purpose of amending Rules 1401, 1401.1, 1402, and 212 is to update rule language relating to cancer risk calculation methodologies so that they are consistent with the Revised OEHHA Guidelines adopted on March 6, 2015.

Proposed Amendments to Rule 1401

Considerations for SCAQMD's permitting approach to implement the Revised OEHHA Guidelines included maintaining public health protection and avoiding backsliding of emission reductions that result in toxic exposure. SCAQMD staff considered if implementation of the guidelines would not unduly impede business activities, and identified approaches to streamline the process to minimize business impacts and SCAQMD resources consistent with principles of transparency and public participation. The proposed amendments to implement the Revised OEHHA Guidelines will be forward-looking. The SCAQMD staff will not retroactively review previously issued permits relative to the Revised OEHHA Guidelines, only permits for new and modified equipment that have been deemed complete 30 days after Proposed Amended Rule 1401 has been adopted. Public notification pursuant to Rule 212 will not be applied retroactively but will apply to new and modified sources.

Proposed Amended Rule 1401 includes a provision to allow spray booths and retail gasoline transfer and dispensing facilities to continue to use the previous OEHHA risk guidelines which are used in SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) to calculate the cancer risk until the SCAQMD staff returns to the Board with specific ~~proposals-regulations and/or procedures~~ for these industries. The SCAQMD staff evaluated permits received between October 1, 2009 and October 1, 2014 and found that some spray booths may have difficulties meeting the Rule 1401 risk thresholds using the Revised OEHHA Guidelines. Over the five year permitting period, the SCAQMD received issued approximately 1,400 permits to operate or permits to construct for spray booths. Because of the large number of permits issued and consideration that this particular source category tends to be associated with smaller businesses such as wood coating operations and autobody facilities, SCAQMD staff is recommending that spray booths continue to use the previous health risk guidelines for permitting under Rules 1401. The SCAQMD staff will begin ~~rulemaking~~ to identify regulatory and/or procedural approaches by which industries using spray booths can reduce their toxic emissions and/or toxic exposure.

The SCAQMD staff is also recommending that retail gasoline transfer and dispensing facilities continue to use the previous OEHHA risk guidelines. Based on permitted data, there are approximately 3,300 retail gasoline stations in the district. The SCAQMD receives approximately 15 permit applications annually for new gas stations and 18 permit applications annually for modifications to increase throughput at a gasoline dispensing facilities. The SCAQMD staff just received new emissions data from CARB ~~this month in March 2015~~ that could potentially change the emission estimates from gasoline dispensing facilities. Additional time is needed to better assess and understand the impacts from gasoline dispensing facilities before use of the Revised OEHHA Guidelines. All new gasoline stations are permitted with toxics best available controls and are required to comply with SCAQMD Rule 461 – Gasoline Transfer and Dispensing. PAR 1401 includes a commitment from the Executive Officer to

return to the Governing Board as quickly as practicable with Staff's analysis of emissions data from gasoline dispensing activities and applicable regulations and/or procedures.

The definition for "MAXIMUM INDIVIDUAL CANCER RISK (MICR)" in existing Rule 1401 is defined as the estimated probability of a potentially maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants over "a period of 70 years" for residential receptor locations. The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. In order for consistency with the Revised OEHHA Guidelines, paragraph (c)(8) has been amended to omit the assumption of "70 years" and add language that MICR at residential receptor locations be "calculated pursuant to the Risk Assessment Procedures referenced in subdivision (e)" which will be reflected in SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588).

Rule 1401 currently states that Executive Officer shall deny a permit to construct a new, relocated or modified permit unit if emissions of any listed toxic air contaminant occur, unless the applicant substantiates to the satisfaction of the Executive Officer that among other ~~criteria~~criteria, the "Risk Per Year" does not exceed "1/70 of the maximum allowable risk specified in the rule. The calculation for "Risk Per Year" is based on the 2003 OEHHA Guidelines relating to a residential exposure period of 70 years. The "Risk Per Year" requirement of Rule 1401 was established in order to cover specific instances where a permit application was submitted for a piece of equipment that would be in a particular location for a limited number of years, for example, equipment installed for short-term (i.e., 3 to 5 years) such as soil vapor extraction project. SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0, which incorporates the Revised OEHHA Guidelines, includes provisions that address short term projects. Therefore the "Risk Per Year" requirement in the rule is no longer necessary and has been removed.~~For consistency with the 30 year exposure period of the Revised OEHHA Guidelines, paragraph (d)(4) has been amended to require that the risk per year shall not exceed the maximum allowable risk specified in the rule divided by the applicable exposure period referenced SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588) at any receptor locations in residential areas.~~

PAR 1401 also adds paragraph (g)(5) to allow the equipment category of "spray booths" and the industry category of "retail gasoline transfer and dispensing facilities" to continue using the SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) in order to calculate the cumulative increase in MICR pursuant to paragraph (d)(1).

Proposed Amendments to Rule 1401.1

The definition for "CANCER RISK" in paragraph (c)(1) is defined as the estimated probability of an exposed individual contracting cancer as a result of exposure to toxic air contaminants at a school or school under construction assuming "an exposure duration of 70 years". The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA

Guidelines has been changed from 70 years to 30 years. ~~In order to~~ For consistency with the Revised OEHHA Guidelines, paragraph (c)(1) has been amended to omit the assumption of “70 years”.

Proposed Amendments to Rule 1402

The definition for “MAXIMUM INDIVIDUAL CANCER RISK (MICR)” in paragraph (c)(9) is defined as the estimated probability of a potentially maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants over “a period of 70 years” for residential receptor locations. The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. ~~In order to~~ For consistency with the Revised OEHHA Guidelines, paragraph (c)(8) has been amended to omit the assumption of “70 years” and add language that MICR at residential receptor locations be “calculated pursuant to the Risk Assessment Procedures referenced in subdivision (j)” which will be reflected in SCAQMD’s Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). Amendments have also been made to subparagraphs (j)(1)(C) and (j)(1)(D) to omit references to the “70 year exposure”. Other amendments include revisions to Tables I and II to revise emission reporting thresholds for specific TACs and industries for consistency with calculations and methodologies of the Revised OEHHA Guidelines.

Proposed Amendments to Rule 212

Rule 212 requires public notification if any new or modified permit unit results in increases in emission of toxic air contaminants, for which the Executive Officer has made a determination that a person may be exposed to a MICR greater than or equal to 1 in a million for facilities with more than one permitted unit, or greater than or equal to 10 in a million for facilities with a single permitted unit “during a lifetime exposure period of 70 years”. The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. ~~In order to~~ For consistency with the Revised OEHHA Guidelines, clause (c)(3)(A)(i) and (c)(3)(A)(ii) has omitted the “during a lifetime (70 years)” language from the rule.

CHAPTER 3: IMPACT ASSESSMENT

AFFECTED INDUSTRIES

IMPACT ANALYSIS APPROACH

SOCIOECONOMIC ASSESSMENT

CEQA ANALYSIS

**DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY
CODE SECTION 40727**

COMPARATIVE ANALYSIS

AFFECTED INDUSTRIES

Implementation of Proposed Amended Rules 1401, 1401.1, 1402, and 212 affects many industry categories. As a result, it is challenging to predict the type, number, and size of new and modified sources that will be seeking permit applications. As previously discussed, implementation of the Revised OEHHA Guidelines is expected to increase the estimated inhalation health risk by about 3 times for residential receptors due to the change in calculation methodology. SCAQMD staff conducted an analysis to better understand the potential number of sources that could be affected by the Revised OEHHA Guidelines for permitting new and modified sources (Rule 1401) and facilities under the AB2588 Hot Spots Program (Rule 1402). A discussion of the assumptions and basis for the number of facilities that could potentially require additional pollution controls is discussed below. A summary of the type of pollution controls is provided in Table 3-1 below. Table 3-1 identifies pollution control options, however to reduce toxic emissions an operator could choose other options such as less toxic coatings and solvents, process throughput limits, and distancing sources from receptors.

IMPACT ANALYSIS APPROACH

Rule 1401 and 1401.1 Analysis

To identify new and modified permitted equipment source categories that under Rule 1401 and 1401.1 could potentially need new or additional air pollution controls as a result of using the Revised OEHHA Guidelines, the SCAQMD staff evaluated permits that were issued over a five year period from October 2009 to October 2014. Based on this evaluation, the SCAQMD staff identified three general groups of equipment source categories based on the need for new or additional pollution controls using the Revised OEHHA Guidelines:

- 1) No new or additional air pollution controls needed;
- 2) New or additional pollution controls likely needed and/or additional time needed to understand potential impacts; and
- 3) Potential for new or additional air pollution controls could be required for some permits within an equipment source category.

Under the first group, no new or additional pollution controls are expected using the Revised OEHHA Guidelines because either the cancer risk was well below the Rule 1401 risk thresholds of 1 in one million without T-BACT, and 10 in one million with T-BACT, or there were no toxic emissions associated with the permitted source. Under the second group, SCAQMD staff found two equipment source categories (1) coating and solvents used in spray booths, and (2) retail gasoline dispensing facilities. For coating and solvents used in spray booths, for a percentage of permits reviewed it is likely that new or additional pollution controls would be needed to meet the Rule 1401 cancer risk threshold using the Revised OEHHA Guidelines. For retail gas stations, the SCAQMD staff has received new information from CARB staff regarding the latest speciation of emissions from gasoline dispensing. The SCAQMD staff needs additional time to assess the effects of this information and how it could affect new and modified gasoline dispensing facilities combined with the Revised OEHHA Guidelines. Therefore, Rule 1401 includes a provision to allow these two source categories to continue to use the existing OEHHA Guidelines. The SCAQMD staff will develop source-specific requirements-regulations and/or procedures for these source categories to reduce toxic emissions and to address potential permitting issues. For gasoline dispensing facilities, the SCAQMD staff will expedite review of

emissions data for gasoline dispensing to better understand potential impacts from gasoline dispensing facilities before using the Revised OEHHA Guidelines.

Lastly under the third group, based on review of five years of permitted data there were five equipment source categories that the estimated cancer risk with the Revised OEHHA Guidelines could require additional controls: metal plating facilities, crematories, plasma arc and laser cutting, wet gate printing and film cleaning, and asphalt and concrete batch blending. Table 3-1 provides a summary for the number of permits annually expected to need additional controls, affected toxic air contaminants, and the possible air pollution control technology for ~~these~~ each of the identified source categories. For plasma arc and laser cutting, most permits are currently close to 1 in one million so it is reasonable to expect for this source category nearly all permits for plasma arc and laser cutting will need additional air pollution controls in order to satisfy T-BACT requirements in Rule 1401, for sources exceeding 1 in a million cancer risk. The SCAQMD staff is working on a rule for metal grinding and cutting that will address emissions from plasma arc and laser cutting. Based on the permitted data, staff estimates that approximately 24 plasma arc and laser cutting permits annually could have estimated health risks greater than 1 in a million requiring pollution additional controls such as a bag house to capture metal particulates. For the remaining equipment or industry categories in Table 3-1, based on the five years of permitted data approximately one permit per year could potentially require additional air pollution controls.

**Table 3-1
New or Modified Permits that Potentially Could Require
Additional Pollution Controls Using the Revised OEHHA Guidelines¹**

Equipment Category	Number of Permits (Annually)	Toxic Air Contaminants	Typical Control Device
Metal Plating Facilities – Plating Tanks	1	Metal – nickel, hexavalent chromium, cadmium	HEPA filter for nickel or chrome plating tank
Crematory – Furnace	1	Combustion emissions – PAHs	Oxidation catalysts
Plasma Arc and Laser Cutting	24	Nickel and hexavalent chromium emissions	Baghouse for metal particulates
Wet Gate Printing and Film Cleaning (Perc)	1	Perchloroethylene emissions from film cleaning	Carbon adsorber
Asphalt Blending and Concrete Batch (Diesel ICEs)	1	Diesel particulate	Diesel particulate filter on diesel engine

¹ Based on SCAQMD analysis of permits issued between 2009 and 2014.

SCAQMD staff did not include equipment or industry categories that are exempt from Rule 1401 such as emergency internal combustion engines and wood product stripping. SCAQMD staff also did not analyze impacts for permits related to change of ownerships, alterations, or modifications that did not result in an increase in toxic emissions. District Rule 1421 – Control

of Perchloroethylene Emissions from Dry Cleaning Systems contain requirements for the phase out of perchloroethylene dry cleaning equipment by 2020 and the state ATCM does not allow purchase of new perchloroethylene dry cleaning equipment. SCAQMD staff did not include the permitting of this equipment category into the impact analysis for this rule development since permitting data shows no permits issued for new perchloroethylene dry cleaning machines over the past five years.

AB2588 Air Toxics Hot Spots Program (Core Facilities) – Rule 1402 Analysis

Since Rule 1402 adoption in 1994, the SCAQMD staff has approved approximately 300 facility HRAs. Based on the most recent approved HRAs for each facility, the SCAQMD staff estimates that 21 facilities could potentially have a cancer risk greater than or equal to 25 in a million when using the Revised OEHHA Guidelines. Under Rule 1402, if the facility-wide health risk is greater than or equal to the action risk level the operator is required to implement risk reduction measures specified in a risk reduction plan to reduce the impact of total facility emissions below the action risk level as quickly as feasible, but by no later than three years. Regarding facilities that are in the AB2588 program, but have not been required to submit an HRA, the SCAQMD staff found that although more facilities will likely be required to submit an HRA, it is not expected that their cancer risk will be over the action risk threshold of 25 in one million. Therefore, no additional pollution controls are assumed for those facilities.

SCAQMD staff evaluated the main toxic driver(s) for the 22 AB2588 facilities that could potentially be required to implement risk reduction measures to make an estimate of the types of additional pollution controls that could potentially be implemented. Rule 1402 establishes a “facility-wide” risk threshold, so there are a variety of options which can be implemented such as process changes, material changes, additional air pollution controls, and reduced throughput. Table 3-2 summarizes the type of facility, key toxic air contaminant that is contributing to the cancer risk, and the type of air pollution controls that could be implemented to reduce the cancer risk.

Table 3-2
Potential Air Pollution Control Device(s)
For Use to Reduce Cancer Risk by AB2588 Facilities

Facility Type	Key Toxic Driver	Air Pollution Control Device(s)
Aerospace	hexavalent chromium, perchloroethylene, tetrachloroethylene	Scrubber/Carbon Adsorber
Aerospace	hexavalent chromium, cadmium	HEPA/Scrubber
Aerospace	perchloroethylene, tetrachloroethylene, hexavalent chromium	Carbon Adsorber/HEPA/Scrubber
Aerospace	hexavalent chromium	HEPA/Scrubber
Aerospace	hexavalent chromium	HEPA/Scrubber
Aerospace	lead	HEPA/Scrubber
Asphalt Manufacturer	PAHs, formaldehyde	Scrubber/Carbon Adsorber
Hospital	formaldehyde, PAHs	Thermal oxidizer/Oxidation catalysts
Metal Forging and Heat Treating	nickel	HEPA/Scrubber
Metal Melting	cadmium, lead	HEPA/Scrubber
Metal Melting	cadmium, lead	HEPA/Scrubber
Metal Melting	arsenic, cadmium	Scrubber
Metal Plating and Finishing	hexavalent chromium, nickel, cadmium	HEPA/Scrubber
Metal Plating and Finishing	hexavalent chromium	HEPA/Scrubber
Metal Plating and Finishing	hexavalent chromium	HEPA/Scrubber
Petroleum Refining	1,3-butadiene, hexavalent chromium	Thermal oxidizer/HEPA
Petroleum Refining	diesel particulate matter, 1,3-butadiene (engines)	Diesel particulate filters/Thermal Oxidizer
Petroleum Refining	benzene, PAHs	Thermal oxidizer/Oxidation catalyst
Petroleum Refining	diesel particulate matter (engines), arsenic	Diesel particulate filters/Scrubber
Waste Management	dioxins, furans	Scrubber
Waste Management	formaldehyde	Carbon Adsorber
Waste Management	formaldehyde	Carbon Adsorber

It is assumed that 22 facilities could potentially need to install additional air pollution controls due to the Revised OEHHA Guidelines. This is likely a conservative estimate (meaning there are not likely to be more such facilities) where staff estimated based on previously approved HRAs. It is possible that some facilities could have implemented emission reduction projects that have reduced air toxic emissions and health risks since the HRA was approved.

AB2588 is the state-required Air Toxics Hot Spots Program required by Health and Safety Code §44360(b)(2) which is implemented here in the SCAQMD through Rule 1402. Under the AB2588 program, facilities are divided into four implementation groups. During the “quadrennial” review, AB2588 facilities are required to submit a more detailed emissions inventory for 177 toxic air contaminants. (During the three years between the quadrennial review

AB2588 facilities submit a toxics inventory for 23 toxic air contaminants.) Based on the quadrennial toxics emissions inventory, SCAQMD staff prioritizes facilities and sends a letter to those facilities with a high Priority Score to submit an even more detailed emissions inventory and HRA. Implementing the AB2588 program using the quadrennial review approach provides a more even workflow and reduces the impact on affected facilities to provide a detailed inventory. Implementation of the Revised OEHHA Guidelines will follow the existing quadrennial review process.

The type of control device(s) necessary for implementing risk reduction measures will vary by the pollutant(s) creating the risk. A summary of the type of pollution controls to address the particular TAC is identified in Table 3-2. Possible control options depending on the TAC could be carbon adsorbers, thermal oxidizers, baghouses with high efficiency particulate arrestors (HEPA), diesel particulate filters, and scrubbers. A facility could potentially use one or all of the possible pollution controls depending on the amount of risk reduction needed.

Rule 212 Analysis

Currently, the SCAQMD staff issues approximately five Rule 212 notices annually, on average, for increases in toxic emissions. Rule 212 notices are also issued for increases in criteria pollutant emissions and for projects that are within 1,000 feet of a school. Under Rule 212, a toxics notice is issued if the cancer risk is greater than 1 in a million for facilities with more than one permitted piece of equipment unless the facility-wide cancer risk is less than 10 in a million. A Rule 212 notice is also required if the permitted source is 10 in a million.

SOCIOECONOMIC ASSESSMENT

A socioeconomic assessment for PAR 1401, 1401.1, 1402, and 212 ~~will be~~ will be available to the public ~~at least 30 days prior to the SCAQMD Governing Board Meeting anticipated for May 1, 2015.~~ Compliance costs are analyzed for PAR 1401, 1401.1, 1402, and 212 and the additional pollution control equipment and their permitting costs, submitting or updating HRAs, and the costs of issuing additional public notices. Assuming a 4% real interest rate, the estimated annual cost of compliance is \$0.3 million for PAR 1401 and \$1.6 million for PAR 1402, for a total overall annual cost of \$1.9 million. The compliance costs conservatively assume that previously reported health risks and emission inventories apply today, even though they were reported in the previously approved HRAs and may not reflect the most recent status at the AB2588 facilities. Additional facilities were included where the calculated risks were near rule thresholds and emissions have remained stable or have increased.

CALIFORNIA ENVIRONMENTAL QUALITY ACT ANALYSIS

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, SCAQMD staff has evaluated the proposed project and is preparing the appropriate CEQA determination. The public workshop meetings ~~will also serve~~ will also serve to solicit public input on any potential environmental impacts from the proposed project. Comments received at the public workshops on any environmental impacts ~~will be~~ will be considered when developing the final CEQA document for this rulemaking.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PAR 1401, 1401.1, 1402, and 212 are needed to update rule language relating to risk assessment calculations such that they are consistent ~~to~~with those specified in the state OEHHA Risk Assessment Guidelines adopted on March 6, 2015.

Authority

The AQMD Governing Board has authority to adopt amendments to Rules 1401, 1401.1, 1402, and 212 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41700, 41706, 44360 through 44366, and 44390 through 44394.

Clarity

PAR 1401, 1401.1, 1402, and 212 are written or displayed so that its meaning can be easily understood by the persons directly affected by them.

Consistency

PAR 1401, 1401.1, 1402, and 212 are in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

PAR 1401, 1401.1, 1402, and 212 will not impose the same requirements as any existing state or federal regulations. The proposed amended rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

Reference

By adopting PAR 1401, 1401.1, 1402, and 212, the SCAQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 39666 (District new source review rules for toxics), 41700 (prohibited discharges), 44360 through 44366 (Risk Assessment), and 44390 et seq. (Risk Reduction Audits and Plans).

Rule Adoption Relative to Cost-effectiveness

On October 14, 1994, the Governing Board adopted a resolution that requires staff to address whether rules being proposed for adoption are considered in the order of cost-effectiveness. The 2012 Air Quality Management Plan (AQMP) ranked, in the order of cost-effectiveness, all of the control measures for which costs were quantified. It is generally recommended that the most cost-effective actions be taken first. PAR 1401, 1401.1, 1402, and 212 are not control measures in the 2012 Air Quality Management Plan (AQMP) and, thus, was not ranked by cost-

effectiveness relative to other AQMP control measures in the 2012 AQMP. In addition, cost-effectiveness defined as cost per ton of emission reductions is not meaningful for toxic risk since risk depends on several factors in addition to emission numbers such as geography, meteorology, and location of receptors.

Incremental Cost-effectiveness

Health and Safety Code Section 40920.6 requires an incremental cost effectiveness analysis for Best Available Retrofit Control Technology (BARCT) rules or emission reduction strategies when there is more than one control option which would achieve the emission reduction objective of the proposed amendments, relative to ozone, CO, SO_x, NO_x, and their precursors. Since the proposed amended rule applies to toxic air contaminants, the incremental cost effectiveness analysis requirement does not apply.

COMPARATIVE ANALYSIS

Health and Safety Code section 40727.2 requires a comparative analysis of the proposed amended rule with any Federal or District rules and regulations applicable to the same source. See Table 3-3 below.

**Table 3-3
Comparative Analysis of PAR 212, 1401, 1401.1 and 1402 with Federal Regulations**

Rule Element	PAR 212	PAR 1401	PAR 1401.1	PAR 1402	Equivalent Federal Regulation
Applicability	New or modified permit unit	New, relocated or modified permit unit	New or relocated permit unit	Existing facilities subject to Air Toxics “Hot Spots” Information and Assessment Act of 1987 and facilities with total facility emissions exceeding any significant or action risk level	None
Requirements	Provide public notice to all nearby addresses projects that are located within 1,000 feet of a school, increase risk or nuisance, or increase criteria pollutants above specified thresholds	Limits maximum individual cancer risk, cancer burden and chronic and acute hazards	Limits cancer risk and chronic and acute hazards near schools	Submittal of health risk assessment for total facility emissions when notified. Implement risk reduction measures if facility-wide risk is greater than or equal to action risk level	None
Reporting	Verification that public notice has been distributed	None	None	Progress reports and updates to risk reduction plans	None
Monitoring	None	None	None	None	None
Recordkeeping	None	None	None	None	None

REFERENCES

REFERENCES

“2010 Clean Communities Plan,” South Coast Air Quality Management District, November 2010.

“Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments,” Office of Environmental Health Hazard Assessment, February 2015.

“Annual Report on AB 2588 Air Toxics “Hot Spots” Program,” South Coast Air Quality Management District, June 2014.

“Final Staff Report for Proposed Rule 1402: Control of Toxic Air Contaminants From Existing Sources and Proposed Amended Rule 1401: New Source Review of Toxic Air Contaminants,” South Coast Air Quality Management District, February 4, 1994.

“Risk Assessment Procedures for Rules 1401 and 212, Version 7.0,” South Coast Air Quality Management District, July 1, 2005

“Staff Report for Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants and 1402 – Control of Toxic Air Contaminants from Existing Sources,” South Coast Air Quality Management District, March 2005.

“Staff Report for Proposed Amended Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools,” South Coast Air Quality Management District, October 2005.

“The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,” Office of Environmental Health Hazard Assessment (OEHHA), March 2015.

APPENDIX A: RESPONSE TO COMMENTS

Response to Comments Received as of March 2015

- 1. Comment:** For nearly 30 years, California businesses have worked with state and local air quality officials to reduce emissions and air toxic risks by 80 percent. OEHHA's latest proposed risk notification guidelines could force local businesses to notify surrounding communities that health risk from their operations is on the rise – even though their facility emissions have stayed the same or even decreased. It is important that the public realize air toxics emissions have not increased; rather, the state has changed the way it estimates air toxics risk. Failure to do so will leave the public with the false impression that air emissions have worsened, when the exact opposite is true.

Response: The SCAQMD staff acknowledges the collective efforts made by state and local air quality agencies and business owners and operators in the Basin to significantly reduce emissions and air toxic risk over the past few decades. Since 1990, toxic risks, excluding diesel particulate have decreased between 75 and 86 percent depending on the location. Staff also understands the concerns of business owners regarding public perception of actual versus estimated health implications resulting from the Revised OEHHA Guidelines. As a result, the staff report has been revised to expand the discussion regarding this concern in Chapter 1 to emphasize the significant decreases in toxic emissions and estimated cancer risks through SCAQMD programs and by businesses in the Basin since 1990. The SCAQMD ~~will also be hosting~~ hosted five regional Public Workshops prior to the hearing on the amended rules by the Governing Board as part of an extensive outreach effort to inform business owners and the public of the Revised OEHHA Guidelines and the affected SCAQMD rules and programs. During these workshops, SCAQMD staff ~~will also reiterate~~ reiterated the achievements in actual air toxic emission and estimated cancer risk reductions throughout the Basin, and ~~emphasize~~ emphasized that it is the calculation methodologies to estimate health risks that have changed rather than the levels of emissions.

- 2. Comment:** We urge the SCAQMD to develop and implement reasonable and realistic policies, including both risk communication and risk management guidelines. Risk communication policies must be developed in a way that the public is offered clear and credible explanations of why the health risk assessment guidelines have changed and what the changes really mean in terms of actual health risks.

Response: The proposed amended rules do not change the approach regarding existing health risk thresholds for permitting, public noticing, and risk reduction that facilities have been subject to prior to the adoption of the Revised OEHHA Guidelines. Regarding risk communication, the SCAQMD ~~will be developing documents or~~ fact sheets explaining the Revised OEHHA Guidelines to include in public notifications that result

from implementation of the Revised OEHHA Guidelines. In addition, during the Regional Public Workshops, the presentation included background information about health risks and risk communication based on public input the SCAQMD staff received.

- 3. Comment:** Before adopting your updated AB2588 communications and risk management guidelines, we urge you to listen and work with local business leaders in order to avoid unnecessarily alarming the public while harming local businesses and our economy.

Response: The SCAQMD staff has already begun an extensive outreach and communication effort to immediately engage all stakeholders regarding the Revised OEHHA Guidelines. Staff has met and will continue to meet with industry groups to discuss the implementation of the guidelines to SCAQMD toxic rules and programs. Additionally, five regional Public Workshops ~~were have been scheduled~~ held in March and April of 2015 throughout the Basin in order to inform the public of the Revised OEHHA Guidelines and to receive any comments, questions, or concerns regarding this rule development.

- 4. Comment:** We are concerned that onerous new policies could significantly harm our members' operations or jeopardize their ability to obtain local permits. Our members need reasonable policies that will allow them to operate their business without excessive new costs for risk reduction measures or delaying their permitting renewal process. As such, we urge you to work with local businesses and organizations in developing your risk communications and risk management guidelines.

Response: Staff has conducted an impact analysis based on reviewing permits received over a five year period between 2009 and 2014. Because the majority of permits issued were well under the risk thresholds, even with the Revised Guidelines, the number of new and modified permits that will be affected is not expected to be significant as discussed in Chapter 3. As discussed in the Draft Staff Report, the SCAQMD staff is recommending that spray booths and retail gasoline stations use the current SCAQMD 1401 and 212 Guidelines – Version 7.0 (July 1, 2005) until further analysis can be performed and a determination made as to whether a separate source specific rule or procedures is warranted. Refer to Chapter 3 of the Final Staff Report for a more detailed assessment of impacts to facilities. As also discussed in Chapter 3, the SCAQMD staff does anticipate that there will be some permits that will be affected by the Revised Guidelines based on past permitting data. Based on the five year review of permitted data, the SCAQMD staff estimates about 30 permits a year could require additional controls due to implementation of the Revised OEHHA Guidelines. There are a variety of options that an applicant has in addition to adding pollution controls such as equipment location, product replacement particularly for coatings and solvents, and reduction in

throughput. In the Environmental Assessment and Socioeconomic analysis the SCAQMD staff assumed that facilities would install pollution controls. As described in the response to the previous comment, SCAQMD staff is working with all stakeholders on risk communication.

- 5. Comment:** We are concerned about the potential impact these new guidelines will have on projects that already are currently in the pipeline, and urge you to work to adjust the guidelines accordingly to eliminate potentially duplicative effort and costly delays.

Response: The proposed amendments to implement the Revised OEHHA Guidelines will be forward-looking. Under PAR 1401, SCAQMD staff will not retroactively review previously issued permits relative to the Revised OEHHA Guidelines; only permits that are for new and modified equipment that have been deemed complete 30 days after Proposed Amended Rule 1401 has been adopted will be subject to the new Guidelines. Additionally, based on staff analysis of facility impacts, two equipment source categories that have been identified to have potential significant impacts due to the Revised OEHHA Guidelines will be allowed to continue using the 2003 OEHHA Guidelines under PAR 1401 until staff determines the full extent of impacts, if any, and/or source-specific rules are developed for the specified equipment source categories.

- 6. Comment:** California hospitals are in the midst of complying with a \$110 billion seismic safety mandate. A number of these hospitals are in your District. While renovating, retrofitting and constructing new buildings, hospitals are replacing old diesel backup generators, boilers, and installing newer and cleaner equipment in conformance with their seismic implementation schedule. At the same time, under state hospital licensing and national accreditation standards, hospitals are required to conduct weekly startups and monthly testing of their generators resulting in the emission of additional diesel particulate matter. As a result, a significant portion of diesel particulate matter generated by hospitals is from meeting requirements mandated by state law and national standards. New risk estimates resulting from changes to air toxics health risk assessment guidelines recently adopted by OEHHA could force hospitals to notify the communities they serve that health risk from their operations is on the rise even though their facility emissions have stayed the same or even decreased. It is our understanding that while hospital diesel particulate emissions have dropped by as much as 80 percent since 1990, the new OEHHA projections may increase the actual cancer risk by 250 to 300 percent.

Response: Emergency diesel generators are exempt from Rule 1401 requirements. However, they are subject to Rule 1470 which requires that new emergency generators at or near a sensitive receptor meet a PM emission rate of between 0.01 and 0.02 grams/BHP-hr for engines greater than 175

BHP. At this low emission rate, these engines are expected to be less than 1 in a million, based on the limited testing hours that are allowed under Rule 1470. Emergency back-up engines are also subject to Rule 212 public noticing, however, it is expected that hospitals will likely be below risk levels for noticing under Rule 212 when meeting the requirements of Rule 1470.

Based on staff's analysis of potential impacts relating to the permitting of boilers, it was found that boilers that are located further than 50 meters from a receptor would not result in an estimated cancer risk of greater than 1 in a million using a Tier 2 screening, and therefore would not have any additional requirements under PAR 1401. Under the SCAQMD's Tier 2 screening, it is expected that some boilers between 25 and 50 meters may need to go to a higher Tier screening level, such a Tier 3 and in some rare situations Tier 4 but these boilers are expected to meet a 1 in a million risk threshold with no additional controls. Health risk screening approaches used in Tier 3 and 4 incorporate more site specific information such as the location of the sensitive receptor, specific stack parameters, and air dispersion modeling specific to the location the inputs for that specific piece of equipment.

The SCAQMD staff will be re-evaluating its public notices to provide additional information to alleviate concerns of potential misconceptions of increased emissions in situations where the change in the estimated risk is attributed solely to the calculation methodology. The SCAQMD will be looking into risk communication tools such as developing documents or fact sheets explaining the Revised OEHHA Guidelines to include in public notifications that result from implementation of the Revised OEHHA Guidelines.

7. Comment: We request that SCAQMD reconsider its preliminary decision to leave unchanged the existing health risk action levels in Rules 1401, 1401.1 and 1402. Both District staff and Board members acknowledged that the expected increase in facility risk estimates are artifacts of OEHHA's changes to state risk assessment methodology, not actual increases in facility air toxics emissions. The risk is spread so far and wide that common activities will create hot spots. The proposal needs much more work including consideration for how it will be implemented and how the District should choose to manage risk thresholds instead of abrogating its risk management authority to OEHHA. For facilities whose air toxics emissions are unchanged or reduced from the most recent District approved air toxics emission inventory, we recommend that the District increase the current action levels to normalize the artificial increase.

Response: SCAQMD staff believes that Rule 1401 and 1402 thresholds are health protective and is recommending maintaining the existing thresholds. While the risk calculation procedure has been revised, the underlying

purpose of minimizing the risk to the public remains the same. Rule 1401 acts as gatekeeper for new permits to ensure that excessive new risks are avoided. Similarly, Rule 1402 addresses existing operations to identify and reduce risk. Altering the thresholds would set a precedent for the acceptable risk thresholds for all communities in the South Coast Basin in order to provide some temporary cost reduction relief for a handful of facilities that continue to present the highest risks to their surrounding communities.

As requested, a sensitivity analysis was conducted to evaluate the impacts of alternative risk thresholds. Staff examined the impacts at the alternative Rule 1402 action risk level thresholds of 30 in one million and 20 in one million compared to the existing action risk level of 25 in one million. The table below lists the number of impacted facilities and the estimated cost increase.

<u>Risk Threshold</u>	<u>20 in one million</u>	<u>25 in one million</u>	<u>30 in one million</u>
<u>Additional Facilities Conducting Risk Reduction</u>	<u>28</u>	<u>22</u>	<u>10</u>
<u>Annual Cost</u>	<u>\$1.86 million (+26%)</u>	<u>\$1.48 million</u>	<u>\$1.27 million (-14%)</u>

In estimating the number of facilities that could potentially be subject to risk reduction under the Revised OEHHA Guidelines, the SCAQMD was conservative to include more facilities. For example, facilities whose previously approved Health Risk Assessment could potentially be just under or slightly above 25 in a million were included potentially impacted under the Revised Guidelines and subject to risk reduction. As shown in the table, increasing the risk threshold to 30 in a million would decrease the number of facilities by more than 50 percent, with a modest 14% decrease in cost.

8. Comment: SCAP recommends that facilities be provided with the opportunity to voluntarily commit to an early risk reduction program. Under this proposal, a facility would commit to reducing their facility risk to below 10 in one million and be granted four years to complete associated construction. Additionally, we request that early risk reduction facilities not be subject to notification and that the cost for any necessary permits be significantly reduced and expedited. Such a voluntary program would expedite risk reduction for many more facilities that currently proposed and reduce the burden on District staff.

Response: Staff intends to work closely with facilities committed to early risk reduction. The opportunity to both accelerate risk reductions and have the

reductions 60 percent lower than rule requirements is, as the commenter suggests, a win-win proposal. However, state law does not allow for eliminating public notification entirely (Health and Safety Code § 44362(b)). Staff is prepared to look at different notification strategies that fulfill regulatory requirements for public not but focus on explaining facilities commitment to early, enhanced risk reductions. However, staff does not agree that permit fees should be discounted as that would merely transfer the cost of risk reduction from the facility creating the risk to other fee-paying facilities.

9. Comment: Staff noted that a handful of facilities have pending HRAs and will be required to use the revised OEHHA guidelines. Additionally, staff indicated that these facilities would be handled on a case-by-case basis to determine timing and what inventory year should be used. WSPA requests that pending HRAs that were submitted prior to the release of the revised OEHHA Guidelines be allowed to use the existing 2003 OEHHA guidelines, unless the HRAs were not submitted in a timely manner.

Response: The SCAQMD staff is working with affected facilities to update their Health Risk Assessment using the Revised OEHHA Guidelines and doing the work itself rather than requiring the facilities to do so. Staff will use the best and most recent information when conducting risk assessments. Facilities have the opportunity to provide additional supporting information and evidence. However, staff also has the responsibility to ensure that recent information and supporting data is representative of operations over the long term and that review procedures are applied consistently. Staff believes that it is more efficient to update the HRA and understand the overall risks up front, rather than prepare an HRA with the previous OEHHA Guidelines and potentially be asked to prepare another HRA under the Revised OEHHA Guidelines. Also, the SCAQMD staff believes that it streamlines implementation for the facility, particularly if risk reduction is needed such that the facility is not required to conduct notification, and engineering designs, permitting, implementation of controls if risk reduction is needed.

10. Comment: WSPA requests that the District provide four years from an approved HRA to complete risk reduction measures before asking for an updated HRA. This practice would uniformly be applied to all facilities to ensure that there is adequate time for both permitting and implementation.

Response: When requesting an updated HRA, staff takes into account the facility's progress on conducting risk reductions. Generally, an updated HRA is not requested if further risk reductions are imminent.

11. Comment: We understand that although the health risk from emergency diesel ICEs emissions is included in the overall calculation of facility risk, a Board-

approved industry-wide policy states that it is not included for purposes of triggering risk reduction or public notification. We requests that staff confirm this interpretation and incorporate this policy into Rule 1402.

Response: Under the current AB2588 Air Toxics “Hot Spots” Emission Inventory Criteria and Guidelines Regulation, facility operators are required to include health risk impacts of any diesel exhaust particulate emissions from stationary emergency internal combustion engines. The data is used for risk determination but not for risk reduction or notification purposes.

12. Comment: Some facilities with an approved HRA may request an updated prioritization score mid-cycle to determine the impact of the revised OEHHA Guidelines and to potentially implement risk reduction measures prior to submitting an updated HRA or providing public notice. Rule 1402 should clarify that 1) providing an updated prioritization score does not immediately trigger a new request for an HRA, and 2) the facility will remain in their current quadrennial cycle.

Response: Facilities subject to AB2588 are required to submit a detailed list of their toxic emissions every four years (referred to as a quadrennial update). Based on their level of toxic and criteria pollutant emissions, each year a different group of facilities will report a detailed list of its toxic emissions. Upon initial prioritization of facilities, the SCAQMD staff conducts further analyses to verify the Priority Score such as confirming the distance to the sensitive receptors and workers, reviewing emissions trends and facility changes such as new or modified permitted equipment or pollution controls, and comparing the Priority Score results with the last Health Risk Assessment submittal or Risk Reduction Plan, if applicable. This additional information obtained through Priority Score auditing will often negate the need to ask for a Health Risk Assessment. If, however, the Prioritization Score remains high, the facility is asked to prepare an Air Toxics Inventory Report and Health Risk Assessment.

13. Comment: We are concerned that the SCAQMD has not considered the significance thresholds when conducting risk analysis for CEQA determinations. This deferral of CEQA creates some chaos for facilities now in the process of conducting risk analyses for a CEQA determination. Facilities are currently investing significant financial resources and are in the middle of health risk analysis for CEQA determination. Based on the significant impact, we believe that additional time and effort needs to be put into revising the Proposed Amended Rules to address the risk thresholds and improve clarity of implementation for CEQA. Facilities undertaking costly analysis for determinations need this information to adapt in a timely and cost effective manner.

Response: The SCAQMD staff understands your concern. The Proposed Amended Rules are separate from the CEQA significance thresholds. The

SCAQMD staff is currently evaluating how to implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board. In the interim, staff will continue to use the previous guidelines for CEQA determinations.

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Environmental Assessment for:

PROPOSED AMENDED RULES TO IMPLEMENT OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT (OEHHA) REVISIONS TO THE AIR TOXICS HOT SPOTS PROGRAM RISK ASSESSMENT GUIDELINES

May 2015

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PREFACE

This document constitutes the Final Environmental Assessment (EA) for Proposed Amended Rule (PAR) 212 – Standards for Approving Permits and Issuing Public Notice, PAR 1401 – New Source Review of Toxic Air Contaminants, PAR 1401.1 Requirements for New and Relocated Facilities Near Schools, and PAR 1402 – Control of Toxic Air Contaminants from Existing Sources. The Draft EA was released for a 30-day public review and comment period from March 24 to April 22, 2015. No comment letters were received from the public relative to the environmental analysis in the Draft EA. The environmental analysis in the Draft EA concluded that the proposed project would not generate adverse significant environmental impacts.

Subsequent to the release of the Draft EA, minor additions and modifications were made to the PARs for clarification purposes. The latest versions of the PARs can be found in the Governing Board's final rule package. To facilitate identifying the modifications in the document, changes are included as underlined text and text removed from the document are indicated by ~~striketrough~~. None of the modifications alter any conclusions reached in the Draft EA. As a result, these minor revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5. Therefore, this document now constitutes the Final EA for the PARs.

CHAPTER 1

PROJECT DESCRIPTION

Introduction

Proposed Amendments to Rules 212, 1401, 1401.1 and 1402

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INTRODUCTION

On March 6, 2015, the California Office of Environmental Health Hazard Assessment (OEHHA) approved revisions to their Risk Assessment Guidelines (Revised OEHHA Guidelines). The Revised OEHHA Guidelines were triggered by the passage of the Children’s Health Protection Act of 1999 (SB 25, Escutia) requiring OEHHA to ensure infants and children are explicitly addressed in assessing risk. Over the past decade, advances in science have shown that early-life exposures to air toxics contribute to an increased lifetime risk of developing cancer, or other adverse health effects, compared to exposures that occur in adulthood¹. The new risk assessment methodology addresses this greater sensitivity and incorporates the most recent data on infants and childhood and adult exposure to air toxics. The Revised OEHHA Guidelines incorporates age sensitivity factors which will increase cancer risk estimates to residential and sensitive receptors by approximately 3 times, and more than 3 times in some cases depending on whether the toxic air contaminant has multiple pathways of exposure in addition to inhalation. Health risks for off-site worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged.

PROPOSED AMENDMENTS TO RULES 212, 1401, 1401.1, AND 1402

The SCAQMD relies on OEHHA’s health risk assessment guidelines in various aspects of its toxics regulatory program including the permitting program, AB2588 Hot Spots Program, and existing regulatory program. Amendments to the following rules are being proposed to incorporate provisions found in the Revised OEHHA Guidelines for estimation of health risks:

- Rule 212 – Standards for Approving Permits and Issuing Public Notice
- Rule 1401 – New Source Review of Toxic Air Contaminants
- Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools
- Rule 1402 – Control of Toxic Air Contaminants from Existing Sources

The proposed amended rules will revise definitions and risk assessment procedures to be consistent with the Revised OEHHA Guidelines. Proposed amendments are to ensure SCAQMD staff can implement the Revised OEHHA Guidelines regarding how health risks are calculated. Staff is not recommending revisions to the health risk *thresholds* in Rules 1401, 1401.1 or 1402. Staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). For two specific industries, gas stations and spray booths, staff requires additional time to evaluate the impacts of the revised OEHHA Guidelines or believes that additional controls will be required that may not be feasible. For these source categories, staff proposes to continue using the existing risk assessment guidelines until staff can perform the required analysis and develop a source-specific risk reduction rule if needed. Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 212, 1401, 1401.1, and 1402.

¹ A toxic substance released to the air is called a “toxic air contaminant” (TAC) or an “air toxic.” A substance is considered toxic if it has the potential to cause adverse health effects. Exposure to a toxic substance can increase the risk of contracting cancer or produce other adverse health effects such as birth defects and other reproductive damage, neurological and respiratory health effects.

The California Air Resources Board (CARB) and the California Air Pollution Control Officers Association's (CAPCOA) are finalizing Risk Management Guidelines for Permitting and AB2588 to be consistent with the Revised OEHHA Guidelines that are expected to recommend the using the 95th percentile breathing rate for children under two years of age to the last trimester of pregnancy and the 80th percentile breathing rate for all other ages. CARB and CAPCOA's Risk Management Guidelines are expected to be considered by the CARB Board in May 2015. The SCAQMD's Risk Assessment Procedures for Rules 212, 1401, and 1401.1 the Supplemental Guidelines for Preparing Risk Assessments for AB2588 will also incorporate these modified breathing rates.

LEGISLATIVE AUTHORITY

The California Legislature created the SCAQMD in 1977 (Lewis-Presley Air Quality Management Act, California Health and Safety Code §§ 40400 et seq.) as the agency responsible for developing and enforcing air pollution control rules and regulations in the Basin and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. By statute, SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all state and federal ambient air quality standards for the District [California Health and Safety Code §40460(a)]. Furthermore, SCAQMD must adopt rules and regulations that carry out the AQMP [California Health and Safety Code, §40440(a)].

In addition to regulating criteria pollutants, state law specifies that air districts may regulate TACs. Specifically, Health and Safety Code §39656, California legislature has delegated the air districts, including the SCAQMD, to establish and implement a program to regulate TACs. Similarly, SCAQMD implements the Air Toxics Hot Spots Act (Health and Safety Code §44330) through Rule 1402.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PAR 212, 1401, 1401.1, and 1402 affect new and modified permitted equipment and existing facilities and taken as a whole, a discretionary action, which has the potential to result in direct or indirect changes to the environment and, therefore, is considered a "project" (hereinafter referred to as "*The PARs*") as defined by the California Environmental Quality Act (CEQA). There are no expected environmental impacts from Proposed Amended Rules 212 or 1401.1 as a result of the revised OEHHA guidelines because changes to these rules are administrative in nature and do not require or cause a physical damage to the environment. SCAQMD is the lead agency for the proposed project and has prepared this Draft Environmental Assessment (EA) pursuant to its Certified Regulatory Program (CEQA Guidelines § 15251). This Draft EA is a comprehensive environmental document that analyzes potential adverse environmental impacts from the currently proposed amendments to Rules 1401 and 1402. California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA and SCAQMD Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of

CEQA, this Draft EA addresses the potential adverse environmental impacts associated with the proposed project according to CEQA Guidelines § 15252. It states that the lead agency has an obligation to identify and evaluate the environmental effects of the project. The Draft EA is an informational document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental effects of the proposed project; and, (b) identify possible ways to minimize the significant effects.

SCAQMD's review of the proposed project shows that the proposed project is not expected to generate significant adverse effects on the environment. Pursuant to CEQA Guidelines §§ 15126.4 (a)(3), and 15126.6, mitigation measures and alternatives are not required for effects which are not found to be significant, thus, no mitigation measures or alternatives to the project are included in the draft SEA. In addition, because SCAQMD has a certified regulatory program, the Environmental Assessment is an appropriate substitute for an EIR or Negative Declaration. Pursuant to CEQA Guidelines § 15252(a)(2)(B) and supported by the environmental checklist (in Chapter 2), if the project would not have any significant or potentially significant effect on the environment, "no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment." ~~Comments received on the Draft EA during the 30-day public review period will be addressed and included in the Final EA.~~ The Draft EA was released for a 30-day public review and comment period from March 24, 2015 to April 22, 2015. No comment letters were received on the Draft EA during the comment period.

PROJECT LOCATION

The proposed amendments would apply to equipment and processes operated at toxic emitting facilities located throughout the entire SCAQMD jurisdiction. The SCAQMD has jurisdiction over an area of 10,473 square miles (referred to hereafter as the district), consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (see Figure 1-1).



Figure 1-1 Boundaries of the South Coast Air Quality Management District

PROJECT OBJECTIVES

The primary purpose of amending Rules 212, 1401, 1401.1, and 1402 is to update rule language relating to cancer risk calculation methodologies so that is consistent with the Revised OEHHA Guidelines approved by OEHHA on March 6, 2015.

PROJECT BACKGROUND

The SCAQMD has a robust and comprehensive air toxics regulatory program that consists of rules to address new and modified toxic sources, AB2588 facilities (existing toxic sources), and source-specific toxic rules. Rules 1401, 1401.1, and 1402 are referred to as the “umbrella” rules that specify requirements for all new and modified permitted sources (Rules 1401 and 1401.1 for sources near schools) and requirements for the existing sources under the Air Toxics Hot Spots program (Rule 1402). In addition to these umbrella toxics rules, the SCAQMD’s regulatory program includes over fifteen source-specific toxic rules regulating specific equipment or industry categories such as chrome plating, asbestos remediation, lead emission reductions, perchloroethylene dry cleaners, diesel internal combustion engines to name a few. Implementation of these programs has resulted in significant reductions in toxic emissions. Since the development of SCAQMD’s Air Toxics Program in 1990, non-diesel cancer risks have been reduced between 75 to 87 percent, depending on the location within the Basin.

SUMMARY OF SCAQMD RULES 212, 1401, 1401.1, AND 1402

RULE 212

Rule 212 – Standards for Approving Permits and Issuing Public Notice was initially adopted in January 1976 and contains public notification requirements for new, modified, or relocated sources of air contaminants based on proximity to schools, increases to emissions above rule-specified daily maximums, and increases in toxic air contaminant emissions resulting in a MICR of greater than or equal to 10 in one million for single permitted source facilities, or 1 in one million for facilities with more than one permitted source, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide cancer risk is below 10 in one million.

RULE 1401

Rule 1401 – New Source Review for Toxic Air Contaminants was adopted by the SCAQMD Governing Board in June 1990. The rule establishes cancer and non-cancer health risk requirements for new, relocated, or modified permitted sources of toxic air pollutants. Under Rule 1401, new and modified permitted sources cannot exceed an MICR of 1 in one million, if the source is not equipped with best available control technology for toxics (T-BACT). If T-BACT is installed, the MICR cannot exceed 10 in one million. The MICR is the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants. Rule 1401 also has requirements for cancer burden which represents the estimated increase in the occurrence of cancer cases in a given population due to exposure to TACs. The rule also includes non-cancer chronic and acute hazard thresholds. Rule 1401 has been amended several times to add or modify new compounds or risk values to the list of TACs as they are identified and risk values are finalized or amended by the state.

RULE 1401.1

Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools was adopted by the SCAQMD Governing Board in November 2005. The rule is designed to be more health protective for school children by establishing more stringent risk requirements related to facility-wide cancer risk and non-cancer acute and chronic HI for new and relocated facilities emitting toxic air contaminants located near schools, thereby reducing the exposure of toxic emissions to school children. For new facilities, the rule requires the facility-wide cancer risk to be less than 1 in one million at any school or school under construction within 500 feet of the facility. If there are no schools within 500 feet, the same risk levels must be met at any school or school under construction within 500 to 1,000 feet unless there is a residential or sensitive receptor within 150 feet of the facility. For relocated facilities, if a facility is relocating, the facility must demonstrate, for each school or school under construction within 500 feet of the facility, that either: 1) the risk at the school from the facility in its new location is no greater than the risk at that same school when the facility was at its previous location, or 2) the facility-wide cancer risk at the school do not exceed 1 in one million. Unlike other SCAQMD risk-based rules, the required risk thresholds of Rule 1401.1 do not change based on whether or not the source is equipped with T-BACT.

RULE 1402

Rule 1402 – Control of Toxic Air Contaminants from Existing Sources was adopted in April 1994. Rule 1402 establishes facility-wide risk requirements for existing facilities that emit TACs and implements the state AB2588 Air Toxics “Hot Spots” program. It contains requirements for toxic emissions inventories, health risk assessments, public notification and risk reduction. A maximum individual cancer risk exceeding 10 in one million, as demonstrated by an approved HRA, triggers the need for public notice. A maximum individual cancer risk of 25 in one million, as demonstrated by an approved HRA, triggers the need for the facility to reduce their facility-wide risk. Any facility whose facility-wide emissions of TACs exceed the significant risk level of 100 in one million is required to achieve risk reductions to achieve a level below 100 in a million within three years from initial risk reduction plan submittal.

PROJECT DESCRIPTION

The SCAQMD relies on OEHHA's health risk assessment guidelines in various aspects of its toxics regulatory program including the permitting program, AB2588 Hot Spots Program, and existing regulatory program. Amendments to the following rules are being proposed to reference the Revised OEHHA Guidelines for estimation health risks:

- Rule 212 – Standards for Approving Permits and Issuing Public Notice
- Rule 1401 – New Source Review of Toxic Air Contaminants;
- Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools;
- Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; and

The proposed amended rules will revise definitions and risk assessment procedures to be consistent with the Revised OEHHA Guidelines. Proposed amendments are to ensure SCAQMD staff can implement the Revised OEHHA Guidelines regarding how health risks are calculated, and staff is not recommending revisions to the health risk thresholds in Rules 1401, 1401.1 or 1402. The SCAQMD staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and the 2015 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588). Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212.

The California Air Resources Board (CARB) and the California Air Pollution Control Officers Association's (CAPCOA) are finalizing Risk Management Guidelines for Permitting and AB2588 to be consistent with the Revised OEHHA Guidelines that are expected to maintain the breathing rate using the 95th percentile breathing rate for children under two years of age and the 80th percentile breathing rate for all other ages. CARB and CAPCOAs Risk Management Guidelines are expected to be approved in May 2015. The SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212 and the Supplemental Guidelines for Preparing Risk Assessments for AB2588 will also incorporate these modified breathing rates. These modified breathing rates are consistent with CARB's 2003 Interim Risk Management Policy for Residential-Based Cancer Risk that was applied for Health Risk Assessments (HRAs) prepared using OEHHA's 2003 version of its HRA Guidance Manual. This policy recommended that HRAs utilize an 80th percentile breathing rate for inhalation residential cancer risks instead of the 95th percentile recommended in OEHHA's 2003 HRA Guidance Manual. This approach has been used in risk assessments state-wide since that time.

Proposed Amendments to Rule 212

Rule 212 requires public notification if any new or modified permit unit results in increases in emission of toxic air contaminants, for which the Executive Officer has made a determination that a person may be exposed to a MICR greater than or equal to 1 in a million for facilities with more than one permitted unit, or greater than or equal to 10 in a million for facilities with a single permitted unit "during a lifetime exposure period of 70 years". The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. In order for consistency with the Revised OEHHA Guidelines, clause (c)(3)(A)(i) and (c)(3)(A)(ii) has omitted the "during a lifetime (70 years)" language from the rule and replaced with a reference to Rule 1401 requirements.

Proposed Amendments to Rule 1401

Considerations for SCAQMD's permitting approach to implement the Revised OEHHA Guidelines included maintaining public health protection and avoiding backsliding of emission reductions that result in toxic exposure. SCAQMD staff considered if implementation of the guidelines would not unduly impede business activities, and identified approaches to streamline the process to minimize business impacts and SCAQMD resources consistent with principles of transparency and public participation. The proposed amendments to implement the Revised OEHHA Guidelines will be forward-looking. The SCAQMD staff will not retroactively review previously issued permits relative to the Revised OEHHA Guidelines only permits that are new and modified that have been deemed complete after Rule 1401 has been adopted. Public notification pursuant to Rule 212 will not be applied retroactively but will apply to new and modified sources.

Proposed Amended Rule 1401 includes a provision to allow spray booths and retail gasoline transfer and dispensing facilities to continue to use the previous OEHHA risk guidelines which are used in SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) to calculate the cancer risk until the SCAQMD staff returns to the Board with specific proposals for these industries. The SCAQMD staff evaluated permits received between October 1, 2009 and October 1, 2014 and found that some spray booths may have difficulties meeting the Rule 1401 risk thresholds using the Revised OEHHA Guidelines. Over the five year permitting period, the SCAQMD received issued approximately 1,400 permits to operate or permits to construct for spray booths. Because of the large number of permits issued and consideration that this particular source category tends to be associated with smaller businesses such as wood coating operations and autobody facilities, SCAQMD staff is recommending that spray booths continue to use the previous health risk guidelines for permitting under Rules 1401. The SCAQMD staff will begin rulemaking to identify approaches by which industries using spray booths can reduce their toxic emissions and/or toxic exposure.

The SCAQMD staff is also recommending that retail gasoline transfer and dispensing facilities continue to use the previous OEHHA risk guidelines. Based on permitted data, there are approximately 3,300 retail gasoline stations in the district. The SCAQMD receives approximately 15 permit applications annually for new gas stations and 18 permit applications annually for modifications to increase throughput at a gasoline dispensing facilities. The SCAQMD staff just received new emissions data from CARB this month that could potentially change the emission estimates from gasoline dispensing facilities. Additional time is needed to better assess and understand the impacts from gasoline dispensing facilities before use of the Revised OEHHA Guidelines. All new gasoline stations are permitted with toxics best available controls and are required to comply with SCAQMD Rule 461 – Gasoline Transfer and Dispensing. PAR 1402 includes a commitment from the Executive Officer to return to the Governing Board as quickly as practicable with Staff's analysis of emissions data from gasoline dispensing activities.

The definition for "MAXIMUM INDIVIDUAL CANCER RISK (MICR)" in existing Rule 1401 is defined as the estimated probability of a potentially maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants over "a period of 70 years" for residential receptor locations. The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. In order for consistency with the Revised OEHHA Guidelines, paragraph (c)(8) has been amended to omit

the assumption of “70 years” and add language that MICR at residential receptor locations be “calculated pursuant to the Risk Assessment Procedures referenced in subdivision (e)” which will be reflected in SCAQMD’s Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588).

Rule 1401 currently states that Executive Officer shall deny a permit to construct a new, relocated or modified permit unit if emissions of any listed toxic air contaminant occur, unless the applicant substantiates to the satisfaction of the Executive Officer that among other criterion, the “Risk Per Year” does not exceed “1/70 of the maximum allowable risk specified in the rule. The calculation for “Risk Per Year” is based on the 2003 OEHHA Guidelines relating to a residential exposure period of 70 years. For consistency with the 30 year exposure period of the Revised OEHHA Guidelines, paragraph (d)(4) has been amended to require that the risk per year shall not exceed the maximum allowable risk specified in the rule divided by the applicable exposure period referenced SCAQMD’s Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588) at any receptor locations in residential areas.

PAR 1401 also adds paragraph (g)(5) to allow the equipment category of “spray booths” and the industry category of “retail gasoline transfer and dispensing facilities” to continue using the current SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (Version 7.0, July 1, 2005) in order to calculate the cumulative increase in MICR pursuant to paragraph (d)(1).

Proposed Amendments to Rule 1401.1

The definition for “CANCER RISK” in paragraph (c)(1) is defined as the estimated probability of an exposed individual contracting cancer as a result of exposure to toxic air contaminants at a school or school under construction assuming “an exposure duration of 70 years”. The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. In order for consistency with the Revised OEHHA Guidelines, paragraph (c)(1) has been amended to omit the assumption of “70 years” and replaced with a reference to Rule 1401 requirements.

Proposed Amendments to Rule 1402

The definition for “MAXIMUM INDIVIDUAL CANCER RISK (MICR)” in paragraph (c)(9) is defined as the estimated probability of a potentially maximally exposed individual contracting cancer as a result of exposure to toxic air contaminants over “a period of 70 years” for residential receptor locations. The assumption for lifetime exposure relating to a residential receptor in the Revised OEHHA Guidelines has been changed from 70 years to 30 years. In order for consistency with the Revised OEHHA Guidelines, paragraph (c)(8) has been amended to omit the assumption of “70 years” and add language that MICR at residential receptor locations be “calculated pursuant to the Risk Assessment Procedures referenced in subdivision (j)” which will be reflected in SCAQMD’s Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). Amendments have also been made to subparagraphs (j)(1)(C) and (j)(1)(D) to omit references to the “70 year exposure”. Other amendments include revisions to Tables I and II to revise emission reporting thresholds for

specific TACs and industries for consistency with calculations and methodologies of the Revised OEHHA Guidelines.

EMISSIONS CONTROL TECHNOLOGIES FOR TOXICS

To comply with the risk limits, certain existing sources, using the new OEHHA Guidelines which have been identified as potentially exceeding the significant risk levels in Rule 1401 and Rule 1402, may need to implement risk reduction measures that include the following:

- Product reformulation and substitution
- Production system modifications, operational standards or practices modifications
- System enclosure and emission capture, exhaust, control or conversion
- Alternative technologies

Several of these risk reduction measures are facility specific (i.e., operational standards and reduction in operating hours).

The use of the most appropriate control technologies is dependent on:

- the physical characteristics and chemical properties of the regulated substances;
- the concentration of the regulated substance;
- design parameters such as the exhaust flow rate, temperature, and pressure of the air to be controlled; and
- the removal and destruction efficiency of the collection and control equipment needed to comply with the requirements of the appropriate rule.

In order to determine which control technology will be used to control a specific TAC, the regulated TACs were categorized by physical and/or chemical properties. Generally, the TACs comprise the following general categories and sub-categories.

- Toxic inorganic aerosols and particulate matter (T-PM)
 - ✓ Metal particles
 - ✓ Mineral/fiber particles
 - ✓ Inorganic acid aerosols
- Toxic volatile organic compounds (VOC)
 - ✓ High boiling point (>150°C)
 - ✓ Medium boiling point (100 - 150°C)

- ✓ Low boiling point (<100°C)
- ✓ Polar organic compounds
- ✓ Nonpolar organic compounds
- ✓ Aromatic compounds
- ✓ Carbonyls
- Toxic halogenated organic compounds (T-HOC)
 - ✓ Fluorinated compounds
 - ✓ Chlorinated compounds
 - ✓ Brominated compounds
 - ✓ Dioxins and furans

Control technologies that can be applied to control TACs generally are categorized into the following groups:

- Filtration for toxic aerosols and particulate matter (T-PM)
- Wet scrubbing for inorganic compounds
- Thermal and catalytic oxidation
- Refrigerated condensation
- Carbon adsorption and combined adsorption-oxidation systems
- Chemical absorption for toxic volatile organic compounds (VOC)
- Special combination systems for the control of toxic halogenated organic compounds (T-HOC).

A description of available control technologies expected to be used by affected facilities to comply with proposed amended Rule 1401 and/or 1402 is provided in the following section.

Control Technology for Toxic Aerosols and Particulate Matter (T-PM)

Table 1-1 identifies typical filtration control equipment for T-PM. Filtration control techniques are characterized by high removal efficiency and moderate- to high-energy requirements in most applications. In order to achieve high removal efficiencies, dry filters must be made of extremely low porosity materials which impose a high resistance to the flow of gas, or pressure drop (expressed in inches of water column where one inch of water column equals 0.43 pounds per square inch absolute) through the filter media. The higher the pressure drop across a control device, the higher the electrical energy requirement to operate larger fan motors needed to

overcome the flow resistance. Therefore, high-efficiency controls are also high-energy controls with correspondingly high operating costs.

Table 1-1 Filtration Controls for T-Particulate Matter and T-Aerosols

CONTROL TECHNOLOGY	SUBSTANCE GROUP	CONTROL EFFICIENCY
Diesel Particulate Filters	Dry particulate	85%
PTFE membrane baghouse	Dry particulate	99-99.9 %
HEPA filter and prefilter	Dry particulate	99.9-99.99 %
Wet packed scrubber	Aerosols	90-98 %

Diesel Particulate Filters (DPFs)

DPFs allow exhaust gases to pass through the filter medium, but trap diesel PM. Depending on engine baseline emissions, fuel sulfur content, and emission test method or duty cycle, DPF's can achieve a PM emission reduction of greater than 85 percent. In addition, DPFs can reduce HC emissions by 95 percent and CO emissions by 90 percent. Limited test data indicate that DPFs can also reduce NO_x emissions by six to ten percent. Most DPFs require periodic regeneration, most commonly achieved by burning off accumulated diesel PM. There are both active DPFs and passive DPFs. Active DPFs use heat generated by means other than exhaust gases (e.g., electricity, fuel burners, microwaves, and additional fuel injection to increase exhaust gas temperatures) to assist in the regeneration process. Passive DPFs, which do not require an external heat source to regenerate, incorporate a catalytic material, typically a platinum group metal, to assist in oxidizing trapped diesel PM. Although there is a slight increase in directly emitted NO₂ during the regeneration of passive DPFs, overall there is ultimately a net reduction in NO₂ emissions.

Polytetrafluoroethylene Membrane Baghouse

Baghouses remove particulate matter from gas streams in the same manner as a household vacuum cleaner bag, using the principle of aerodynamic capture by fibers. In lieu of conventional natural or synthetic bag fabrics such as cotton or Nomex, polytetrafluoroethylene (PTFE, trade name Gore-Tex) fabric consists of a very thin laminate of microporous Teflon on a suitable substrate. PTFE bags are capable of a particulate collection efficiency of 99 to 99.9 percent for particle sizes down to 1.0 micron (µm) when properly operated and maintained. Because of the microporous nature of PTFE, air-to-cloth ratios for these applications are lower than with conventional fabrics, requiring more collector area for a given volume flow rate of gas at a higher relative pressure drop. PTFE can tolerate moderately high temperatures (400°F) at the expense of shortened bag life. The current trend in bag cleaning is the pulsejet technology, where tubular bags are supported from the inside by metal wire frames. Gas flows across the fabric from the outside inward, exiting at the top of the bags. Periodically, a blast of compressed air from a fixed nozzle located inside the wire frame causes the bag to inflate outward, thus knocking the accumulated toxics-bearing dust off the bag exterior and into the baghouse hopper, ready for collection and disposal as dry potentially hazardous solid waste.

High-efficiency Particulate Arrestors(HEPA) Filters

Used in conjunction with a baghouse or cartridge filter as a prefilter, high-efficiency particulate arrestors (HEPA) filters can trap toxic particles as small as 0.1 μm at an efficiency of 99.99 percent or greater. Like cartridge filters, HEPA filter elements are of pleated construction. Air-to-cloth ratios for HEPA filters are low due to high media density, low porosity, and resulting high-pressure drop. HEPA filters are generally limited to ambient temperature (100°F), though special applications for higher temperatures are available. Unlike bags or cartridge filters, HEPA filters are not automatically cleaned. When a HEPA filter element becomes loaded with particulate matter, the element is changed out and disposed of as dry solid waste (possibly hazardous).

Wet Packed Scrubber

The standard air pollution control system for electroplating and anodizing, these devices consist of a vertical column made of fiberglass or other non-corrosive material loosely filled with specially shaped plastic packing material which maximizes gas-to-liquid contact and minimizes pressure drop across the column. Exhaust air from a plating or anodizing tank line enters at the bottom of the scrubber and exits at the top. The scrubbing solution is pumped from a reservoir at the base of the scrubber and sprayed down into the packing from the top. This flow scheme is called counter-current scrubbing and is the dominant method in use today due to its high pollutant removal efficiency, ranging from 90 to 98 percent, depending on residence (contact) time and solution freshness.

Wet packed scrubbers typically use a caustic solution (dilute sodium hydroxide) for absorbing acid mists. For absorbing caustic mists, acid solutions (dilute sulfuric acid) are typically employed. Scrubber solutions are maintained at the proper pH by automatic addition of concentrated sodium hydroxide or sulfuric acid solutions to scrubber make-up water, whichever is applicable. Usually, just slightly acidic or basic conditions are maintained with pH in the 5 to 6 range for acid solutions or 8 to 9 range for caustic solutions. As the scrubber solution becomes loaded with absorbed air contaminants, including trace metals and salts resulting from neutralization reactions, scrubber efficiency is diminished and the risk of clogging the packing increases. Therefore, scrubber solutions must be refreshed by either continuously draining off a small flow of solution and replacing it with fresh water and reagent (the engineering term for this is "blowdown") or by periodically replacing the entire contents of the scrubber solution reservoir. In either case, a liquid/sludge waste stream containing metals and salts is generated. With continuous blowdown, the liquid effluent may need on-site pretreatment prior to discharge into municipal sewers to remove heavy metals. With periodic change out, the spent solutions may need to be disposed of as liquid hazardous waste.

Control Technology for Toxic Volatile Organic Compounds (T-VOC) and Combined Controls for Toxic Halogenated Organic Compounds (T-HOC)

Table 1-2 summarizes feasible air pollution control technologies for T-VOC and T-HOC. These control techniques are characterized by moderate to high-energy requirements in most applications. Pressure drops can range from very low (afterburners) to very high (carbon adsorption), with corresponding energy requirements. In general, high DRE controls are also high-energy controls with correspondingly high operating costs.

Table 1-2 Controls for T-VOC and Halogenated T-VOC

CONTROL TECHNOLOGY	SUBSTANCE GROUP	CONTROL EFFICIENCY
Combined Controls:		
Regenerative thermal oxidizer with dry scrubber and PTFE membrane baghouse	Halogenated T-VOC (high concentration)	99.9 - 99.99 %
Moving bed carbon adsorption concentrator with regenerative thermal oxidizer, dry scrubber and PTFE membrane baghouse	Halogenated T-VOC (high concentration)	90 - 99 %
Carbon Absorption Controls:		
Fixed bed with regenerative solvent reclaimer	T-VOC Halogenated T-VOC	50-99 %
Moving bed with regenerative solvent reclaimer	T-VOC Halogenated T-VOC	50-99 %
Moving bed with regenerative thermal oxidizer	T-VOC	50-99 %
Fluidized bed with regenerative thermal oxidizer	T-VOC	50-99 %
Fixed bed disposable	T-VOC Halogenated T-VOC	50-99 %

Oxidation

Oxidation is the process of converting VOC gases to carbon dioxide and water through combustion. Of the various types of oxidizers available, the two basic types of equipment used most often are thermal oxidizers and catalytic oxidizers (Table 1-3). Thermal oxidizers rely on direct contact between toxic gases and high-temperature flames to disassociate and destroy toxic substances. Catalytic oxidizers rely on an active catalyst bed at moderate temperatures to break intramolecular bonds, also causing disassociation and destruction of toxic substances.

Table 1-3 Thermal and Catalytic Controls for T-VOC

CONTROL TECHNOLOGY	SUBSTANCE GROUP	CONTROL EFFICIENCY
Direct flame afterburner 1,200 - 1,400 °F, t > 0.3 sec*	T-VOC EtO	95-98 %
Recuperative heat exchanger oxidizer 1,400 - 1,600 °F, t > 0.5 sec	T-VOC	98-99 %
Regenerative heat exchanger oxidizer 1,800 - 2,000 °F, t > 0.8 sec	T-VOC	99-99.9 %
Catalytic oxidizer 700 - 800 °F, t > 0.1 sec	T-VOC EtO	90-95 %

Thermal Oxidizers

There are three main categories of thermal oxidizers that could be used to control VOCs: afterburners with no heat recovery, thermal oxidizers with recuperative heat recovery and highly efficient regenerative heat recovery oxidizers. When thermal oxidizers are used to destroy halogenated organic compounds, special materials or construction are often required, such as fiber-reinforced plastic (FRP) or stainless steel. In addition, a downstream scrubber is frequently needed to minimize releases of halogenated acid gases. The extent and type of these additional items depend upon the level of the halogenated compounds in the inlet stream and applicable regulatory requirements. The following paragraphs briefly describe the three types of thermal oxidizers.

Afterburners: Afterburners are most commonly used to control intermittent and emergency releases of VOCs. Due to factors such as noise and the lack of heat recovery, (which results in high energy consumption and high NO_x, CO, and CO₂ emissions) their use for steady-state control of VOCs is not widespread. They are most often used for controlling intermittent releases of ethylene oxide from medical or food product sterilizers. Afterburners operate in the 1,200 °F to 1,400 °F range with a residence time of at least 0.3 seconds and destruction removal efficiency of 95 to 98 percent.

Both recuperative and/or regenerative thermal oxidation systems generally consist of a refractory-lined chamber, one or more burners, a temperature-control system and heat-recovery equipment. Contaminated gases are collected by an industrial ventilation system and delivered to the preheater inlet, where they are heated by indirect contact with the hot oxidizer exhaust. Gases are then mixed thoroughly with the burner flame in the upstream portion of the unit, and then pass through the combustion zone where the combustion process is completed. The VOC concentrations in most industrial process vent-streams are too low for self-sustaining combustion. Therefore, a supplemental fuel (natural gas) is required. Depending on the heat recovery efficiency, this supplemental fuel requirement may or may not translate into significant annual operating costs.

Recuperative thermal oxidizers: Recuperative thermal oxidizers recover 60 to 80 percent of the system's energy demands with a shell and tube type heat exchanger. Recuperative units operate in the 1,400°F to 1,600°F range with a residence time of at least 0.5 seconds and DREs of 98 to 99 percent. Thermal oxidizers with recuperative heat exchangers can recover 80 to 95 percent of the energy requirement. These recuperative thermal oxidizers use a ceramic medium for heat transfer, which is stored in three or more dedicated beds that feed a central combustion chamber. Valves control which bed is being preheated by exhaust gases and which bed is transferring its heat to incoming VOC contaminated air.

Regenerative thermal oxidizers: Regenerative units operate in the 1,800 °F to 2,000 °F range with a residence time of at least 0.8 seconds and DREs of 99 to 99.9 percent. Regenerative oxidizers cost more than recuperative designs of equal capacity. However, their life-cycle costs are less because annual fuel costs are less than for recuperative units.

Catalytic oxidizers

Catalytic oxidation is similar to thermal oxidation in that heat is used to convert the VOC contaminants to carbon dioxide and water. However, a catalyst is used to lower the oxidation activation energy, allowing combustion to occur at 600°F to 800°F, significantly lower temperatures than those of thermal units. In catalytic oxidation, the preheated gas stream is passed through a catalyst bed, where the catalyst initiates and promotes the oxidation of the VOC without being permanently altered itself. Catalyst units have a residence time of at least 0.1 seconds and DREs of 90 to 95 percent. The primary advantage of catalytic oxidation over thermal oxidation is lower fuel cost, depending on the efficiency of the air preheater. Disadvantages include higher capital costs, periodic catalyst replacement, and the inability to handle halogenated organics.

The most common catalyst configuration is the plate-and-frame arrangement, in which blocks of catalyst material are held in place within the oxidizer body by a metal frame. The catalyst consists of a reactive material (such as platinum, platinum alloys, copper chromite, copper oxide, chromium, manganese or nickel) on an inert substrate (such as honeycomb-shaped ceramic). For the catalyst to be effective, the reactive sites upon which the VOC gas molecules react must be accessible. The build-up of polymerized material or reaction with certain metal particulates will prevent contact between reactive sites and the exhaust gas. A catalyst can be reactivated by removing such a coating. Cleaning methods vary with the type of catalyst and include air blowing, steam blowing and operating at elevated temperatures (100°F above the operating temperature) in a clean air stream. As with other catalytic processes, oxidation catalyst material can be lost by erosion, attrition, and vaporization at high temperatures.

Carbon Adsorption

Adsorption is a process by which VOCs are retained on the surface of granular solids. The solid adsorbent particles are highly porous and have very large surface-to-volume ratios. Gas molecules penetrate the pores of the adsorbent and contact the large surface area available for adsorption.

Materials such as activated carbon, silica gel, or alumina may be used as adsorbents. Activated carbon is the most common adsorbent for VOC removal. Carbon may also be used to remove other compounds such as sulfur-bearing or odorous materials. Advantages of carbon adsorption include the recovery of a relatively pure product for recycle and reuse and a high removal efficiency with low inlet concentrations. In addition, if a process stream is already available onsite, additional fuel costs are low, the main energy requirement being electrical power to run fan motors. Disadvantages are the potential generation of a hazardous organic waste if the recovered product cannot be reused, the generation of potentially contaminated wastewater that must be treated (when regeneration is by steam), and potentially higher operating and maintenance costs for the disposal of these two waste streams.

Fixed, moving, or fluidized-bed regenerative carbon adsorption systems operate in two modes, adsorption and desorption. Adsorption is rapid and removes from 50 to 99 percent of VOCs in the air stream, depending on their composition, concentration, temperature, and bed characteristics. Well-designed and operated systems, however, can usually achieve removal efficiencies in the 90 to 99 percent range. Eventually, the adsorbent becomes

saturated with the vapors and system efficiency drops. At this point (called "breakthrough," since the contaminants "break through" the saturated bed), the VOC contaminated stream is directed to another bed containing regenerated adsorbent, and the saturated bed is then regenerated. Although it is possible to operate a nonregenerative adsorption system (i.e., the saturated carbon is disposed of and fresh carbon is placed into the bed), most applications, especially those with high VOC loadings, are regenerative.

The adsorption/regeneration cycle can last from a few hours to many days, depending on the inlet VOC concentration, the variability of VOC loading and the design parameters of the carbon bed (e.g., the amount of carbon and the bed's depth). Saturated carbon beds can be regenerated with steam, hot air, or a combination of vacuum and hot gas. Although the bed can be regenerated, complete desorption is not possible, and a small amount of VOC (called a "heel") will remain on the bed after each regeneration. After time, the bed can no longer be used and must be replenished with fresh carbon. Carbon life of five years is typical. The concentrated VOCs in the regeneration stream must be reclaimed (decanted or distilled), destroyed (oxidized), or otherwise disposed of in an environmentally sound manner.

An important consideration in the design of a carbon adsorption system is the temperature of the gas stream. Adsorption capacity of the carbon, and thus the performance of the adsorber, are directly related to this temperature -- adsorption capacity decreases with increasing temperature. Operating temperature must be less than 100°F. Otherwise, the gas will have to be cooled in a heat exchanger prior to being passed through the absorber. Also, the relative humidity of the gas stream can affect the operating capacity of the carbon, and should not exceed 50 percent. Entrained liquid and particulate matter can also cause operating problems, such as plugging, and should be removed by mist eliminators or a packed filter upstream of the absorber. In addition, VOCs with boiling points above 300°F (such as phenol) will be collected by the carbon, but will not be removed during regeneration of the bed. These compounds should be removed upstream of the absorber inlet or captured on a sacrificial bed in the absorber.

Equipment has been developed that combines moving-bed activated carbon adsorption with thermal or catalytic oxidation. VOCs are collected by rotating-wheel carbon beds and subsequently desorbed with hot air. The concentrated exhaust stream is then sent to a thermal or catalytic oxidizer, where the VOC is combusted. The benefit of this configuration is that the volume of the desorption air stream is as much as fifteen times less than the original VOC stream, which translates into a smaller and less expensive oxidizer. Fuel costs are also lower than for a full-sized oxidizer for the same application. This approach is particularly useful for VOC streams with low concentrations and high volumes [concentrations less than 100 ppm and flow rates over 10,000 cubic feet per meter (CFM)], such as paint spray booths. Combination systems provide the inherent advantages of the individual techniques - the high destruction efficiency and no generation of liquid or solid waste of oxidation, and the low fuel consumption and good control efficiency of adsorption - without many of the disadvantages of each system. The ability of combination units to concentrate the VOC emission stream and thus lower the flow rate requiring oxidation not only minimizes the capital costs associated with the oxidizer, but also maximizes the energy input derived by combusting the VOC. In addition, by eliminating the steam for regeneration (and the subsequent condensate), the system does not generate contaminated wastewater.

Chemical Absorption or Wet Scrubbing

Absorption is the mass transfer of selected components from a gas stream into a nonvolatile liquid. Such systems are typically classified by the absorbent used (water or organic liquid, such as mineral oil or low-volatility hydrocarbon solvent). The choice of absorbent depends on the solubility of the gaseous VOC compounds and the cost of the absorbent. Absorption will occur when the concentration of the organic species in the liquid phase is less than the equilibrium concentration of the gaseous component. The gradient between the actual and the equilibrium concentrations is the driving force. Absorption is a function of both the physical properties of the system and the operating parameters of the absorber. The best absorption systems are characterized by low operating temperatures, large contacting surface areas, high liquid-to-gas (L/G) ratios and high VOC concentrations in the gas stream. Removal efficiencies in the 90 to 98 percent range may be achieved for well-designed and operated systems. Absorption is also efficient for dilute streams provided the VOC is highly soluble in the absorbent. Packed columns and plate columns are commonly used for high-efficiency pollution control applications.

The efficiency of absorption as a VOC control technique depends on several factors: the solubility of the VOC in the solvent; the concentration of the VOC in the gas stream; temperature; the L/G ratio; and the contact surface area. Higher gas solubilities and inlet concentrations provide a larger driving force for more efficient absorption. Since lower temperatures correspond to higher gas solubilities, absorption is also enhanced at reduced temperatures. The solvent flow rate is determined from the minimum L/G ratio, which can be found from material balances and equilibrium data. Generally, the most economical absorption factor is 1.25 to 2 times the minimum L/G. Absorption efficiency increases with contact surface area. Increasing the surface area, however, also raises the pressure drop through the packed bed. Thus, while a larger contact surface area may increase the overall removal efficiency, the higher energy consumption (fan power) may make it uneconomical.

Two modes of operation are typical for absorption systems: simple absorption and complex absorption. Simple absorption uses a single liquid pass system, where the VOC contaminated liquid is disposed of directly after exiting the absorber. In complex absorption, the VOC contaminant is recovered via stripping or other desorption techniques and the cleaned absorbent is recycled to the absorber. This option is generally feasible for organic-based systems employing expensive absorbents. In either case, waste streams are generated. In simple absorption systems where the absorbent is water, dilute acids, or dilute caustics, the spent solution, called "blowdown," is continuously bled off and replenished with fresh reagent. Typical blowdown rates are one to 10 percent of the solution recirculation rate, depending on the concentration of VOC air contaminants being absorbed. In complex absorption systems, a concentrated VOC stream is generated and must be reclaimed, destroyed, or otherwise disposed of in an environmentally sound manner.

CHAPTER 2

Introduction

General Information

Environmental Factors Potentially Affected

Determination

Discussion and Evaluation of Environmental Checklist

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Proposed Amended Rules to Implement Office of Environmental Health Hazard Assessment (OEHHA) Revisions to the Air Toxics Hot Spots Program Risk Assessment Guidelines
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
Rule Contact Person:	Eugene Kang, (909) 396-3524
CEQA Contact Person:	Cynthia Carter, (909) 396-2431
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive, Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	Not applicable
Surrounding Land Uses and Setting:	Not applicable
Other Public Agencies Whose Approval is Required:	Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact issues have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of the significance of the impacts can be found following the checklist for each area.

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing |
| <input type="checkbox"/> Agricultural Resources | <input checked="" type="checkbox"/> Hazards and Hazardous Materials | <input checked="" type="checkbox"/> Public Services |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input checked="" type="checkbox"/> Solid/Hazardous Waste |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input checked="" type="checkbox"/> Energy | <input checked="" type="checkbox"/> Noise | <input checked="" type="checkbox"/> Mandatory Findings |

DETERMINATION

On the basis of this initial evaluation:

- I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.
- I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.
- I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: March 23, 2015

Signature: 

Michael Krause
Program Supervisor, CEQA Section
Planning, Rules, and Area Sources

DISCUSSION AND EVALUATION OF ENVIRONMENTAL IMPACTS

As previously discussed, implementation of the Revised OEHHA Guidelines is expected to increase the estimated health risk by about 3 times. This Draft EA evaluated potential adverse environmental impacts that could potentially occur from additional air pollution control equipment needed as a result of implementing the Revised OEHHA Guidelines for permitting new and modified sources (Rules 1401 and 1401.1) and facilities under the AB2588 Hot Spots program (Rule 1402). There are no expected environmental impacts resulting from amendments to Rule 212 as a result of the revised OEHHA guidelines because changes to this rule are administrative in nature and do not require or cause a physical change to the environment. This analysis assumes that there would be 112 new or modified permit applications and about six AB2588 facilities that could potentially be affected annually and require additional pollution control equipment. Potential adverse environmental impacts can occur from the construction and operation of air pollution control equipment. A discussion of the assumptions and basis for the number of facilities that could potentially require additional pollution control devices (APCDs) for each rule is discussed below.

Rule 212 Analysis

Rule 212 establishes standards for approving permits and issuing public notice. Under Rule 212, public notification is required for installation of new or modified equipment that increases risk by one in one million. This provision does not apply to facilities that have a facility-wide risk of less than ten in one million. The requirements in Rule 212 are administrative and informational in nature, and will not have any direct or indirect physical environmental impact.

Rule 1401 and 1401.1 Analysis

To identify new and modified permitted equipment source categories that under Rule 1401 and 1401.1 could potentially need new or additional air pollution controls as a result of using the Revised OEHHA Guidelines, the SCAQMD staff evaluated permits that were issued over a five year period from October 2009 to October 2014. Based on this evaluation, the SCAQMD staff identified three general groups of equipment source categories based on the need for new or additional pollution controls using the Revised OEHHA Guidelines:

- 1) No new or additional air pollution controls needed;
- 2) New or additional pollution controls likely needed and/or additional time needed to evaluate potential impacts; and
- 3) Potential for new or additional air pollution controls could be required for some permits within an equipment source category.

Under the first group, no new or additional pollution controls are expected using the Revised OEHHA Guidelines because either the cancer risk was well below the Rule 1401 risk thresholds of 1 in one million without T-BACT, and 10 in one million with T-BACT, or there were no toxic emissions associated with the permitted source. For the first group, no further environmental analysis was needed. Under the second group, SCAQMD staff identified two equipment source categories (1) coating and solvents used in spray booths, and (2) retail gasoline dispensing facilities. For coating and solvents used in spray booths, for a percentage of permits reviewed it is likely that new or additional pollution controls would be needed to meet the Rule 1401 cancer risk threshold using the Revised OEHHA Guidelines. For retail gas stations, the SCAQMD staff has received new information from CARB staff regarding the latest speciation of emissions from gasoline dispensing. The SCAQMD staff needs additional time to assess the effects of this information and how it could affect new and modified gasoline dispensing facilities combined

with the Revised OEHHA Guidelines. Therefore, Rule 1401 includes a provision to allow these two source categories to continue to use the existing OEHHA Guidelines. The SCAQMD staff will develop source-specific requirements for these source categories to reduce toxic emissions and to address potential permitting issues. For gasoline dispensing facilities, the SCAQMD staff will expedite review of emissions data for gasoline dispensing to better understand potential impacts from gasoline dispensing facilities before using the Revised OEHHA Guidelines. Since these two equipment and industry categories will continue to use the previous SCAQMD permitting guidelines (Version 7.0, July 2005), there are no additional adverse environmental impacts associated with the Revised OEHHA Guidelines of implementation of PAR 1401 and 1401.1.

Lastly under the third group, based on review of five years of permitted data there were five equipment source categories that the estimated cancer risk with the Revised OEHHA Guidelines could require additional controls: metal plating facilities, crematories, plasma arc and laser cutting, wet gate printing and film cleaning, and asphalt and concrete batch blending. Table 2-1 provides a summary of the affected toxic air contaminants and the possible air pollution control technology for these each of the identified source categories. For plasma arc and laser cutting, most permits are currently close to 1 in one million so it is reasonable to expect for this source category nearly all permits for plasma arc and laser cutting will need additional air pollution controls in order to satisfy T-BACT requirements in Rule 1401, for sources exceeding 1 in a million cancer risk. The SCAQMD staff is working on a rule for metal grinding and cutting that will address emissions from plasma arc and laser cutting. Based on the permitted data, staff estimates that approximately 24 plasma arc and laser cutting permits annually could have estimated health risks greater than 1 in a million requiring pollution additional controls such as a bag house to capture metal particulates. For the remaining equipment or industry categories in Table 2-1, based on the five years of permitted data approximately one permit per year could potentially require additional air pollution controls.

Table 2-1 PAR 1401 New or Modified Permits that Potentially Could Require Additional Pollution Controls Using the Revised OEHHA Guidelines

Equipment Category	Toxic Air Contaminants	Typical Control Device
Metal Plating Facilities – Plating Tanks	Metal – nickel, hexavalent chromium, cadmium	HEPA filter for nickel plating tank
Crematory – Furnace	Combustion emissions – PAHs	Oxidation catalysts
Plasma Arc and Laser Cutting	Nickel and hexavalent chromium emissions	Baghouse for metal particulates
Wet Gate Printing and Film Cleaning (Perc)	Perchloroethylene emissions from film cleaning	Carbon adsorber
Asphalt Blending and Concrete Batch (Diesel ICEs)	Diesel particulate	Diesel particulate filter on diesel engine

¹ Based on SCAQMD analysis of permits issued between 2009 and 2014.

SCAQMD staff did not include equipment or industry categories that are exempt from Rule 1401 such as emergency internal combustion engines and wood product stripping. SCAQMD staff also did not analyze impacts for permits related to change of ownerships, alterations, or modifications that did not result in an increase in toxic emissions. District Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Systems contain requirements for the phase out of perchloroethylene dry cleaning equipment by 2020 and the state ATCM does not allow purchase of new perchloroethylene dry cleaning equipment. SCAQMD staff did not include the permitting of this equipment category into the impact analysis for this rule development since permitting data shows no permits issued for new perchloroethylene dry cleaning machines over the past five years.

AB2588 Air Toxics Hot Spots Program (Core Facilities) – Rule 1402 Analysis

Since Rule 1402 adoption in 1994, the SCAQMD staff has approved approximately 300 facility HRAs. Based on the most recent approved HRAs for each facility, the SCAQMD staff estimates that about 22 facilities could potentially have a cancer risk greater than or equal to 25 in a million when using the Revised OEHHA Guidelines. Under Rule 1402, if the facility-wide health risk is greater than or equal to the action risk level the operator is required to implement risk reduction measures specified in a risk reduction plan to reduce the impact of total facility emissions below the action risk level as quickly as feasible, but by no later than three years. Regarding facilities that are in the AB2588 program, but have not been required to submit an HRA, the SCAQMD staff found that although more facilities will likely be required to submit an HRA, it is not expected that their cancer risk will be over the action risk threshold of 25 in one million. Therefore, no additional pollution controls are assumed for those facilities.

SCAQMD staff evaluated the main toxic driver(s) for a total of 22 AB2588 affected facilities that could potentially be required to implement risk reduction measures to make an estimate of the types of additional pollution controls that could potentially be implemented. Rule 1402 establishes a “facility-wide” risk threshold, so there are a variety of options which can be implemented such as process changes, material changes, additional air pollution controls, and reduced throughput. Table 2-2 summarizes the types of the 22 facilities, key toxic air contaminants that are contributing to the cancer risk, and the type of air pollution controls that could be implemented to reduce the cancer risk.

Table 2-2 PAR 1402 Potential Air Pollution Control Device(s) For Use to Reduce Cancer Risk by AB2588 Facilities

Facility Type	Key Toxic Driver	Air Pollution Control Device(s)
Aerospace	hexavalent chromium, perchloroethylene, tetrachloroethylene	Scrubber, Carbon Adsorber
Aerospace	hexavalent chromium, cadmium	HEPA, Scrubber
Aerospace	perchloroethylene, tetrachloroethylene, hexavalent chromium	Carbon Adsorber, HEPA, Scrubber
Aerospace	hexavalent chromium	HEPA, Scrubber
Aerospace	hexavalent chromium	HEPA, Scrubber
Aerospace	lead	HEPA, Scrubber
Asphalt Manufacturer	PAHs, formaldehyde	Scrubber, Carbon Adsorber

Facility Type	Key Toxic Driver	Air Pollution Control Device(s)
Hospital	formaldehyde, PAHs	Thermal oxidizer, Oxidation catalysts
Metal Forging and Heat Treating	nickel	HEPA, Scrubber
Metal Melting	cadmium, lead	HEPA, Scrubber
Metal Melting	cadmium, lead	HEPA, Scrubber
Metal Melting	arsenic, cadmium	Scrubber
Metal Plating and Finishing	hexavalent chromium, nickel, cadmium	HEPA, Scrubber
Metal Plating and Finishing	hexavalent chromium	HEPA, Scrubber
Metal Plating and Finishing	hexavalent chromium	HEPA, Scrubber
Petroleum Refining	1,3-butadiene, hexavalent chromium	Thermal oxidizer, HEPA
Petroleum Refining	diesel particulate matter, 1,3-butadiene (engines)	Diesel particulate filters, Thermal Oxidizer
Petroleum Refining	benzene, PAHs	Thermal oxidizer, Oxidation catalyst
Petroleum Refining	diesel particulate matter (engines), arsenic	Diesel particulate filters, Scrubber
Waste Management	dioxins, furans	Thermal oxidizer
Waste Management	formaldehyde	Carbon Adsorber
Waste Management	formaldehyde	Carbon Adsorber

It is assumed that 22 facilities could potentially need to install additional air pollution controls due to the Revised OEHHA Guidelines. This is based on review of approved HRAs that have been received through implementation of the AB2588 program. This is likely a conservative estimate (meaning there are not likely to be more such facilities) where staff estimated based on previously approved HRAs. It is possible that some facilities could have implemented emission reduction projects that have reduced air toxic emissions and health risks since the HRA was approved.

AB2588 is the state-required Air Toxics Hot Spots Program required by Health and Safety Code §44360(b)(2) which is implemented here in the SCAQMD through Rule 1402. Under the AB2588 program, facilities are divided into four implementation groups. During the “quadrennial” review, AB2588 facilities are required to submit a more detailed emissions inventory for 177 toxic air contaminants. (During the three years between the quadrennial review AB2588 facilities submit a toxics inventory for 23 toxic air contaminants.) Based on the quadrennial toxics emissions inventory, SCAQMD staff prioritizes facilities and sends a letter to those facilities with a high Priority Score to submit an even more detailed emissions inventory and HRA. Implementing the AB2588 program using the quadrennial review approach provides a more even workflow and reduces the impact on affected facilities to provide a detailed inventory. Implementation of the Revised OEHHA Guidelines will follow the existing quadrennial review process. Thus staff analysis examined actions and operations over a four year period to estimate future impacts. It is speculative to assume beyond these proposed requirements that will be well established by then and the nature of business operations, need and usage of TACs, and cleaner technologies are expected to change the impacts beyond four years.

The review and approval process for the AB2588 program is staggered, even for facilities within the same quadrennial review cycle. SCAQMD staff is estimating that of the 22 identified

AB2588 facilities, one-fourth of the 22 facilities which is approximately six AB2588 facilities could potentially install air pollution control equipment annually. In analyzing the potential impacts of the Revised OEHHA Guidelines, for worst case analysis it is assumed that 2 facilities would be installing equipment on a given day.

A total of 134 facilities are estimated to be installing and operating 152 pieces of control equipment. A summary of the types of pollution controls from Rules 1401 and 1402 are provided in Table 2-3 below.

Table 2-3 Summary of Types of APCD’s to be Installed at Estimated Affected Facilities and Analyzed for Impacts

Types of APCDs								
	HEPA Filters	Oxidation Catalysts	Baghouses	Carbon Adsorber	Diesel Particulate Filter	Wet Scrubbers	Thermal Oxidizers	Total
PAR 1401 Impacts (# of APCDs)	4	4	96	4	4	0	0	112
PAR 1402 Impacts (# of APCDs)	12	3	0	4	2	14	5	40
Total	16	7	96	8	6	14	5	152
Environmental Topics to be Analyzed	<ul style="list-style-type: none"> • Aesthetics • AQ • Solidwaste 	<ul style="list-style-type: none"> • Aesthetics • AQ • Solidwaste 	<ul style="list-style-type: none"> • Aesthetics • AQ • Energy 	<ul style="list-style-type: none"> • AQ • Energy 	<ul style="list-style-type: none"> • AQ • Energy 	<ul style="list-style-type: none"> • Aesthetics • AQ • Energy • Hydrology • Solidwaste 	<ul style="list-style-type: none"> • Aesthetics • AQ • Energy 	

ENVIRONMENTAL CHECKLIST AND DISCUSSION

I. AESTHETICS.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from 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.

DISCUSSION

I. a), b), d) In general, the proposed amended rules have no potential to affect scenic vistas because installation of add-on control equipment (i.e. HEPA filters, Thermal Oxidizers, Oxidation Catalysts, DPFs, Wet Scrubbers, Baghouses, and Carbon Adsobers) will occur at commercial, industrial, or institutional facilities. Likewise, additional light or glare would not be created since no additional light generating equipment would be required for the amended rule’s implementation. Equipment used to control TAC emissions is typically located inside buildings which are located in industrial/commercial areas.

I. c) There will be additional pieces of industrial control equipment (i.e. HEPA filters, Thermal Oxidizers, Oxidation Catalysts, DPFs, Wet Scrubbers, Baghouses, and Carbon Adsobers), but the facilities will be installing in an existing commercial, industrial setting with commercial, industrial and institutional equipment so not likely to change the usual character or quality of the site and its surroundings. Therefore, there will be no significant impact to substantially degrade the existing visual character.

II. AGRICULTURE AND FOREST RESOURCES.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Project-related impacts on agriculture and forest 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 conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
- 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 use or conversion of forest land to non-forest use.

DISCUSSION

II. a), b), c), & d) No Impact. Land use, including agriculture- and forest-related uses, and other planning considerations are determined by local governments. While implementation of the proposed project may cause air pollution control equipment to be installed and operated on existing equipment to control toxic emissions, these activities will occur at established toxic emitting facilities which are located on previously developed land in primarily industrial areas and are not located in the vicinity of agricultural or forest areas.

Further, no new construction of buildings or other structures is expected that would require conversion of farmland to non-agricultural use or conflict with zoning for agricultural uses or a Williamson Act contract. Further, because the proposed project does not require construction or operation activities within an area designated as forest land, implementation of the proposed project is not expected to conflict with any forest land zoning codes or convert forest land to non-forest uses. Similarly, there is nothing in the proposed project that would affect or conflict with existing land use plans, policies, or regulations or require conversion of farmland to non-agricultural uses or forest land to non-forest uses. Thus, no agricultural land use or planning requirements will be altered by the proposed project.

Finally, in the event the proposed project is implemented, the installation of toxic control equipment will ensure that projected toxic emission reductions will occur and that air quality in the region will improve. Thus, assuring that these air quality improvements occur could provide benefits to agricultural and forest land resources by reducing the adverse oxidation impacts of ozone on plants and animals located in the Basin. Accordingly, these impact issues will not be further analyzed in the Draft EA.

Based upon these considerations, significant agricultural and forest resources impacts are not expected from implementing the proposed project, and thus, this topic will not be further analyzed in the Draft EA. Since no significant agriculture and forest resources impacts were identified for any of the issues, no mitigation measures are necessary or required.

III. AIR QUALITY AND GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

To determine whether or not air quality impacts from the proposed project may be significant, impacts will be evaluated and compared to the criteria in Table 2-4.

Table 2-4 SCAQMD Air Quality Significance Thresholds

<i>Mass Daily Thresholds^a</i>		
Pollutant	Construction^b	Operation^c
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
<i>Toxic Air Contaminants (TACs), Odor, and GHG Thresholds</i>		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO ₂ eq for industrial facilities	
<i>Ambient Air Quality Standards for Criteria Pollutants^d</i>		
NO₂ 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour average annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM2.5 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
SO₂ 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99 th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu\text{g}/\text{m}^3$ (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal)	

^a Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

^b Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

^c For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

^d Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

^e Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million $\mu\text{g}/\text{m}^3$ = microgram per cubic meter \geq = greater than or equal to
MT/yr CO₂eq = metric tons per year of CO₂ equivalents $>$ = greater than

DISCUSSION

As discussed earlier under the “Environmental Checklist and Discussion”, there are no expected impacts from Rule 212 as a result of the revised OEHHA guidelines. A discussion of the assumptions and basis for the number of facilities that could potentially require additional pollution controls under Rules 1401, 1401.1 or 1402 is discussed below. A summary of the type of pollution controls to be installed is provided in Table 2-3.

III. a) The SCAQMD is required by law to prepare a comprehensive district-wide Air Quality Management Plan (AQMP) which includes strategies (e.g., control measures) to reduce emission levels to achieve and maintain state and federal ambient air quality standards, and to ensure that new sources of emissions are planned and operated to be consistent with the SCAQMD’s air quality goals. The AQMP’s air pollution reduction strategies include control measures which target stationary, area, mobile and indirect sources. These control measures are based on feasible methods of attaining ambient air quality standards. Pursuant to the provisions of both the state and federal Clean Air Acts (CAA)s, the SCAQMD is required to attain the state and federal ambient air quality standards for all criteria pollutants.

Toxic Air Contaminants: General Identification and Control Measures (AB 2728)

AB 2728 was enacted in 1992 and amends the Tanner process (AB 1807) to reflect the shift of certain duties from the DHS to the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessments (OEHHA). This law requires the ARB to identify all 188 hazardous air pollutants (HAPs) listed under Title III of the 1990 CAA Amendments as TACs under the AB 1807 process. It encourages local air districts to adopt TAC programs to enable local enforcement of Title III - Air Toxics of the federal CAA. AB 2728 further provides that districts may adopt more stringent requirements than those provided under AB 1807. Health & Safety Code 44300 et. Seq. sets forth the state’s Air Toxics “Hot Spots” Program, which requires districts to use OEHHA for risk assessment. H&S 44360(b)(2)

Therefore, implementing the proposed rule amendments do not conflict or obstruct implementation of the AQMP or federal CAA.

III. b) and f) *Criteria Pollutants*

Construction Impacts

Affected Facilities

SCAQMD staff is not certain as to the number of new and modified facilities planned to be constructed in the future. In order to reasonably foresee the number of future facilities affected by the proposed amendments, as previously discussed at the beginning of this Chapter, SCAQMD staff evaluated permitted data over a five year period from October 2009 to October 2014 to determine how those new and modified permits could potentially be affected by the Revised OEHHA Guidelines. The number of affected facilities and corresponding impacts to those facilities or operational activity of new or existing facilities were used as a surrogate to reasonably foresee and analyze possible impacts. SCAQMD staff is estimating permitting impacts over a four year period. Construction of new facilities beyond the four years scope is considered speculative according to CEQA Guidelines §15145 and will not be evaluated further in this analysis.

Construction emissions were estimated for the various construction phases for the installation of APC equipment. The phases are: grading/site preparation, paving, and equipment installation². In addition, criteria pollutant emissions were calculated for all on-road vehicles transporting workers, vendors, and material removal and delivery. Since all phases must be entirely completed before the next phase can commence, there would be no overlap of construction phases for the construction of the new APCDs.

Any process substitutions or product reformulations are not expected to require installation of new equipment. Activities during construction that could potentially adversely affect air quality are those activities associated with the installation of control equipment.

PROJECT-SPECIFIC IMPACTS: The primary source of construction air quality impacts would be from those facilities installing add-on controls (thermal oxidizers, scrubbers, etc.). The type of construction-related activities attributable to facilities that would be installing control equipment would consist predominantly of cutting, welding, etc. These construction activities would not involve large-scale grading, slab pouring, or paving activities, that would be undertaken at typical land use projects such as housing developments, shopping centers, new industrial facilities, etc. Consequently NO_x, SO_x, and PM₁₀ emissions from these types of construction activities would not occur as a result of implementing the proposed project. For the purposes of this analysis, construction activities undertaken at affected facilities are anticipated to entail the use of portable equipment (e.g., generators and compressors) and hand held equipment by small construction crews to weld, cut, and grind metal structures.

Construction emission estimates included construction equipment used during the phase (e.g., paver during paving) and on-road vehicles transporting workers, vendors, and material removal and delivery (see Appendix B). Hence, all of the proposed project elements were considered in the daily construction emissions. Because the construction phases do not overlap, the daily emissions are not additive.

To analyze the “worst-case” emissions from construction activities associated with the implementation of proposed amendments, the SCAQMD staff assumed that 2 facilities would be installing APCDs at any given time at affected facilities complying with the new risk thresholds.

The SCAQMD staff assumed that the maximum daily emissions from construction-related activities for each phase would all occur on the same day. Table 2-5 presents the results of the SCAQMD’s construction air quality analysis. Appendix B contains the spreadsheets with the results and assumptions used for this analysis.

It should be noted that the analysis of construction air quality impacts was a “worst-case” analysis because it assumes that the peak construction would occur from the facilities that had the most APCDs to install. There are a number of factors that would preclude concurrent construction activities including: availability of construction crews, type and size of control equipment to be constructed, engineering time necessary to plan and design the

² *In general, no or limited construction emissions from grading are anticipated because modifications or installation of new equipment would occur at existing industrial/commercial facilities and, therefore, would not be expected to require digging, earthmoving, grading, etc.*

control equipment, permitting constraints, etc. Furthermore, as a “worst-case,” the SCAQMD’s air quality impacts analysis assumes that construction could take up to two months to complete. Depending on the type and size of the control equipment to be constructed, actual construction time could be substantially less than two months. Further, some affected facilities could reduce emissions through methods other than installing control equipment, thus, eliminating construction impacts at those facilities. Construction emissions at any one facility would not exceed any of the significance thresholds identified in Table 2-5. Finally, once construction is complete, construction air quality impacts would cease.

The peak daily emissions vary for each pollutant depending on the construction phase, which do not overlap in time as a site would need to be graded before paving and paved before installing. The significance determination for the construction is based on the peak daily emissions during any construction phase. Therefore, all of the construction impacts from the project are not significant for criteria pollutant emissions.

Table 2-5 PARs Daily Peak Construction Emissions in SCAQMD for Two Facilities

Construction Phase	CO, lb/day	NO _x , lb/day	PM ₁₀ , lb/day	PM _{2.5} , lb/day	VOC, lb/day	SO _x , lb/day
Grading/Site Preparation	22.9	50.4	8.0	3.2	5.4	0.1
Paving	15.0	24.0	1.5	1.3	0.5	0.0
Equipment Installation	29.9	59.2	2.9	2.6	6.9	0.1
Significance Threshold, lb/day	550	100	150	55	75	150
Exceed Significance?	No	No	No	No	No	No

Localized Significance Thresholds for Construction

The localized significance threshold (LST) methodology was developed to be used as a tool to assist lead agencies to analyze localized impacts associated with proposed projects.

Because the proposed project affects facilities located across the region and it is unknown where future construction would be located, a LST analysis is not possible. The reason is the analysis to determine if construction or operation of the facility would have adverse localized impacts requires knowledge of the location (i.e. source receptor).

Operation Impacts

PROJECT-SPECIFIC IMPACT: Seven different types of add-on control equipment were identified to reduce toxic risk at the affected facilities. Two of the control devices, thermal oxidizers and carbon adsorbers, have the potential to generate adverse secondary air quality impacts during operation. To analyze maximum air quality impacts, it was assumed that for each operation needing to incinerate, the add-on control equipment would be a thermal oxidizer because they generate the highest emissions compared to other types of oxidizers. Thermal oxidizers destroy VOC emissions, but the process produces secondary criteria pollutant emissions such as CO, NO_x, VOC, SO_x, and PM₁₀. Carbon adsorbers possess a carbon bed that requires regeneration for reuse. Emissions are produced when the spent carbon is regenerated.

The operation of the control equipment will reduce toxic exposure and will assist in meeting the risk threshold. The direct and indirect criteria emissions for each control equipment are totaled, in Table 2-8 and are less than the SCAQMD's mass daily operational significance thresholds; therefore, the proposed amendments are not expected to result in significant adverse operational criteria pollutant emission impacts.

Air Quality Assumptions

1. Affected facilities were assumed to operate the control equipment for eight hours per day, six days per week, and 52 weeks per year. These parameters represent a "worst-case" scenario, especially for the thermal oxidizer users because it overestimates the typical hours of high-fired load operation. For example, during some hours of operation incinerators operate on low-fired load when VOC emissions are not being vented to the combustion chamber, which results in lower combustion emissions from the thermal oxidizer. Additionally, not taken into consideration is the fact that hybrid technology has emerged that allows more efficient use of thermal oxidizers.
2. The exhaust emission flowrate (in cubic feet per minute, cfm) was estimated to be at 10,000 cfm.

Thermal Oxidizers

To estimate criteria pollutant emissions from thermal oxidizers, the SCAQMD used general default emission factors. Currently, SCAQMD permitting staff requires thermal oxidizers less than two million British thermal units (MMbtu) per hour to comply with a NO_x concentration of 30 parts per million as BACT. This translates to an emission factor of 36 pounds per million cubic feet (MMcf) of natural gas used as the combustion fuel. The actual emission factors were derived from the Annual Emissions Reporting (AER) default emission factor of 130 pounds per MMcf (SCAQMD 2015 AER Program). For CO, VOC, PM₁₀, and SO_x, the SCAQMD permitting staff uses the general AER default emission factors for all sizes of thermal oxidizers.

As shown in Table 2-3, five thermal oxidizers were identified as likely to be needed for reducing risks to comply with the Revised OEHHA Guidelines. To calculate the daily emissions, the number of devices is multiplied by the assumed operating schedule and the amount of natural gas consumed, and then divided by the heating value of natural gas. The result is multiplied by the criteria pollutant emission factor to determine the pounds per day of emissions. At 10,000 cfm, the amount of natural gas consumed by a thermal oxidizer is 0.488 MMBTU per hour. The heating value of natural gas is 1050 MMBTU/MMcf.

$$(5 \text{ Thermal Oxidizers} \times 8 \text{ hrs/day} \times 0.488 \text{ MMBTU/hr}) / (1050 \text{ MMBTU/MMcf}) = 0.019 \text{ MMcf/day}$$

Table 2-6 shows total criteria pollutant emissions generated by the facilities anticipated to install thermal oxidizers to reduce TAC emissions. Table 2-6 shows criteria pollutant emissions from the thermal oxidizers.

Table 2-6 Estimated Operational Emissions from Thermal Oxidizers

Criteria Pollutant	Emission Factor (lb/MMcf)	MMcf/day	Total Emissions (lb/day)
NO _x	130	0.019	2.47
VOC	7	0.019	0.13
CO	35	0.019	0.67
PM10	7.5	0.019	0.14
SO _x	0.83	0.019	0.02

Carbon Adsorbers

As set forth in Table 2-3, approximately seven carbon adsorbers were identified as needed to comply with the proposed amendments instead of thermal oxidizers. For these facilities, thermal oxidizers were not considered to be applicable as a method of controlling TAC emissions. As described in Chapter 1, the initial control efficiency of carbon adsorption equipment is extremely high. As the activated carbon becomes saturated with organic material over time, control efficiency drops until breakthrough occurs. When breakthrough occurs, the saturated carbon must be removed and either disposed of or regenerated and the solvent recovered, or removed and destroyed.

Typically, the carbon is regenerated by raising the temperature of the carbon, evacuating the bed, or both. A regenerant, either steam or a noncondensable gas, is heated and injected into the carbon bed to desorb the organic materials. This procedure is usually performed daily, but may be done more or less frequently, depending on the capacity of the control unit and the concentration of the VOC being collected. The resulting heated organic mixture is vented to a condenser where the organic material is separated from the regenerant by gravity or distillation, and recycled or disposed of properly.

Regenerating carbon typically requires a combustion source using natural gas as the combustion fuel for boilers or steam generators used to heat the regenerant and/or to heat the carbon beds. Only 15 percent of the carbon bed volume collects toxic VOC emissions and a typical carbon bed is sized to reduce 55 pounds of VOC per day. Based on these two characteristics, a typical carbon bed size is approximately 400 pounds ($55/0.15 = 400$). According to the Standard Handbook of Environmental Engineering (Corbitt, 1990), the projected natural gas fuel use is 5.5 scf per pound of carbon and the carbon bed is assumed to be regenerated four times per day. The amount of natural gas required per day is 0.062 MMcf.

$(400 \text{ lbs C}) \times (5.5 \text{ scf/lb C per regen}) \times (4 \text{ regen/day}) \times (8 \text{ Carbon Adsorbers}) = 0.062 \text{ MMcf/day}$

Using emission factors from the SCAQMD's AER Program, the projected criteria pollutant emissions from the combustion equipment used to regenerate spent carbon are listed in Table 2-7.

Table 2-7 Estimated Operational Emissions from Regenerating Spent Carbon

Criteria Pollutant	AER Emission Factor (lb/MMcf)	Amount of Natural Gas Consumed (MMcf/day)	Total Emissions (lb/day)
NO _x	130	0.062	8.1
VOC	7.0	0.062	0.43
CO	35	0.062	2.2

Operation-related Mobile Source Emissions

PROJECT-SPECIFIC IMPACT: Some types of control equipment generate waste products that will need to be disposed of properly. The wastes and controls include: spent carbon generated from the carbon adsorption process; solids and sludge from wet scrubbers; and dry solids from filtration controls. Although thermal oxidizers produce little or no waste products, this part of the air quality analysis assumed that catalytic oxidizers could be used instead of thermal oxidizers. The catalysts in catalytic oxidizers need to be replaced every few years so this potential waste product was considered to contribute to the waste transport impacts.

Any wastes generated will require delivery and transport to disposal or recycling facilities. It is assumed here that enough waste could be generated as a result of proposed project to require a “worst-case” scenario of 2 truck trips per day of the 134 affected facilities³ installing a control device to comply with PARs. To calculate transport truck trip emissions, it is assumed that two start-ups would be required, medium-duty trucks (5,000-8,500 pounds) transport wastes, and trucks would travel 20 miles each way.

TOTAL OPERATIONAL EMISSIONS

Total operational emissions from both stationary sources (control equipment) and mobile sources (waste disposal trucks) are shown in Table 2-8. As indicated in Table 2-8, operational emissions anticipated from implementing PARs do not exceed any significance threshold and therefore, are considered insignificant.

Table 2-8 SCAQMD Operational Criteria Pollutant Emissions

Description	CO	NO _x	PM10	PM2.5	VOC	SO _x
	(lb/day)					
Emissions from Thermal Oxidizers	0.67	2.47	0.14	0.07	0.5	0.05
Emissions from Regenerating Spent Carbon	2.1	8.1	--	--	0.43	--
Emissions from Mobile Sources ⁴	0.3	1.4	0	0	0.1	0
Total Operational Emissions	3.07	11.97	0.14	0.07	1.03	0.05
Significance Threshold	550	55	150	55	75	150
Exceed Significance?	No	No	No	No	No	No

³ See Section XVII for a further discussion.

⁴ No new permanent employees are expected for operation of the control equipment as a result of the proposed project; therefore no worker vehicles' emissions are calculated. However, delivery and disposal of new carbon or removal of spent catalysts is expected to generate mobile source emissions.

Indirect Criteria Pollutant Emissions from Electricity Consumption

Indirect criteria pollutant and GHG emissions are expected from the generation of electricity to operate new equipment that occurs off-site at electricity generating facilities (EGFs). Emissions from electricity generating facilities are already evaluated in the CEQA documents for those projects when they are built or modified. The analysis in Section VI. Energy b), c) and d)) demonstrates that there is sufficient capacity from power providers for the increased electricity consumption from the PARs.

Under the SCAQMD Regional Clean Air Incentives Market (RECLAIM) program (that regulates NO_x and SO_x emissions), EGFs were provided annual allocations of NO_x and SO_x emissions that typically decline annually. However, the proposed project does require an increase energy and that increase in emissions from generating the additional energy (See Section VI Energy for impacts) from the EGFs would be required to offset any potential NO_x and SO_x emission increases under the RECLAIM program and other pollutants under the New Source Review Project. Thus, impacts from energy generation are anticipated to be to less than significant impacts.

III. c) Cumulatively Considerable Impacts

Based on the foregoing analysis, criteria pollutant project-specific air quality impacts from implementing PARs would not exceed air quality significance thresholds (Table 2-4), cumulative impacts are not expected to be significant for air quality. SCAQMD cumulative significance thresholds are the same as project-specific significance thresholds. Therefore, potential adverse impacts from implementing PARs would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. Per CEQA Guidelines §15064(h)(4), the mere existing of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulative considerable.

The SCAQMD guidance on addressing cumulative impacts for air quality is as follows: "As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR." "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."⁵

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental

⁵ SCAQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, <http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4>.

effect.” The court found that, “Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria...” “Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact.” As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast Air Quality Management District significance thresholds. See also, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the South Coast Air Quality Management District’s approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the Project will not cause a significant unavoidable cumulative contribution to an air quality impact.

III. d) Toxic Air Contaminants (TAC)

Construction

Construction TAC emissions may be generated from diesel exhaust emissions (i.e. heavy-duty trucks and construction equipment).

Diesel exhaust particulate is considered a carcinogenic and chronic TAC. Since construction is expected to last less than three months and carcinogenic health risk is estimated over a 25 year exposure period for off-site occupational receptors and a 30 year exposure period for sensitive receptors, diesel exhaust particulate from construction is not expected to generate significant adverse health risk impacts.

Therefore, the PARs are not expected to generate significant adverse TAC impacts from construction.

Operation

Direct Health Risk Reductions from the PARs

The PARs would be expected to reduce overall TAC emissions. Therefore, the PARs are expected to have the benefit of reducing adverse health risk impacts from the facilities to nearby sensitive receptors.

Secondary Health Risk Impacts from the PARs

The operation of non-combustion APCDs, that may be needed to comply with the PARs, are not expected to generate any TAC emissions. These APCDs are expected to be powered by electricity, so no new combustion emissions would be generated.

The Thermal Oxidizers would generate TAC emissions (i.e. benzene, formaldehyde, and polycyclic aromatic hydrocarbons) from the combustion of natural gas. These Thermal Oxidizers will be subject to SCAQMD Air Permits and toxic rules. The Thermal Oxidizers will be evaluated on a case by case basis for their appropriate toxic risk screening levels (i.e. sensitive receptor distances). These toxic risk levels are the same as the CEQA thresholds and these Thermal Oxidizers are expected to comply with the PARs.

Based on the above discussion, the PARs are not expected to be significant for exposing sensitive receptors to substantial concentrations.

III. e) Odor Impacts

The operation of new APC equipment is not expected to generate any new odors as APC equipment are not typically odor generating equipment. The new APC equipment would be designed to reduce TAC emissions from facilities, which may potentially further reduce odors.

Therefore, the PARs are not expected to generate significant adverse odor impacts.

III. g) and h) Greenhouse Gas Impacts

Global warming is the observed increase in average temperature of the earth's surface and atmosphere. The primary cause of global warming is an increase of greenhouse gas (GHG) emissions in the atmosphere. The six major types of GHG emissions are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). The GHG emissions absorb longwave radiant energy emitted by the earth, which warms the atmosphere. The GHGs also emit longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect."

The current scientific consensus is that the majority of the observed warming over the last 50 years can be attributable to increased concentration of GHG emissions in the atmosphere due to human activities. Events and activities, such as the industrial revolution and the increased consumption of fossil fuels (e.g., combustion of gasoline, diesel, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHG emissions. As reported by the California Energy Commission (CEC), California contributes 1.4 percent of the global and 6.2 percent of the national GHG emissions (CEC, 2004). Further, approximately 80 percent of GHG emissions in California are from fossil fuel combustion (e.g., gasoline, diesel, coal, etc.).

GHGs are typically reported as CO₂ equivalent emissions (CO₂e). CO₂e is the amount of CO₂ that would have the same global warming potential (relative measure of how much heat a greenhouse gas traps in the atmosphere) as a given mixture and amount of greenhouse gas. CO₂e is estimated by the summation of mass of each GHG multiplied by its global warming potential (global warming potentials: CO₂ = 1, CH₄ = 21, N₂O = 310, etc.).⁶

Construction

Based on the same assumptions made for the criteria pollutant estimates, approximately 430 metric tons of CO₂e per facility would be generated from all construction activity including: grading, site preparation, paving, equipment installation, and construction and worker vehicles. Thus, since there are 134 facilities, there will be approximately 57,597 CO₂e from the proposed project. Amortized over 30 years as prescribed by the SCAQMD Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans adopted by the SCAQMD Governing Board in December 2008, approximately 1,920 metric tons of CO₂e emissions per year (see Appendix B for calculations) would be generated from construction activities over the life of the project.

⁶ California Air Resource Board Conversion Table: <http://www.arb.ca.gov/cc/facts/conversiontable.pdf>

Operation

The operation of the HEPA filters, oxidation catalysts, Baghouses, DPFs, and wet scrubbers are not expected to generate greenhouse gases as the equipment control emissions with no secondary emissions impacts. However, the operation of the Thermal Oxidizers, Carbon Adsorbers, and delivery/disposal trucks are equal to 4,538.56 metric tons of CO₂e per year.

Total GHG Emissions

The PARs may result in the generation of 1,920 amortized metric tons of CO₂e construction emissions per year and 4538.56 metric tons of CO₂e operational emissions per year. The addition of 6,458.56 metric tons of CO₂e emissions is less than the SCAQMD significance threshold of 10,000 metric tons per year for CO₂e from industrial projects.

Conclusion

Based upon these considerations, the proposed project would not generate significant adverse construction or operational air quality impacts and, therefore, no further analysis is required or necessary and no mitigation measures are necessary or required.

IV. BIOLOGICAL RESOURCES.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

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.

Discussion

IV. a), b), c), & d) No Impact. All of the affected units operating at existing facilities are located primarily in developed industrial areas, which have already been greatly disturbed and paved. These areas currently do not support riparian habitat, federally protected wetlands, or migratory corridors. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the affected facilities. Therefore, the proposed project would have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction. While some of the APCDs may be located at new facilities, the rule amendment does not cause the new facilities to be build. Construction of the required APCDs in itself would not have any impact on plants or animals beyond the impact of construction and operating a new source itself. The current and expected future land use development to accommodate population growth is primarily due to economic considerations or local government planning decisions. A conclusion in the Final Program EIR for the 2012 AQMP was that population growth in the region would have greater adverse effects on plant species and wildlife dispersal or migration corridors in the basin than SCAQMD regulatory activities, (e.g., air quality control measures or regulations). In addition, by reducing air pollutants, biological resources will benefit. Accordingly, these impact are considered insignificant.

IV. e) & f) No Impact. The proposed project is not envisioned to conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Additionally, the proposed project will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan, and would not create divisions in any existing communities because all activities associated with complying with the proposed project will occur at existing industrial facilities. Accordingly, these impact issues are considered insignificant.

Based upon these considerations, significant biological resources impacts are not expected from implementing the proposed project, and thus, this topic will not be further analyzed in the Draft EA. Since no significant biological resources impacts were identified for any of the issues, no mitigation measures are necessary or required.

V. CULTURAL RESOURCES.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource, site, or feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.

DISCUSSION

V. a) No Impact. There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. Since construction-related activities associated with the implementation of the proposed project are expected to be confined within the existing footprint of the affected facilities that either have been fully developed and paved, or will be developed regardless of whether the project is approved, no impacts to historical resources are expected to occur as a result of implementing the proposed project. Accordingly, this impact issue is not significant.

V. b), c), & d) Installing or modifying add-on controls and other associated equipment to comply with the proposed project may require disturbance of previously disturbed areas at the affected existing industrial facilities. However, since construction-related activities are expected to be confined within the existing footprint of the affected facilities that have been fully developed and paved, or will be regardless of whether the project is approved, the proposed project is not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed. As noted in Section IV, the project does not cause new source construction, regardless, this will occur whether or not the project is approved. Therefore, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemeteries. The proposed project

is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the District. Accordingly, these impacts are not significant.

Based upon these considerations, significant cultural resources impacts are not expected from implementing the proposed project. Since no significant cultural resources impacts were identified for any of the issues, no mitigation measures are necessary or required.

VI. ENERGY.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with adopted energy conservation plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the need for new or substantially altered power or natural gas utility systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Create any significant effects on local or regional energy supplies and on requirements for additional energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create any significant effects on peak and base period demands for electricity and other forms of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with existing energy standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

DISCUSSION

VI. a) & e) The PARs do not require any action which would result in any conflict with an adopted energy conservation plan or violation of any energy conservation standard. The PARs are not expected to conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing any existing energy conservation plans.

The PARs are not expected to cause new development. The local jurisdiction or energy utility sets standards (including energy conservation) and zoning guidelines regarding new development and will approve or deny applications for building new equipment at the affected facility. During the local land use permit process, the project proponent may be required by the local jurisdiction or energy utility to undertake a site-specific CEQA analysis to determine the impacts, if any, associated with the siting and construction of new development.

As a result, the PARs would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems.

VI. b), c) & d.

There may be an increase in electricity consumption associated with the new APC equipment. Diesel fuel would be consumed by construction equipment. Gasoline fuel would be consumed by the construction workers vehicles. Natural gas fuel would be consumed by the new Thermal Oxidizers. The following sections evaluate the various forms of energy sources affected by the proposed project.

Construction-Related Impacts

PROJECT-SPECIFIC IMPACT: During the construction phases, diesel and gasoline fuel will be consumed in construction equipment portable equipment (e.g., generators and compressors) used to weld, cut, and grind metal structures and by construction workers' vehicles traveling to and from construction sites. To estimate "worst-case" energy impacts associated with the construction phases of the proposed project, the SCAQMD assumed that portable equipment used to weld, cut, and grind metal structures would be operated up to 500 hours in a year (8 hours per day for 60 days). The reader is referred to Appendix B for the assumptions used by the SCAQMD to estimate fuel usage associated with the implementation of the proposed amendments.

To estimate construction workers' fuel usage per commute round trip, the SCAQMD assumed that workers' vehicles would get 20 miles to the gallon and would travel 40 miles round trip to and from the construction site in one day. Table 2-9 lists the projected energy impacts associated with the construction and installation at the two affected facilities at any given time.

Table 2-9 Total Projected Fuel Usage for Construction Activities

Fuel Type	Year 2012 Projected Basin Fuel Demand^a (mmgal/yr)	Fuel Usage^b (mmgal/yr)	Total % Above Baseline	Exceed Significance?
Diesel	524	0.0014	3.0E-10	No
Gasoline	5,589	0.012	2.1E-12	No

^a Figures taken from Table 3.3-3 of the 2012 AQMP Final EIR

^b Estimated peak fuel usage from the implementation of the proposed amendments. Diesel usage estimates are based on portable construction equipment operation. Gasoline usage estimates are derived from workers' vehicle daily trips to and from work.

Operational Energy Impacts

PROJECT-SPECIFIC IMPACT: Any operational natural gas impacts associated with implementing the proposed amendments are attributable to fuel consumed in thermal oxidizers used by affected facilities to reduce toxic risk. According to Table 2-3, approximately five thermal oxidizers could use some type of oxidation device to comply with the risk reduction requirements in the PARs. To estimate natural gas fuel usage from thermal oxidizer operation, the SCAQMD assumed that the five units (one unit per facility) would operate eight hours per day, six days per week, 52 weeks per year and fire natural gas only. At an exhaust emission flow rate of 10,000 cfm, the amount of natural gas consumed is 0.488 MMBTU/hr and 28 kW of instantaneous power.

$(5 \text{ Thermal Oxidizers} \times 8 \text{ hrs/day} \times 6 \text{ days/wk} \times 52 \text{ wks/yr} \times 0.488 \text{ MMBTU/hr}) / (1050 \text{ MMBTU/MMcf}) = 5.8 \text{ MMcf per year or } 0.11 \text{ MMcf/day}$

Table 2-10 lists the projected natural gas impacts associated with the operational phase of the proposed amendments. The natural gas usage from the proposed project is negligible to the demand of natural gas available in the district.

Table 2-10 Total Projected Natural Gas Usage for Thermal Oxidizer Operations

Year	Projected Regional Natural Gas Demand ^a (mmcf/day)	Project Total Natural Gas Usage ^b (mmcf/day)	Total Impact % of Capacity	Significant?
2010	493	0.11	0.022	No

^a Figures taken from Table 3.3-6 of the 2012 AQMP Final EIR-Commercial Sector

^b Estimated natural gas usage from the implementation of the proposed project.

Electricity Impacts

SCAQMD staff estimates there will be additional electricity usage for the new APC equipment. Electrical energy impacts associated with ancillary equipment (e.g., fans, motors, etc.) used in conjunction with the 5 thermal oxidizers, 16 HEPA filters, 96 baghouses, 8 carbon adsorbers, and 14 wet scrubbers will need 139 blowers and are not considered significant as shown in Table 2-11.

Table 2-11 PARs Additional Electricity Consumption

Energy	Consumption (GW-h)
Blower (100 bhp@ 0.001788 GW-h) x 139	0.25
SCAQMD District Electrical Demand ¹	113,109
Total Impact % of Capacity	2.2E-4
Significant?	No

¹AQMP 2012 TABLE 3.3-1 2011 Electricity Use GWh (Aggregated, includes self generation and renewables)

Therefore, based on the foregoing analysis, the SCAQMD has determined that operational-related activities associated with the implementation of the proposed amendments is necessary and will not use energy in a wasteful manner; will not result in substantial depletion of existing energy resource supplies; nor will significant amounts of fuel be needed when compared to existing supplies. Thus, there are no significant adverse energy/mineral resources impacts associated with the implementation of the PARs.

Based upon these considerations, significant adverse energy impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

VII. GEOLOGY AND SOILS.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

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.

DISCUSSION

VII. a) Since the proposed project would result in construction activities at existing facilities located in developed industrial settings to install or modify control equipment, little site preparation is anticipated that could adversely affect geophysical conditions in the jurisdiction of the SCAQMD. While some APCDs may be installed at new facilities, the project does not cause the new facility construction. Southern California is an area of known seismic activity. Accordingly, the installation of add-on controls at existing or new affected facilities to comply with the proposed project is expected to conform to the Uniform Building Code and all other applicable state and local building codes. As part of the issuance of building permits, local jurisdictions are responsible for assuring that the Uniform Building Code is adhered to 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 basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation condition at the site. The Uniform Building Code requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction. Thus, the proposed project would not alter the exposure of people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structures to the risk of loss, injury, or death involving the rupture of an earthquake fault, seismic ground shaking, ground failure or landslides is not anticipated.

VII. b) Since add-on controls will likely be installed at existing developed facilities, during construction of the proposed project, a slight possibility exists for temporary erosion resulting from grading activities, if required (controls included as part of new facilities are not expected to cause erosion or excavating beyond that otherwise resulting from constructing the new facility). These activities are expected to be minor since the existing facilities are generally flat and have previously been graded and paved. Further, wind erosion is not expected to occur to any appreciable extent, because operators at dust generating sites would be required to comply with the best available control measure (BACM) requirements of SCAQMD Rule 403 – Fugitive Dust. In general, operators must control fugitive dust through a number of soil stabilizing measures such as watering the site, using chemical soil stabilizers, revegetating inactive sites, etc. The proposed project involves the installation or modification of add-on control equipment at existing facilities, so that grading could be required to provide stable foundations. Potential air quality impacts related to grading are addressed elsewhere in this EA (as part of construction air quality impacts). No unstable earth conditions or changes in geologic substructures are expected to result from implementing the proposed project. Accordingly, this impact is not considered significant.

VII. c) Since the proposed project will affect existing facilities, it is expected that the soil types present at the affected facilities will not be made further susceptible to expansion or liquefaction. Furthermore, subsidence is not anticipated to be a problem since only minor excavation, grading,

or filling activities are expected occur at affected facilities. Additionally, the affected areas are not envisioned to be prone to new landslide impacts or have unique geologic features since the affected equipment units are located at existing facilities in industrial areas. Controls installed at new facilities would not increase these risks beyond those resulting from the new facility itself. Accordingly, this impact is not considered significant.

VII. d) & e) Since the proposed project will affect equipment units at existing facilities located in industrial zones, it is expected that people or property will not be exposed to new impacts related to expansive soils or soils incapable of supporting water disposal. Further, typically each affected facility has some degree of existing wastewater treatment systems that will continue to be used and are expected to be unaffected by the proposed project. Sewer systems are available to handle wastewater produced and treated by each affected facility. Each existing facility affected by the proposed project does not require installation of septic tanks or alternative wastewater disposal systems. As a result, the proposed project will not require facility operators to utilize septic systems or alternative wastewater disposal systems. Thus, implementation of the proposed project will not adversely affect soils associated with a septic system or alternative wastewater disposal system. Accordingly, these impacts are not considered significant.

Based upon these considerations, significant geology and soils impacts are not expected from the implementation of the proposed project. Since no significant geology and soils impacts were identified for any of the issues, no mitigation measures are necessary or required.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Significantly increased fire hazard in areas with flammable materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- 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.

DISCUSSION

VIII. a) & b) The PARs may increase the amount of captured toxic emissions. The additional captured toxic emissions through additional air pollution control equipment would reduce the toxic emissions that are currently emitted into the air. Thus, the capture of these emissions would reduce toxic exposure to the public and the environment.

Oxidation systems can be susceptible to compressor failure and flame flashbacks, particularly during startup and shutdown. As a result, oxidation systems could pose potential hazard risks primarily to workers or to a lesser extent the public in the event of explosions or fires. Oxidation systems historically have a good safety record when operated properly according to the manufacturers' instruction. Proper tune-up and maintenance is also important and necessary to avoid failures or explosions. When installed, operated, and maintained properly, oxidation systems are not expected to create fire or explosion hazards to workers or the public in general.

Operation of a carbon adsorption control system has potential hazard risks, primarily during the desorption cycle when there is a slight risk of explosion or release of VOC into the atmosphere. Carbon adsorption systems may also represent a fire risk during operation when carbon particles are saturated with solvent. Although most halogenated hydrocarbons have low flammability potential, use of such solvents is expected to decrease due to implementation of regulations to prevent global warming and stratospheric ozone depletion. Therefore, fire risks associated with carbon adsorption systems could differ depending upon the solvents used in place of halogenated compounds. Further, hazard risks would depend on the flammability of the material, concentration of VOC adsorbed into the activated carbon, ambient oxygen levels, characteristics of the specific system, and the operating conditions. Additionally, use of carbon adsorption units may concentrate hazardous organic compounds into the spent carbon, requiring recycling or disposal. This practice may generate environmental hazards during handling and disposal.

The risk of explosion or release of VOC from carbon adsorption systems is not expected to be significant. The engineering specifications for a carbon adsorption unit are typically designed to guard against risks by including an energy balance, which is an acceptable range of temperatures for the carbon bed. Good engineering practice means this range of temperatures should not exceed the lower explosive limit (LEL) of the compound(s) being adsorbed. There is little risk of fire if the LEL is not exceeded.

In addition to following good engineering practice for both thermal oxidizers and carbon adsorption systems, Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local

administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- * Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- * Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- * Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- * Procedures to notify the necessary persons who can respond to an emergency within the facility;
- * Details of evacuation plans and procedures;
- * Descriptions of the emergency equipment available in the facility;
- * Identification of local emergency medical assistance; and
- * Training (initial and refresher) programs for employees in:
 1. The safe handling of hazardous materials used by the business;
 2. Methods of working with the local public emergency response agencies;
 3. The use of emergency response resources under control of the handler;
 4. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area.

Further, all hazardous materials are expected to be used in compliance with established OSHA or Cal/OSHA regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training.

When taken together, the above regulations provide comprehensive measures to reduce hazards of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure the potential for explosions or accidental releases of hazardous materials is not significant.

Therefore, the PARs are not expected to create a significant hazard to the public or environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment.

VIII. c) It is not known if schools are located within a quarter mile of the affected facilities. However, it is expected that these facilities near schools are taking the appropriate and required actions to ensure proper handling of hazardous or acutely hazardous materials, substances or wastes within one-quarter mile of an existing or proposed school.

VIII. d) Government Code §65962.5 refers to hazardous waste handling practices at facilities subject to the Resources Conservation and Recovery Act (RCRA). It is not known if the affected facilities are subject to RCRA. However, it is expected that these facilities are taking the appropriate and required actions to ensure proper handling of hazardous or acutely hazardous materials, substances or wastes.

VIII. e) The PARs would result in the reduction of toxic emissions. It is not known if some of the facilities affected by the proposed project are located at sites within an airport land use plan, or within two miles of a public airport. However, the addition of new or modification of existing toxic control equipment would not expose people residing or working in the project area to the same degree of the existing settings associated with airplanes. Therefore, the PARs are not expected to result in a safety hazard for people residing or working in the project area even within the vicinity of an airport.

VIII. f) Emergency response plans are typically prepared in coordination with the local city or county emergency plans to ensure the safety of the public (surrounding local communities), and the facility employees as well. The proposed project would not impair implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan. It is expected that the existing affected facilities already have an emergency response plan in place, where required. The addition of air pollution control equipment is not expected to require modification of the existing emergency response plan at the affected facilities. Thus, the PARs are not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

VIII. g) It is not known if the affected facilities are adjacent to wildland. However, it is expected that these facilities are taking the appropriate and required actions to ensure proper handling of hazardous or acutely hazardous materials, substances or wastes, so potential for a wildland fire from the proposed project does not exist.

VIII. h) The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations. Further, businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. Local fire departments ensure that

adequate permit conditions are in place to protect against potential risk of upset. The proposed project would not change the existing requirements and permit conditions.

The proposed project would also not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees. No substantial or native vegetation typically exists on or near the affected facilities (specifically because such areas could allow the accumulation of fugitive lead dust), the existing rule requires the encapsulating (paving or asphaltting) of all facility grounds. So the proposed project is not expected to expose people or structures to wild fires. Therefore, no significant increase in fire hazards is expected at the affected facilities associated with the proposed project.

Based upon these considerations, significant adverse hazards and hazardous materials impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

IX. HYDROLOGY AND WATER QUALITY.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project: as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow?				
g) Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for total water by more than five million gallons per day.

Water Quality:

- 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 capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- 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.

DISCUSSION

As identified in Table 2-3, the two groups of controls that have the potential to increase water demand in the district are carbon adsorption and wet scrubbers. The removal of organic material from spent carbon from carbon adsorbers may involve the use of a steam stripping application. The steam/organic mixture is vented to a condenser where the mixture is cooled. The mixture can either be disposed of or the water can be separated from the organic mixture by decanting or distillation.

The absorption process involves the transfer of components from a gas stream into a liquid form. The choice of absorbent is dependent on the physical properties of the pollutants to be controlled. Water can be used as an absorbent media for soluble gases. There are typically two modes of operation for an absorption process: simple and reclaiming/recycling. The simple process uses a single-liquid-pass system, where the water containing the toxic emission is disposed of directly after exiting the absorber. The water absorbent would need to be replaced periodically. In the complex process, the toxic component is removed or stripped from the water, and the water is recirculated into the system. In order for an absorption process to function efficiently, a certain volume of the water/toxic solution must be removed at a steady rate. The portion that is removed, which is termed the wet scrubber blowdown, constitutes the wastewater component of the process. The water that is removed must also be replaced.

Staff has identified 22 new wet scrubbers or carbon adsorption systems to comply with the proposed amendments. For the purposes of this analysis, an average emission exhaust flowrates was evaluated to estimate potential water demand generated by the proposed amendments. The flowrate evaluated are 10,000 CFM (Table 2-12).

If all of the 22 APCDs are assumed to have operations that require control equipment to handle a flowrate of 10,000 CFM, as much as 226,000 gallons per day [0.22 million gallons per day (MMgal/day)] would be needed for all 22 APCDs. This incremental daily increase in water demand anticipated for the PARs is negligible (7.1E-7%) compared to the total district supply of 9.8 million acre-feet (MAF) or 3,193,344 million gallons for 2012. Further, this incremental increase in water demand does not exceed the SCAQMD's significance threshold of potable water 262,820 gallons per day and total water of 5,000,000 gallons per day and, therefore, is not considered to be significant.

Table 2-12 Wastewater Discharge Volumes/Freshwater Demand From Carbon Adsorption and Wet Scrubbing

WASTEWATER STREAM TYPE	AVERAGE SYSTEM FLOWRATE
	10,000 CFM
Wet Scrubber blowdown (MMgal/day) ^a	0.039 - 0.214
Wet Scrubber sludge dewatering (MMgal/day) ^b	0.005
Carbon Adsorption stream stripping condense (MMgal/day) ^c	0.0004 – 0.0006
Total Wastewater discharge (MMgal/day) ^d	0.044 – 0.220

a Assumes 0.75 - 3.7 gal min per 1,000 CFM recirculation rate, 10 percent blowdown, fourteen units.

b Assumes wet scrubber dewatered sludge 20 percent solids, 90-98 percent control efficiency.

- c Assumes 3/8 - 1/2 gal water per pound VOC collected, eight units
- d Equal to additional freshwater demand.

IX. a) The PARs are not expected to alter any existing wastewater treatment requirements or otherwise substantially degrade water quality that the requirements are meant to protect because the small volume expected through the APCDs should not warrant a modification to their existing permit.

IX. b) The PARs would not require the use of groundwater. The facilities use potable water that is treated in their respective on-site wastewater treatment, reused, and then directed to the sanitary sewer. Therefore, it would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

IX. c) & d) The PARs is a proposed project that is not expected to have significant adverse effects on any existing drainage patterns, or cause an increase rate or amount of surface runoff water that would exceed the capacity of the facilities' existing or planned storm water drainage systems.

IX. e) & f) The PARs do not include or require any new or additional construction activities to build additional housing that could be located in 100-year flood hazard areas. Similarly, the sources affected by the proposed project are located at existing commercial or industrial facilities. Hence, the PARs are not expected to result in placing housing in 100-year flood hazard areas that could create new flood hazards. Therefore, the PARs are not expected to generate significance impacts regarding placing housing in a 100-year flood zone.

For the same reasons as those identified in the preceding paragraph, PARs are not expected to create significant adverse risk impacts from flooding as a result of failure of a levee or dam or inundation by seiches, tsunamis, or mudflows because the proposed project does not require levee or dam construction, and the affected facilities are located on flat land far from the ocean.

IX. g) The potential increase in wastewater volume generated by the proposed amendments is well within the existing and projected overall capacity of POTWs in the district. Therefore, wastewater impacts associated with the disposal of waterborne clean-up waste material generated from implementing the proposed amendments are not expected to significantly adversely affect POTW operations.

IX. h) SCAQMD staff estimates the additional water usage from the affected facilities would be negligible (see the above Discussion). Therefore, the PARs new APCDs water demand can be met.

IX. i) Carbon adsorbers and wet scrubbers are control technologies that can generate a hazardous liquid that could be identified as a hazardous waste depending upon the concentrations of its chemical components. If these liquids were to be discharged as a result of an equipment failure or accidental release, the hazardous material could migrate into groundwater supplies or travel into surface waters. If it is assumed that all of the water demand estimated in the proceeding water demand subsection ended up as wastewater, then a maximum volume of 0.426 MMgal of waste water could be generated on a daily basis. It is anticipated that facilities would not need to change their waste water permits due to the proposed project. Thus, no significant adverse impacts from wastewater.

It is not anticipated that the estimated amount of wastewater would create significant adverse groundwater or surface water quality impacts for a number of reasons. First, as explained in the “Geophysical Impacts” section, there are a number of state and federal laws regulating USTs and above-ground storage tanks that eliminate or minimize the possibility of accidental leaks from wastewater-containing storage vessels.

Activated carbon is often used as a method of removing organics from wastewater streams, with the organic waste either recovered and reused, or destroyed by oxidation (Fu, 1993). If regenerative carbon adsorption equipment is used, the solvent is normally recovered rather than requiring disposal. In the case of adsorption-incineration processes, the solvent is destroyed and never enters the waste stream.

In the case of once-through adsorption, spent canisters are typically returned to the supplier for regeneration by a treatment, storage and disposal facility (TSDF). These facilities are subject to strict regulatory limits for contaminated wastewater treatment. The regulatory wastewater discharge limit for wastewater from carbon regeneration by TSDFs is 1 mg/liter of total toxic organics. To ensure compliance with the 1.0 mg/liter limit, local sanitation districts monitor wastewater discharges using EPA Test Methods 601 or 602 (Lum, 1989).

Based upon these considerations, significant adverse hydrology and water quality impacts are not anticipated from the proposed project. Further, since no significant impacts were identified for any of these issues, no mitigation measures are necessary or required.

X. LAND USE AND PLANNING.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

DISCUSSION

X. a) No Impact. The proposed project does not require the construction of new facilities, but any physical effects that will result from the proposed project, will occur at existing facilities located in commercial/industrial areas and would not be expected to go beyond existing boundaries. Thus, implementing the proposed project will not result in physically dividing any established communities.

X. b) No Impact. There are no provisions in the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Further, the proposed project would be consistent with the typical industrial zoning of the affected facilities. Typically, all proposed construction activities are expected to occur within the confines of the existing facilities. The proposed project would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Further, no new development or alterations to existing land designations will occur as a result of the implementation of the proposed project. Therefore, present or planned land uses in the region will not be affected as a result of implementing the proposed project.

Based upon these considerations, significant land use planning impacts are not expected from the implementation of the proposed project. Further, since no significant impacts were identified for any of these issues, no mitigation measures are necessary or required.

XI. MINERAL RESOURCES.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.

DISCUSSION

XI. a) & b) No Impact. There are no provisions in the proposed project that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state such as aggregate, coal, clay, shale, et cetera, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Based upon these considerations, significant mineral resource impacts are not expected from the implementation of the proposed project. Since no significant mineral resource impacts were identified for any of these issues, no mitigation measures are necessary or required.

XII. NOISE.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances 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.

Discussion

XII. a), b), & c) Less Than Significant Impact. The existing noise environment at each of the affected facilities is typically dominated by noise from existing equipment onsite, vehicular traffic around the facilities, and trucks entering and exiting facility premises. Construction activities associated with implementing the proposed project may generate some noise associated with the use of construction equipment and construction-related traffic temporary and minor construction so not expected to take a long period of time. However, noise from the proposed project is not expected to produce noise in excess of current operations at each of the existing facilities. If toxic control devices are installed or existing devices are modified, the operations phase of the proposed project may add new sources of noise to each affected facility. However, control devices are not typically equipment that generate substantial amounts of noise.

Nonetheless, for any noise that may be generated by the control devices, it is expected that each facility affected will comply with all existing noise control laws or ordinances. Further, Occupational Safety and Health Administration (OSHA) and California-OSHA (Cal/OSHA) have established noise standards to protect worker health. These potential noise increases are expected within the allowable noise levels established by the local noise ordinances for industrial areas, and thus are expected to be less than significant. Therefore, less than significant noise impacts are expected to result from the operation of the proposed project.

XII. d) Less Than Significant Impact. It is not known where the future affected facilities will be located, although some of the existing affected facilities could be located at sites within an airport land use plan, or within two miles of a public airport. However, the addition of new or modification of existing toxic control equipment would not expose people residing or working in the project area to the same degree of excessive noise levels associated with airplanes because APCDs are not typically noise generating equipment. All noise producing equipment must comply with local noise ordinances and applicable OSHA or Cal/OSHA workplace noise reduction requirements. Therefore, less than significant noise impacts are expected to occur at sites located within an airport land use plan, or within two miles of a public airport.

Based upon these considerations, significant noise impacts are not expected from the implementation of the proposed project. Further, since no significant impacts were identified for any of these issues, no mitigation measures are necessary or required.

XIII. POPULATION AND HOUSING.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

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.

DISCUSSION

XIII. a) and b) The construction activities associated with the proposed project at each affected facility are not expected to involve the relocation of individuals, require new housing or commercial facilities, or change the distribution of the population. The reason for this conclusion is that operators of affected facilities who need to perform any construction activities to comply with the proposed project can draw from the large existing labor pool in the local southern California area. Further, it is not expected that the installation of new or the modification of existing toxic control equipment will require new employees during operation of the equipment. In the event that new employees are hired, it is expected that the number of new employees at any one facility would be small. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing the proposed project. As a result, the proposed project is not anticipated to generate any significant adverse effects, either direct or indirect, on population growth or displace people in the district or population distribution.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed project. Since no significant population and housing impacts were identified for any of these issues, no mitigation measures are necessary or required.

XIV. PUBLIC SERVICES.

Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 times or other performance objectives for any of the following public services:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.

Discussion

XIV. a) & b) Less Than Significant Impact. Implementation of the proposed project is expected to cause facility operators to install new or modify existing toxic emissions control devices, all the while continuing current operations at existing affected facilities. The proposed project may result in a greater demand for catalyst, scrubbing agents and other chemicals, which will need to be transported to the affected facilities to support the function of toxic emissions control equipment and stored onsite prior to use. As first responders to emergency situations, police and fire departments may assist local hazmat teams with containing hazardous materials, putting out fires, and controlling crowds to reduce public exposure to releases of hazardous materials. In addition, emergency or rescue vehicles operated by local, state, and federal law enforcement agencies, police and sheriff departments, fire departments, hospitals, medical or paramedic facilities, that are used for responding to situations where potential threats to life or property exist, including, but not limited to fire, ambulance calls, or life-saving calls, may be needed in the event of an accidental release or other emergency. While the specific nature or degree of such impacts is currently unknown, the affected facilities have existing emergency response plans so any changes to those plans would not be expected to dramatically alter how emergency personnel would respond to an accidental release or other emergency. In addition, due the low probability and unpredictable nature of accidental releases, the proposed project is not expected to increase the need or demand for additional public services (e.g., fire and police departments and related emergency services, et cetera) above current levels.

XIV. c) No Impact. As noted in the previous “Population and Housing” discussion, the proposed project is not expected to induce population growth in any way because the local labor pool (e.g., workforce) is expected to be sufficient to accommodate any construction activities that may be necessary at affected facilities and operation of new or modified toxic emissions control equipment is not expected to require additional employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

XIV. d) No Impact. The proposed project is expected to result in the use of new or modified add-on control equipment for toxic control. Besides permitting the equipment or altering permit conditions by the SCAQMD, there is no need for other types of government services. 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. There will be no increase in population and, therefore, no need for physically altered government facilities.

Based upon these considerations, significant public services impacts are not expected from the implementation of the proposed project. Since no significant public services impacts were identified for any of these issues, no mitigation measures are necessary or required.

XV. RECREATION.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment or recreational services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

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.

DISCUSSION

XV. a) & b) No Impact. As discussed earlier under the topic of “Population and Housing,” there are no provisions in the proposed project that would affect or increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or the expansion of existing recreational facilities that might have an adverse physical effects on the environment because the proposed project will not directly or indirectly increase or redistribute population. Based upon these considerations, including the conclusion of “no impact” for the topic of “Population and Housing,” significant recreation impacts are not expected from implementing the proposed project. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

XVI. SOLID/HAZARDOUS WASTE.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

DISCUSSION

XVI.a) Landfills are permitted by the local enforcement agencies with concurrence from the California Department of Resources Recycling and Recovery (CalRecycle). 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. The PARs would generate additional waste from the disposal of contaminated concrete and soils that is discussed in further detail in the following paragraphs.

One way to evaluate sold/hazardous waste impacts is to determine if the proposed project or any components therein will result in a need for new landfill capacity. Because affected facilities may install control equipment or implement process changes that could increase the waste products in the form of liquid or solids, implementing the proposed amendment may have solid hazardous waste impacts. As noted in Table 2-3, operation of control equipment such as filters, carbon adsorption, and wet scrubbers could have solid waste impacts.

Assumptions Used in The Solid Waste Analysis

This analysis of solid waste impacts assumes that safety and disposal procedures required by various agencies in the state of California will provide reasonable precautions against the improper disposal of hazardous wastes in a municipal waste landfill. Because of state and federal requirements, some facilities are attempting to reduce or minimize the generation of solid and hazardous wastes by incorporating source reduction technologies to reduce the volume or toxicity of wastes generated, including improving operating procedures, using less hazardous or nonhazardous substitute materials, and upgrading or replacing inefficient processes.

Carbon Adsorption

The amount of solid waste that may be generated by the carbon adsorption process would depend on the number of carbon adsorber installed, the operating characteristics, and frequency of carbon replacement. Disposal of spent carbon could adversely affect solid waste disposal facilities because increased quantities of waste may be generated. In addition, spent carbon may be considered hazardous waste depending on the constituents present and their concentrations, which may require disposal in a Class I landfill.

Only eight carbon adsorbers may be installed to comply with the PARs. Table 2-13 outlines the annual solid waste estimates from the disposal of spent carbon from those facilities installing carbon adsorbers to comply with the proposed amendments. It should be noted that the amounts of solid waste generated (Table 2-13) substantially overestimates solid waste impacts because most carbon is regenerated in a rotary kiln and reused. The rotary kiln typically consumes five percent of the carbon in the process, which has to be replaced. Therefore, no significant adverse solid waste impact is anticipated from the disposal of spent carbon.

Table 2-13 Estimates of Solid Waste from Carbon Adsorption

Process Exhaust Rate	5,000 CFM	10,000 CFM	20,000 CFM
Solid Waste Quantity:			
Carbon adsorption (spent carbon) (tons/yr) ^a	1,136	1,136	1,136

^a Based on total emissions of 71 ton/yr for low and medium boiling point VOC and carbon replacement rate 2-lb carbon/lb VOC per year, assuming 5-year bed life, eight permit units.

Wet Scrubbing

It is estimated that fourteen wet scrubbers may be installed as a control option to comply with the proposed amendments. Assuming a 98 percent control efficiency, wet scrubbing of all metal compounds would be expected to generate a maximum volume of 128.8 tons per year (9.2 tons per year per wet scrubber x 14 facilities) of hazardous solids and dewatered sludge. Based on the types of facilities that would install wet scrubbers, it is likely that this waste would be concentrated with metals and would most likely need to be disposed of as a hazardous waste in a Class I landfill.

Filtration

Filtration includes usage of baghouse, HEPA filters and DPFs. All mixed metal compounds could be generated with the use of filtration controls at a 99.9 percent control rate. It is likely that the majority of the approximately 224.2 tons per year of minerals and silica (118 filtration systems x 1.9 tons per year per filter) that could potentially be generated by filtration devices would be used as land cover at a solid waste, Class II landfill. Otherwise, if traces of asbestos, etc. are found, the filter would need to be disposed in a Class I landfill.

Depending upon what type of control equipment is used, the total quantity of waste requiring disposal in a Class I landfill that may be generated from the disposal of spent carbon, minerals and metal compounds is 1.9 tons per day (or 410.5 tons per year). Currently, there are three Class I landfills in California: Laidlaw Environmental in Westmoreland, Imperial County; Chemical Waste Management Corporation in Kettleman Hills, Kings County; and Laidlaw Environmental, in Buttonwillow, Kern County. According to SCAQMD's 2012 AQMP, the

total available capacity of each of these landfills ranges from 83,425 cubic yards (or 116,796 tons per day). With an annual disposal of 1,489 tons of carbon beds, filters, etc., the total solid/hazardous waste impact from the proposed amendments ranges from 0.0035 percent of the available Class I landfill capacity. The amount of hazardous waste generated by the proposed project will not require new Class I landfills and is not considered to be a substantial impact to existing landfill capacity. Therefore, potential hazardous waste impacts are not considered significant.

Table 2-14 Total Solid Waste Generation

Control Type	Potential # APC Devices	Annual Waste per Control Device (tons/year)	Total Waste Generated (tons/year)
Carbon adsorption	8	142	1,136
Wet Scrubbing	14	9.2	128.8
Filtration	118	1.9	224.2
TOTAL WASTE GENERATED FROM PROPOSED PROJECT			1,489 tons/yr or 4.08 tons/day

XVI.b) It is assumed that facility operators at the affected facilities comply with all applicable local, state, or federal waste disposal regulations.

Implementing the PARs is not expected to interfere with any affected facility’s ability to comply with applicable local, state, or federal waste disposal regulations. Since no solid/hazardous waste impacts were identified, no mitigation measures are required or necessary.

Based upon these considerations, significant adverse solid/hazardous waste impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XVII. TRANSPORTATION/TRAFFIC.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

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 D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- 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.
- The need for more than 350 employees.
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day.
- Increase customer traffic by more than 700 visits per day.

DISCUSSION

XVII. a) & b)

Construction

As noted in the "Discussion" sections of the other environmental topics, compliance with the PARs are expected to require construction activities for control equipment. It has been estimated to need 8 delivery and/or disposal trucks and 8 construction worker trips on a peak construction day (during the fill phases). Construction onsite is not expected to affect on-site traffic or parking. The additional 16 construction trips are less than the significance threshold of 350 round trips, therefore construction activities are not expected to cause a significance adverse impact to traffic or transportation.

Operation

Waste products may be generated from the use of several types of control technologies. Wastes could include: spent carbon generated from the carbon adsorption process; spent metal catalysts from the catalytic oxidation process; solids and sludge from wet scrubbers; and dry solids from filtration controls. The majority of wastes will likely need to be transported to disposal or recycling facilities. The catalysts in catalytic oxidizers need to be replaced every few years so this potential waste product was considered to contribute to the waste transport impacts.

For a "worst case" analysis, SCAQMD staff assumed that for the 134 facilities required to install a control device to comply with the PARs, these facilities at any given day would generate an additional 2 truck trips per day in the entire district additional for delivery and disposal. These potential truck trips are not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities. In addition, this volume of additional daily truck traffic is negligible over the entire area of the district. Finally, the number waste disposal transport trips substantially overestimates the number of anticipated trips because owners/operators at affected facilities may use other types of add-on control equipment

that do not generate wastes and the actual volume of wastes is expected to much less than estimated here, resulting in fewer truck trips per day.

Table 2-15 Estimation of Vehicle Trips

Phase	Worker Vehicles	Delivery/Disposal Trucks
Construction	4/day	3 per day ^a
Operation	N/A	2 per day ^b

^a A maximum of 4 worker vehicles and 3 delivery/disposal trucks per day were estimated from two affected facilities peak construction

^b A maximum of 2 delivery/disposal trucks can travel in the District for the 134 Affected Facilities

XVII. c) It is not known whether the location of existing or future affected facilities could be located at sites within an airport land use plan, or within two miles of a public airport. However, the addition of new or modification of existing toxic control equipment at ground level facilities is not expected to change the air traffic patterns or change in location that results in substantial safety risks.

XVII. d) & e) The proposed project does not involve construction of any roadways or other transportation design features, so there would be no change to current roadway designs that could increase traffic hazards. Thus, the proposed project is not expected to substantially increase traffic hazards or create incompatible uses at or adjacent to the affected facilities. Emergency access at the affected facilities is not expected to be impacted by the proposed project. Further, each affected facility is expected to continue to maintain their existing emergency access. Since the PARs involves short-term construction activities and operational of control equipment is not expected to increase vehicle trips, the proposed project is not expected to alter the existing long-term circulation patterns. The proposed project is not expected to require a modification to circulation, thus, no long-term impacts on the traffic circulation system are expected to occur.

XVII. f) The affected facilities would still be expected to comply with, and not interfere with adopted policies, plans, or programs supporting alternative transportation (e.g. bicycles or buses). Since all of the PARs' compliance activities would occur on-site, the PARs would not hinder compliance with any applicable alternative transportation plans or policies.

Based upon these considerations, significant adverse transportation/traffic impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

XVIII. a) As discussed in the “Biological Resources” section, the PARs are not expected to significantly adversely affect plant or animal species or the habitat on which they rely because any construction and operational activities associated with affected sources are expected to occur entirely within the boundaries of existing developed facilities in areas that have been greatly disturbed and that currently do not support any species of concern or the habitat on which they rely. The PARs are not expected to reduce or eliminate any plant or animal species or destroy prehistoric records of the past.

XVIII. b) Based on the foregoing analyses, the PARs would not result in significant adverse project-specific environmental impacts. Potential adverse impacts from implementing the PARs would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for any environmental topic because there are no, or only minor incremental project-specific impacts that were concluded to be less than significant. Per CEQA Guidelines §15064(h)(4), the mere existing of significant cumulative impacts caused by other projects alone shall not constitute

substantial evidence that the proposed project's incremental effects are cumulatively considerable. SCAQMD cumulative significance thresholds are the same as project-specific significance thresholds.

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria..." "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast Air Quality Management District significance thresholds. See also, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the South Coast Air Quality Management District's approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the Project will not cause a significant unavoidable cumulative contribution to an air quality impact.

Therefore, there is no potential for significant adverse cumulative or cumulatively considerable impacts to be generated by the proposed project for any environmental topic.

XVIII. c) Based on the foregoing analyses, the proposed project is not expected to cause adverse effects on human beings for any environmental topic because the air quality impacts were determined to be less than the significance thresholds (See Section III-AQ), the energy demand, water demand and solid waste disposal can be met utilizing existing services (See Section VI-Energy, Section IX-Hydrology and Section XVI-Solid/Hazardous Waste) and the aesthetics, noise, hazards and public services will not be significantly impacted (See Section I-Aesthetics, Section VII-Hazards, Section XII-Noise, and Section XIV-Public Services).

As previously discussed in environmental topics I through XVIII, the proposed project has no potential to cause significant adverse environmental effects. Therefore, no further analysis or mitigation measures are required or necessary.

APPENDICES

APPENDIX A

PROPOSED AMENDED RULES

Please find the final rule language in the Governing Board Package.

APPENDIX B

ASSUMPTIONS AND CALCULATIONS

Table B-1 Summary

Total On-Site for one Facility

	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOx, lb/day	CO2e, ton/year	Total GHG Amortized over 30 years for 134 facilities (CO2e/yr)
Grading/Site Preparation	11	25	4.0	1.6	2.7	0.0	13	
Paving	8	12	0.7	0.7	0.2	0.01	2	
Equipment Installation	15	30	1.4	1.3	3.4	0.0	414	

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Total Daily at Two Facilities (maximum "worst case")

	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOx, lb/day	CO2e, ton/year
Grading/Site Preparation	22.9	50.4	8.0	3.2	5.4	0.1	25.2
Paving	15.0	24.0	1.5	1.3	0.5	0.0	4.6
Equipment Installation	29.9	59.2	2.9	2.6	6.9	0.1	828.8
Significance Threshold	550	100	150	55	75	150	100,000
Exceed Significance?	NO	NO	NO	NO	NO	NO	NO

Table B-2 Grade/Site Summary

Grading/Site Preparation -		8 days ^a							
Equipment Type^{a,b}	No. of Equipment	hr/day	Crew Size						
Rubber Tired Dozers	1	7.0	4						
Tractors/Loaders/Backhoes	1	7.0							
Construction Equipment Emission Factors									
	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
Equipment Type^c	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Rubber Tired Dozers	1.101	2.381	0.099	0.091	0.284	0.002	238	0.026	0.099
Tractors/Loaders/Backhoes	0.374	0.498	0.034	0.031	0.073	0.001	67	0.007	0.021
Fugitive Dust Bulldozer Parameters									
Vehicle Speed (mph)^d	Vehicle Miles Traveled^e								
3	21								
Fugitive Dust Material Handling									
Aerodynamic Particle Size Multiplier^f	Mean Wind Speed^g	Moisture Content^h	Dirt Handledⁱ					Dirt Handled^j	
0.35	mph		cy					lb/day	
	10	7.9	3,413			170641		8,532,031	
Construction Vehicle (Mobile Source) Emission Factors^k									
	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Medium-Duty Truck	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Number of Trips and Trip Length		
Vehicle	No. of One-Way Trips/Day	One-Way Trip Length (miles)
Automobile	4	20
Medium-duty Truck ¹	3	20

Incremental Increase in Combustion Emissions from Construction Equipment									
Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Construction Emissions (lb/day)									
Equipment Type	CO lb/day	NOx lb/day	PM10 lb/day	PM2.5 lb/day	VOC lb/day	SOx lb/day	CO2 lb/day	CH4 lb/day	NO2 lb/day
Rubber Tired Dozers	7.71	16.67	0.69	0.64	1.99	0.02	1,665	0.18	0.69
Tractors/Loaders/Backhoes	2.62	3.48	0.24	0.22	0.51	0.01	467	0.05	0.14
Total	10.3	20.2	0.9	0.9	2.5	0.0	2,132	0.2	0.8

Incremental Increase in Fugitive Dust Emissions from Construction Operations				
Equations:				
Grading ^m : PM10 Emissions (lb/day) = 0.60 x 0.051 x mean vehicle speed ^{2.0} x VMTx (1 - control efficiency)				
Material Handling ⁿ PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5) ^{1.3} /(moisture content/2) ^{1.4} x dirt handled (lb/day)/2,000 (lb/ton) (1 - control efficiency)				
Description	Control Efficiency %	Unmitigated PM10^o lb/day	Unmitigated PM2.5^o lb/day	
Earthmoving	61	2.3	0.475	
Material Handling	61	0.67	0.141	
Total		2.9	0.615	

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

Vehicle	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Automobiles	0.6371	2.8971	0.0865	0.0615	0.1255	0.0058	601	0.0058	0.0410
Medium Duty Trucks	0.4779	2.1728	0.0648	0.0462	0.0941	0.0044	451	0.0044	0.0308
	1.115	5.070	0.151	0.108	0.220	0.010	1,051	0.010	0.072

Total Incremental Emissions from Construction Activities

Sources	CO	NOx	PM10	PM2.5	VOC	SOx	CO2
Emissions	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	metric ton/year
	11	25	4.0	1.6	2.7	0.033	13
Significance Threshold^P	550	100	150	55	75	150	
Exceed Significance?	NO	NO	NO	NO	NO	NO	

Notes:

Project specific data may be entered into shaded cells. Changing the values in the shaded cells will not affect the integrity of the worksheets. Verify that units of values entered match units for cell.

Adding lines or entering values with units different than those associated with the shaded cells may alter the integrity of the sheets or produce incorrect results.

a) Based on assumption that each bulldozer can move 35 cubic yards of soil per hour and one acre of area with a depth of 20 feet.

b) Estimated construction equipment assumed to operate one eight-hour shift per day.

c) Emission factors estimated using OFFROAD2011

d) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.

e) Two bulldozers traveling three miles per hour for seven hours per day.

f) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm

g) Mean wind speed - maximum of daily average wind speeds reported in 1981 meteorological data.

i) Assuming 3412.8125 cubic yards of dirt handled (4840 ft² x 20 ft) x yd³/27 ft³/ days)

- j) Dirt handled, lb/day = (3412.8125 yd³ x 2,500 lb/yd³)
- k) Emission factors estimated using EMFAC2011 for the 2014 fleet year.
- l) Assumed 30 cubic yd truck capacity for 3412.8125 cy of dirt [(3412.8125 cy x truck/30 cy) = 3 one-way truck trips/day].
- m) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading $\leq 10 \mu\text{m}$
- n) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12
- o) Includes watering at least three times a day per Rule 403 (61% control efficiency)
- p) SCAQMD CEQA significance thresholds

Table B-3 Paving Summary

Asphalt Paving of Foundation									
Construction Schedule	8 days^a								
Equipment Type^a	No. of Equipment	hr/day	Crew Size						
Pavers	1	7.0	4						
Cement and Mortar Mixers	1	6.0							
Rollers	1	7.0							
Construction Equipment Combustion Emission Factors									
Equipment Type^b	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/hr	lb/hr	lb/hr		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Pavers	0.526	0.810	0.056	0.052	0.143	0.001	78	0.013	0.000
Cement and Mortar Mixers	0.042	0.055	0.002	0.002	0.009	0.000	7	0.001	0.000
Rollers	0.401	0.616	0.042	0.039	0.091	0.001	67	0.008	0.000
Construction Vehicle (Mobile Source) Emission Factors^c									
	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Medium-Duty Truck	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04
Number of Trips and Trip Length									
Vehicle	No. of One-Way Trips/Day	One-Way Trip Length (miles)							
Worker	4	20							
Delivery/Disposal Truck ^d	3	20							

Incremental Increase in Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day)
= Construction Emissions (lb/day)

Equipment Type	CO lb/day	NOx lb/day	PM10 lb/day	PM2.5 lb/day	VOC lb/day	SOx lb/day	CO2 lb/day	CH4 lb/day	NO2 lb/day
Pavers	3.68	5.67	0.39	0.36	0.1	0.00	51	0.01	0.00
Cement and Mortar Mixers	2.41	3.70	0.25	0.23	0.0	0.00	0	0.00	0.00
Rollers	0.29	0.39	0.02	0.02	0.0	0.00	0	0.00	0.00
Total	6	10	0.66	0.61	0.06	0.00	51	0.01	0.00

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x
Trip length (mile) = Mobile Emissions (lb/day)

Vehicle	CO lb/day	NOx lb/day	PM10 lb/day	PM2.5 lb/day	VOC lb/day	SOx lb/day	CO2 lb/day	CH4 lb/day	NO2 lb/day
Worker	0.659	0.055	0.0166	0.0071	0.0720	0.0013	116.5368	0.0032	0.0008
Delivery	0.478	2.173	0.0648	0.0462	0.0941	0.0044	450.6386	0.0044	0.0308
Total	1.137	2.227	0.0814	0.0532	0.1661	0.0057	567.1755	0.0076	0.0315

Total Incremental Combustion Emissions from Construction Activities

Sources	CO lb/day	NOx lb/day	PM10 lb/day	PM2.5 lb/day	VOC lb/day	SOx lb/day	CO2eq metric ton/year
Emissions	8	12	0.7	0.7	0.2	0.0	2.3
Significance Threshold^e	550	100	150	55	75	150	
Exceed Significance?	NO	NO	NO	NO	NO	NO	

Notes:

Project specific data may be entered into shaded cells. Changing the values in the shaded cells will not affect the integrity of the worksheets. Verify that units of values entered match units

for cell. Adding lines or entering values with units different than those associated with the shaded cells may alter the integrity of the sheets or produce incorrect results.

- a) Estimated construction equipment assumed to operate one eight-hour shift per day.
- b) Emission factors estimated using OFFROAD2011
- c) Emission factors estimated using EMFAC2011 for the 2014 fleet year.
- d) Assumed three deliver truck trips per day.
- e) SCAQMD CEQA significance thresholds

Table B-4 Operational Summary

Operational									
	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Automobile	4.12E-03	3.41E-04	1.04E-04	4.41E-05	4.50E-04	8.22E-06	0.73	2.01E-05	4.83E-06
Medium-Duty Truck ^a	3.98E-03	1.81E-02	5.40E-04	3.85E-04	7.84E-04	3.64E-05	3.76	3.64E-05	2.56E-04

Number of Trips and Trip Length		
Vehicle	No. of One-Way Trips/Dayⁱ	One-Way Trip Lengthⁱ (miles)
Worker	0	20
Medium-Duty Truck	8	20

Incremental Increase in Combustion Emissions from Onroad Mobile Vehicles									
Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)									
Vehicle	CO	NOx	PM10	PM2.5	VOC	SOx	CO2	CH4	NO2
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Automobile	0.00	0.000	0.0000	0.0000	0.000	0.00000	0	0.0000	4.83E-06
Medium-Duty Truck	1.3	5.8	0.173	0.123	0.25	0.0116	1,202	0.0117	0.082

Total Incremental Emissions from Operational Activities							
Sources	CO	NOx	PM10	PM2.5	VOC	SOx	CO2
Emissions	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	metric ton/year
	1.3	5.8	0.2	0.1	0.3	0.01	0.56
Significance Threshold^b	550	55	150	55	75	150	10,000

Exceed Significance?	NO	NO	NO	NO	NO	NO	NO
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Notes:
a) Emission factors estimated using EMFAC2011 for the 2015 fleet year.
b) SCAQMD significance thresholds

Table B-5 Thermal Oxidizer Summary**Annual Emission Reporting Default Emission Factors for External Combustion Equipment**

Fuel Type (fuel unit)	Organic Gases, lb/mmscf	Rule 1147 Nitrogen Oxides, lb/mmbtu	Sulfur Oxides, lb/mmscf	Carbon Monoxide, lb/mmscf	Particulate Matter, lb/mmscf	CO ₂ , lb/mmscf	N ₂ O, lb/mmscf	CH ₄ , lb/mmscf
Natural Gas/ Other Equipment	7	0.073	0.6	35	7.5	120,000	0.64000	2.3

Annual Emission Reporting (AER) defaulting emission factors from B1 external combustion equipment for all criteria pollutants exempt NO_x.
BACT= Rule 1147 NO_x emissions limit was used.

CO₂, N₂O and CH₄ emission factors from AP-42 Table 1.4-2, July 1998

Thermal Oxidizer Criteria Pollutant Emissions

Natural Gas Rating, mmbtu/hr	Conversion, btu/scf	Natural Gas Usage, mmscf/hr	Op Time, hr/day	ROG, lb/day	NO _x , lb/day	SO _x , lb/day	CO, lb/day	PM, lb/day
2.44	1,050	0.00232	8	0.1	1.4	0.01	0.7	0.1

Natural gas rating based on engineering estimate.

Thermal Oxidizer Greenhouse Gas Emissions

Natural Gas Usage, mmscf/yr	CO ₂ , metric ton/year	N ₂ O, metric ton/year	CH ₄ , metric ton/year	CO ₂ e, metric ton/year
20.3	1,105	0.01	0.02	1,107

**Table B-6
Construction Equipment Fuel Use**

Grading/Site Preparation

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Rubber Tired Dozers	2	7.0	5.2	72.8
Tractors/Loaders/Backhoes	2	7.0	1.9	26.6
				99.4

Paving

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Cranes	3	4.0	3.52	42.24
Forklifts	2	6.0	0.96	11.52
Tractors/Loaders/Backhoes	2	8.0	1.9	30.4
				84.16

Equipment Installation

Equipment Type	No. of Equipment	Op Time, hr/day	Fuel Economy, gal/hr	Fuel Used, gal/day
Pavers	1	7.0	2.8	19.6
Cement and Mortar Mixers	4	6.0		
Rollers	1	7.0	1.6	11.2
Tractors/Loaders/Backhoes	1	7.0	1.9	13.3
				44.1

**Table B-7
Vehicle Fuel Use**

Grading/Site Preparation

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	4	20	10	16
Medium-duty Truck	3	20	40	3

7

Paving

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	4	20	10	16
Medium-duty Truck	3	20	40	3

Equipment Installation

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	4	20	10	16
Medium-duty Truck	3	20	40	3

Operational

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Medium-duty Truck	3	21	40	3

Vehicle	No. of One-Way, Trips/Day	One-Way Trip Length, miles	Fuel Economy, mpg	Fuel Used, gal/day
Automobile	32	20	10	128

ATTACHMENT I

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Socioeconomic Assessment for

Proposed Amended Rules

212 – Standards for Approving Permits and Issuing Public Notice

1401 – New Source Review of Toxic Air Contaminants

1401.1 – Requirements for New and Relocated Facilities Near Schools, and

1402 – Control of Toxic Air Contaminants from Existing Sources

May 2015

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GOVERNING BOARD**

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Speaker of the Assembly Appointee

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EXECUTIVE SUMMARY

On March 31, 2015, the SCAQMD released a Draft Socioeconomic Report for Proposed Amended Rules (PARs) 212, 1401, 1401.1, and 1402. Since the release of the Draft Socioeconomic Report in March, the SCAQMD hosted regional Public Workshops. Based on comments received during the Regional Public Workshops, staff has revised the Draft Socioeconomic Report to identify the AB2588 facilities that would potentially need to prepare an HRA and public noticing and include the cost associated with these activities. A socioeconomic analysis was conducted to assess the impacts of PARs 212, 1401, 1401.1, and 1402, and the associated revisions to risk assessment guidelines for permitting and AB2588. A summary of the analysis and findings is presented below.

<p>Elements of Proposed Amendments</p>	<p>The SCAQMD relies on health risk assessment guidelines issued by the California Office of Environmental Health Hazard Assessment (OEHHA) in various aspects of its toxics regulatory program including the permitting program, AB2588 Hot Spots Program, and existing regulatory program. On March 6, 2015, OEHHA adopted the Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (Revised OEHHA Guidelines), based on new scientific information that early-life exposures to air toxics contribute to an increased lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood.</p> <p>The proposed amended rules will revise specific references within definitions to be consistent with the Revised OEHHA Guidelines. The SCAQMD staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and the 2015 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212. The proposed amended rules do not include revisions to the health risk thresholds in Rules 1401, 1401.1 or 1402.</p> <p>The estimated cancer risk calculated based on the Revised OEHHA Guidelines is expected to increase even though there may be no increase in toxic emissions at a facility. Except for the proposed amendments to Rule 1402 that would apply to the existing sources of toxic air contaminants (TACs), PARs 1401, 1401.1, and 212 will apply to new, relocated, or modified sources of TACs and will not be applied retroactively. Because the Revised OEHHA Guidelines reflect revisions to the susceptibility of infants and children, the Revised OEHHA Guidelines primarily affect residential and sensitive receptors with very little change to</p>
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<p>Elements of Proposed Amendments (cont.)</p>	<p>worker receptors. In fact, a slight decrease in estimated risk for the same emissions is expected for most worker receptors, due to a shorter assumed period of exposure.</p>
<p>Affected Facilities and Industries</p>	<p>PAR 1401 and 1401.1 could potentially require new or additional air pollution controls for new, relocated, or modified sources of TACs, except gas stations and spray booths. Staff estimated that five equipment source categories could potentially be affected. With the exceptions of motion picture film laboratories that are classified within the information sector (NAICS 51) and crematories within the services sector (NAICS 54-81), all other affected facilities are in the manufacturing sector (NAICS 31-33). They include metal plating, plasma arc and laser cutting, and asphalt blending and concrete batch facilities.</p> <p>Rule 1402 establishes facility-wide risk requirements for existing TACs-emitting facilities and implements the California AB2588 Air Toxics “Hot Spots” program. SCAQMD staff estimates, based on the most recently approved Health Risk Assessments (HRAs) for facilities in the AB2588 program, that implementation of the Revised OEHHA Guidelines could potentially require new or additional air pollution controls for 22 existing AB2588 facilities because their estimated health risk with the Revised OEHHA Guidelines could potentially be greater than 25 in a million, thus requiring risk reduction. Among them, one is classified within the services sector (NAICS 54-81), three in the utilities sector (NAICS 22), and the rest in the manufacturing sector (NAICS 31-33). In addition to the cost of pollution controls, it is estimated that 17 of the 22 facilities are expected to have to update their HRAs and incur related costs.</p> <p>70 other existing AB2588 facilities, which belong to various sectors, are also expected to either have to submit HRAs for the first time or update HRAs and issue public notices. Of these 70 facilities, it is expected that 42 facilities could potentially need to conduct public notification as well.</p> <p>Rule 212 contains public notification requirements for new, modified, or relocated sources of TACs. Staff projects that, annually, approximately 10 to 30 new diesel emergency back-up internal combustion engines could potentially require the issuance of public notices that are attributed to the Revised OEHHA Guidelines. These new emergency back-up internal combustion engines would be employed by a wide array of industries in the private sector, as well as by the public sector.</p>

<p>Major Assumptions and Limitation of Analysis</p>	<p>The analysis herein was performed for a ten year period (2015-2024). This is mainly because PAR 1401 and 1401.1 will apply to new, relocated, or modified sources of TACs and will not be applied retroactively. Due to potential changes in basic and control technologies, as well as the costs of technologies, it would be speculative to assume that the new, relocated, or modified sources permitted further in the future would continue requiring the same types of additional controls assumed in this analysis.</p> <p>Based on an evaluation of the SCAQMD permits that were issued over a five year period from October 2009 to October 2014, staff estimated that 28 new or modified permits annually could potentially need additional pollution control equipment due to implementation of the Revised OEHHA Guidelines. The SCAQMD staff is assuming that the selected compliance path would be installation of pollution controls. There are other options available that many facilities may select. They include product replacement such as using materials with less or no toxic emissions, use of different fuels that are less toxic such as natural gas instead of diesel, locating the equipment at a distance to create a larger buffer between the equipment and the residential and sensitive receptors, and reduction of throughput. The availability of these alternative options depends on the specific situation at each facility.</p> <p>The typical pollution controls that would likely be utilized under PAR 1401, 1401.1 and 1402 are High Efficiency Particulate Arrestors (HEPA) filters for nickel plating tanks, oxidation catalysts for control of polycyclic aromatic hydrocarbons, baghouses for metal particulates, carbon adsorbers for wet gate printing and film cleaning, and diesel particulate filters on diesel engines. In addition to the aforementioned controls, scrubbers and thermal oxidizers could also be needed for some of the potentially affected AB2588 facilities due to implementation of the Revised OEHHA Guidelines. These controls are assumed to have an equipment life of six to ten years, depending on the particular type of control.</p> <p>The compliance costs conservatively assume that previously reported health risks and emission inventories apply today, even though they were reported in the previously approved HRAs and may not reflect the most recent status at the AB2588 facilities. Additional facilities were included where the calculated risks were near rule thresholds and emissions have remained stable or have increased. Recent changes to equipment and reductions in emission inventories were not considered.</p>
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<p>Compliance Costs</p>	<p>The compliance costs estimated in the analysis are associated with additional pollution control equipment and their permitting costs, submitting or updating HRAs, and the costs of issuing additional public notices. However, they do not take into account other potential costs, such as some permitting and administrative costs, as these cost would have occurred independent of the Revised OEHHA Guidelines.</p> <p>The compliance costs due to PAR1401 are estimated to increase annually by an amount ranging from \$239,000 to \$255,000, depending on the real interest rate assumed (1%-4%). The compliance costs would cease to continue accumulating when lower-emission alternatives to the permit equipment become available at a competitive price. The machine tool manufacturing industry (NAICS 333517), where plasma arc and laser cutting facilities belongs, would bear the largest share of compliance costs (67%) due the number of new and modified permits assumed for this source category.</p> <p>The compliance costs associated with PAR 1402 are estimated as below among the existing AB2588 facilities:</p> <ul style="list-style-type: none"> • 22 facilities would need to conduct risk reductions and install additional controls. The estimated—associated total annual compliance cost <u>is estimated to—would</u> range from \$1.3 million to \$1.4 million, depending on the real interest rate assumed (1%-4%). • 87 facilities would need to submit HRAs for the first time or update HRAs and incur a total one-time cost of \$2.2 million. If annualized over a period of ten years, the cost would range from \$0.2 million to \$0.3 million, using a real interest rate of 1%-4%. • 42 facilities would need to issue public notices due to the Revised OEHHA Guidelines specifically. The overall costs of public notification would add up to \$71,400. If annualized over a period of ten years, the cost would range from \$7,500 to \$8,800, using a real interest rate of 1%-4%. <p><u>Together, the Overall annualized compliance costs under PAR 1402 would range from \$1.5 million to \$1.6 million, reflecting mainly the cost of installing and operating control equipment. The costs</u> are estimated to be approximately 25% lower if conservative assumptions are not utilized. Many industries identified as requiring HRAs or requiring risk reduction have already been actively pursuing risk reduction actions as part of their business</p>
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<p>Compliance Costs (cont.)</p>	<p>plan or in anticipation of the Revised OEHHA Guidelines.</p> <p>Finally, the annual compliance costs due to PAR 212 are estimated to be between \$17,000 and \$51,000. The expenditures are to pay for the projected 10-30 public notices that would be required for new emergency engines installed by various industries annually that are estimated to be attributed to implementing the Revised OEHHA Guidelines.</p>
<p>Regional Job Impacts</p>	<p>The proposed amendments are expected to result in approximately 10 to 100 annual jobs forgone between 2015 and 2024 when it is assumed that facilities would finance capital costs of control equipment at a 4-percent real interest rate and that all equipment and services would be purchased from businesses located within the region. When a 1-percent real interest rate is assumed instead, the job impact would become less negative, with approximately 10 to 90 annual jobs foregone over the same period. However, if all equipment and services would be imported from outside the region, the number of jobs foregone would increase by about 20 percent, to approximately 20 to 120 annual jobs foregone between 2015 and 2024.</p> <p>In any of the scenarios analyzed above, the projected job impacts represent less than 0.001 percent of the total employment in the four-county region. The projected reduction in employment would be across all major sectors of the economy.</p>

INTRODUCTION

The California Office of Environmental Health Hazard Assessment (OEHHA) establishes guidance for performing risk assessments for toxic air contaminants (TACs). Pursuant to AB2588, OEHHA developed and approved in 2003 the Health Risk Assessment Guidance (2003 OEHHA Guidelines) for implementation of the Hot Spots Program (Health and Safety Code Section 44360(b)(2)). Since the adoption of the 2003 guidelines, new scientific information has shown that early-life exposures to air toxics contribute to an increased lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. Based on this information, OEHHA adopted on March 6, 2015 the Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (Revised OEHHA Guidelines).

The SCAQMD relies on OEHHA's health risk assessment guidelines in various aspects of its toxics regulatory program including the permitting program, AB2588 Hot Spots Program, and existing regulatory program. Amendments to the following rules are being proposed to reference the Revised OEHHA Guidelines for estimation of health risks:

- *Rule 1401 – New Source Review of Toxic Air Contaminants*, which establishes cancer and non-cancer health risk requirements for new, relocated, or modified permitted sources of toxic air pollutants.
- *Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools*, which establishes more stringent risk requirements for new and relocated facilities emitting TACs located near schools, thereby reducing the exposure of toxic emissions to school children.
- *Rule 1402 – Control of Toxic Air Contaminants from Existing Sources*, which establishes facility-wide risk requirements for existing facilities that emit TACs and implements the state AB2588 Air Toxics “Hot Spots” program.
- *Rule 212 – Standards for Approving Permits and Issuing Public Notice*, which contains public notification requirements for new, modified, or relocated sources of air contaminants.

The proposed amended rules will revise definitions and risk assessment procedures to be consistent with the Revised OEHHA Guidelines. Proposed amendments are to ensure SCAQMD staff can implement the Revised OEHHA Guidelines regarding how health risks are calculated. Staff is not recommending revisions to the health risk thresholds in Rules 1401, 1401.1 or 1402. The SCAQMD staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and the 2015 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212. (Please refer to the Staff Report for additional information).

The estimated cancer risk using the Revised OEHHA Guidelines is expected to increase even though there may be no increase in toxic emissions at a facility. The Revised OEHHA Guidelines incorporate age sensitivity factors and other changes which will increase cancer risk estimates to residential and sensitive receptors by approximately 3 times, and more than 3 times in some cases depending on whether the toxic air

contaminant has multiple pathways of exposure in addition to inhalation. Except for the proposed amendments to Rule 1402 that would apply to the existing sources of TACs, the Proposed Amended Rules (PAR) 1401, 1401.1, and 212 will apply to new, relocated, or modified sources of TACs and will not be applied retroactively. Because the Revised OEHHA Guidelines reflect revisions to the susceptibility of infants and children, the Revised OEHHA Guidelines primarily affect residential and sensitive receptors with very little change to worker receptors, in fact a slight decrease is expected for most worker receptors, due to a shorter assumed period of exposure.¹

Since the estimated cancer risk is expected to increase due to the Revised OEHHA Guidelines, it could potentially become necessary to install new or additional air pollution control equipment to comply with the existing health risk thresholds in Rules 1401, 1401.1 or 1402. Under PAR 1401 and 1401.1, five equipment source categories were identified that could potentially require additional controls for some of the new, relocated, or modified sources permitted in the future. These five categories are metal plating facilities, crematories, plasma arc and laser cutting, wet gate printing and film cleaning, and asphalt and concrete batch blending facilities.

Under PAR 1402, it is estimated that 22 existing facilities could potentially need to install additional controls, and the majority of them would also need to update their Health Risk Assessments (HRAs). These identified facilities belong to various industries, including aerospace, asphalt manufacturing, hospital, metal forging and heat treating, metal melting, metal plating and finishing, petroleum refining, and waste management. These facilities were identified based on health risks from previously approved HRAs and the increase in estimated health risk using the Revised OEHHA Guidelines. It should be noted that some of the approved HRAs are more than ten years old, so it is likely that changes within the facility could have occurred that would have reduced the overall health risk at the facility. Actual determination of the need for risk reductions will be made on a case-by-case basis utilizing the most recent data available. Moreover, under PAR 1402, 42 additional existing facilities are expected to need to update their HRAs and conduct public notification, and 28 could potentially need to submit HRAs for the first time. Most of these facilities are in the manufacturing and utilities sectors.

In addition, the expected increase in estimated cancer risk due to implementing the Revised OEHHA Guidelines could also potentially increase the number of Rule 212 notices. Staff projects that 10 to 30 additional notices will be required on a yearly basis, all for new diesel emergency back-up internal combustion engines. These emergency engines are exempt from Rule 1401 but subject to Rule 212.

LEGISLATIVE MANDATES

The socioeconomic assessments at the SCAQMD have evolved over time to reflect the benefits and costs of regulations. The legal mandates directly related to the assessment of the proposed amendments include the SCAQMD Governing Board resolutions and various sections of the California Health & Safety Code (H&SC).

¹ There could be some increases for workers for some multipathway compounds (e.g., dioxins).

SCAQMD Governing Board Resolutions

On March 17, 1989 the SCAQMD Governing Board adopted a resolution that calls for an economic analysis of regulatory impacts that includes the following elements:

- Affected industries
- Range of control costs
- Cost effectiveness
- Public health benefits

On October 14, 1994, the Board passed a resolution which directed staff to address whether the rules or amendments brought to the Board for adoption are in the order of cost effectiveness as defined in the AQMP. The intent was to bring forth those rules that are cost effective first.

Health & Safety Code Requirements

The state legislature adopted legislation that reinforces and expands the Governing Board resolutions for socioeconomic assessments. H&SC Sections 40440.8(a) and (b), which became effective on January 1, 1991, require that a socioeconomic analysis be prepared for any proposed rule or rule amendment that "will significantly affect air quality or emissions limitations." While the present amendments do not have such effects, they will have costs, so staff determined to prepare this socioeconomic impact assessment. Specifically, the scope of the analysis should include:

- Type of affected industries
- Impact on employment and the economy of the district
- Range of probable costs, including those to industries
- Emission reduction potential
- Necessity of adopting, amending or repealing the rule in order to attain state and federal ambient air quality standards
- Availability and cost effectiveness of alternatives to the rule

Additionally, the SCAQMD is required to actively consider the socioeconomic impacts of regulations and make a good faith effort to minimize adverse socioeconomic impacts. H&SC Section 40728.5, which became effective on January 1, 1992, requires the SCAQMD to:

- Examine the type of industries affected, including small businesses; and
- Consider socioeconomic impacts in rule adoption

Finally, H&SC Section 40920.6, which became effective on January 1, 1996, requires that incremental cost effectiveness be performed for a proposed rule or amendment that imposes Best Available Retrofit Control Technology or "all feasible measures" requirements relating to ozone, carbon monoxide (CO), oxides of sulfur (SO_x), oxides of nitrogen (NO_x), and their precursors. This statute does not apply to the proposed rules; moreover, cost effectiveness in terms of dollars per ton is not meaningful for risk-based regulations, since many other factors besides the amount of pollution affect the risk such as the cancer potency and the location of receptors.

AFFECTED FACILITIES

The proposed amended rules will revise definitions and the SCAQMD risk assessment procedures to be consistent with the Revised OEHHA Guidelines. The SCAQMD staff is preparing Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0 and the 2015 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). Both documents will incorporate the Revised OEHHA Guidelines and will be used to implement Rules 1401, 1401.1, 1402, and 212. As a result, the SCAQMD staff expects increases in the estimated cancer risk. The increases could potentially require additional controls that were previously not needed for certain source categories of equipment that are typically used by the potentially affected industries. They could also potentially require new or updated HRAs and increase the number of occasions that a facility is required to issue a public notice for an increase in toxic emissions. As emphasized earlier, however, the projected increase in the estimated cancer risk does not necessarily imply any increase in actual toxic emissions from any equipment source category. Instead, it is due to changes in risk assessment procedures that are made to be consistent with the Revised OEHHA Guidelines.

Below is a discussion of the potentially affected facilities, their industry types and sizes of the affected businesses. A detailed discussion of the assumptions and basis for the number of facilities that could potentially require additional pollution controls can be found in the Staff Report for the proposed amended rules. For the purpose of this analysis, the SCAQMD staff is assuming that the selected compliance path will be installation of pollution controls. There are other options available that many facilities may select including product replacement such as using materials with less or no toxic emissions, use of different fuels that are less toxic such as natural gas instead of diesel, locating the equipment at a distance to create a larger buffer between the equipment and the residential and sensitive receptors, and reduction of throughput. The availability of these alternative options depends on the specific situation at each facility.

As previously discussed the Revised OEHHA Guidelines primarily affect residential and sensitive receptors due to the increased susceptibility assumed for infants and children with very little change to worker receptors. This analysis assumes that there is a residential or sensitive receptor that would require risk reduction. This may not necessarily be the case particularly for facilities located at a substantial distance from residential or sensitive receptors or within an industrial location. Under those situations the facility would not be affected by implementation of the Revised OEHHA Guidelines.

PAR 1401 and 1401.1

As a result of using the Revised OEHHA Guidelines, PAR 1401 and 1401.1 could potentially require new or additional air pollution controls for new, relocated, or modified sources of TACs. It is challenging to predict the type, number, and size of new and modified sources that will be seeking permit applications. However, based on an evaluation of the SCAQMD permits that were issued over a five year period from October 2009 to October 2014, staff identified a total of seven equipment source categories that could potentially have an estimated cancer risk value above the existing

thresholds when the Revised OEHHA Guidelines are used. However, PAR 1401 includes a provision to allow two of these source categories—spray booths and retail gasoline transfer and dispensing facilities—to continue to use the previous OEHHA risk guidelines to calculate the cancer risk until the SCAQMD staff returns to the Board with specific proposals for these industries.

For spray booths, SCAQMD staff's recommendation of continuing using the 2003 OEHHA Guidelines is because of the large number of permits issued (approximately 1,400 over the past five years), and importantly, also based on the consideration that this particular source category tends to be associated with smaller businesses such as wood coating operations and autobody facilities. The SCAQMD staff will begin rulemaking to identify alternative approaches by which industries using spray booths can reduce their toxic emissions and/or toxic exposure. For retail gasoline transfer and dispensing facilities, staff will need additional time to analyze new emissions data from CARB in order to better assess and understand the emission impacts from such facilities. PAR 1402 includes a commitment from the Executive Officer to return to the Governing Board as quickly as practicable with staff's analysis. Currently, all new gasoline stations are permitted with toxics best available controls and are required to comply with SCAQMD Rule 461 – Gasoline Transfer and Dispensing. This socioeconomic analysis does not include potential savings from this rule proposal. Analysis of socioeconomic impacts will be included for any subsequent proposed rule amendments for these equipment categories.

There remain five equipment source categories that could potentially need additional pollution controls with the Revised OEHHA Guidelines. Table 1 lists these equipment categories, and for each category, the typical pollution control device, type of industry that typically uses the equipment, and the number of expected permits per year within the SCAQMD jurisdiction. With the exceptions of motion picture film laboratories that are classified within the information sector (NAICS 51) and crematories within the services sector (NAICS 54-81), all other affected facilities are classified in the manufacturing sector (NAICS 31-33).

Table 1
New or Modified Permits that Potentially Could Require
Additional Pollution Controls Using the Revised OEHHA Guidelines¹

Equipment Category	Typical Control Device*	Industry that Typically Uses the Equipment (6-Digit NAICS Code)	Number of Expected Permits Per Year
Metal Plating Facilities – Plating Tanks	High Efficiency Particulate Arrestors (HEPA) Filter for Nickel Plating Tank	Electroplating, Plating, Polishing, Anodizing, and Coloring (332813)	1
Crematory – Furnace	Oxidation Catalysts for Polycyclic Aromatic Hydrocarbons	Cemeteries and Crematories (812220)	1
Plasma Arc and Laser Cutting	Baghouse for Metal Particulates	Machine Tool Manufacturing (333517)	24
Wet Gate Printing and Film Cleaning	Carbon Adsorber for Perchloroethylene	Other Motion Picture and Video Industries (512199)	1
Asphalt Blending and Concrete Batch	Diesel Particulate Filter on Diesel Internal Combustion Engine	Asphalt Paving Mixture and Block Manufacturing (324121)	1

¹ Based on SCAQMD analysis of permits issued between October 2009 and October 2014.

* In addition to installing the typical control device to reduce toxic emissions, an operator could alternatively choose other options, such as less toxic coatings and solvents, process throughput limits, and increasing the distance of the equipment from receptors.

PAR 1402

Rule 1402 establishes facility-wide risk requirements for existing facilities that emit TACs and implements the state AB2588 Air Toxics “Hot Spots” program. It requires facilities to submit an HRA for total facility emissions upon request. An HRA is a detailed comprehensive analysis to evaluate and predict the dispersion of hazardous substances in the environment, to determine the potential for exposure of human populations, and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure. If a facility has a facility-wide health risk greater than or equal to the action risk level of 25 in one million, the operator is required to implement risk reduction measures (specified in a risk reduction plan) to reduce the impact of total facility emissions below the action risk level as quickly as feasible, but by no later than three years. The AB2588 facilities are divided into four implementation groups. Each year, only one implementation group is subject to the “quadrennial” review where facilities are required to submit a detailed emissions inventory for 177 toxic air contaminants. (An annual toxics inventory for 23 toxic air contaminants is required during the three years between the quadrennial reviews.) The quadrennial review approach provides a more even workflow and reduces the impact on affected facilities to

provide a detailed inventory. Implementation of the Revised OEHHA Guidelines will follow the existing quadrennial review process.

Based on an evaluation of the existing facilities that are in the AB2588 program, the SCAQMD staff estimates that 22 facilities could potentially have a cancer risk greater than or equal to the action risk level when using the Revised OEHHA Guidelines; therefore, these facilities would be required to implement risk reduction measures where they could potentially need to install additional air pollution controls. These facilities were identified based on health risks from previously approved HRAs and the increase in estimated health risk using the Revised OEHHA Guidelines. Facilities that were above 25 in one million were included regardless of recent changes to equipment or decreases in emission trends, and facilities that were just below 25 in one million were included if emissions have increased since the previous HRA. Due to the aforementioned quadrennial review process, it is expected that, each year between 2015 and 2018, one-fourth of the 22 AB2588 facilities (four to five) will install control equipment to reduce emissions below 25 in one million. Therefore from 2018 onward, all 22 facilities would have installed controls.

The type of control device(s) necessary for implementing risk reduction measures will vary by the pollutant(s) being emitted. A potentially affected facility may be required to reduce the emissions of multiple TACs, and therefore, it is possible that more than one control devices could potentially be needed at an individual facility. Table 2 lists the type of potentially affected facilities, and for each type, the typical control devise(s) needed for various pollutants, the facilities' industry classification, and the number of such facilities. Among the 22 AB2588 facilities that could potentially need additional controls due to the Revised OEHHA Guidelines, one is classified within the services sector (NAICS 54-81), three in the utilities sector (NAICS 22), and the rest are in the manufacturing sector (NAICS 31-33).

Moreover, the SCAQMD staff determined that 17 of the 22 facilities identified to be required to do risk reduction and install additional controls will also be required to submit updated HRAs. The other five of the 22 facilities have already been required to submit an updated HRA independent of the Revised OEHHA Guidelines. In addition, 42 existing AB2588 facilities will be required to update their HRAs and provide public notification, and 28 existing AB2588 facilities that had not previously submitted HRAs will be requested to do so. Among these 70 facilities that can potentially experience a cost impact due to PAR 1402 but are not expected to install additional controls, 40 are classified in the manufacturing sector (NAICS 31-33), 15 in the utilities sector (NAICS 22), and the rest in a variety of different sectors. For facilities that had an existing approved HRA, staff used the Revised OEHHA Guidelines and re-estimated the health risks based on their toxic inventory and equipment reported in the approved HRA. Those with an estimated health risk greater than 10 in one million will be expected to update their HRAs and have to conduct public notification. For facilities that had an estimated health risk just below 10 in one million, emission trends were examined and facilities with increasing emissions were included. For facilities that did not have an approved HRA, staff estimated health risks based on emission inventory reports using the AB2588 Draft Prioritization Procedures. The estimation utilized conservative assumptions regarding wind direction, receptor distance and other factors. Therefore, it is very likely

that none of these facilities will have a calculated risk above 10 in one million after the initial HRA is submitted, thus eliminating the need to conduct public notification.

Overall, the estimation for the need of risk reduction, new or updated HRAs and public notification due to PAR 1402, is likely conservative (meaning that the actual number of facilities that would be affected is expected to be lower). This is because staff's estimations are based on previously submitted and approved HRAs and other information that may not reflect the most updated emission reductions measures that have been implemented at some facilities. It is possible that some facilities could have implemented emission reduction projects that have reduced air toxic emissions and health risks since the HRA was approved.

Table 2
Existing AB2588 Facilities that Potentially Could Need
Additional Pollution Controls Using the Revised OEHHA Guidelines

Type of Facility	Typical Control Device(s)*	Industry Classification (6-Digit NAICS Code)	Estimated Number of Facilities**
Hospital	Oxidation Catalyst	General Medical and Surgical Hospitals (622110)	1
Waste Management	Carbon Adsorber Scrubber	Sewage Treatment Facilities (221320)	3
Aerospace	Carbon Adsorber HEPA Scrubber	Aircraft Manufacturing (336411)	6
Asphalt Manufacturer	Oxidation Catalyst	Asphalt Paving Mixture and Block Manufacturing (324121)	1
Metal Forging and Heat Treating	HEPA Scrubber	Machine Tool Manufacturing (333517)	1
Metal Melting	HEPA Scrubber	Industrial Process Furnace and Oven Manufacturing (333994)	3
Metal Plating and Finishing	HEPA Scrubber	Electroplating, Plating, Polishing, Anodizing, and Coloring (332813)	3
Petroleum Refining	Diesel Particulate Filters HEPA Oxidation Catalyst Scrubber Thermal Oxidizer	Petroleum Refineries (324110)	4

* The typical control device(s) needed depends on which toxic emissions are the main contributors to the estimated risk from a facility. It is possible that not all devices listed are needed at an individual facility. See Table 3-2 in the Staff Report for more details.

** It is expected that, each year between 2015 and 2018, one-fourth of the 22 AB2588 facilities (four to five) will install control equipment to reduce emissions below 25 in one million. Therefore from 2018 onward, all 22 facilities would have installed controls.

PAR 212

Rule 212 contains public notification requirements for new, modified, or relocated sources of air contaminants based on proximity to schools, increases to emissions above rule-specified daily maximums, and increases in TAC emissions resulting in cancer risks above rule-specified thresholds. Facilities that are projected to install control equipment because of changes to the revised OEHHA Guidelines will likely be below the rule-specified threshold for increased cancer risk after the control device is installed, so may not be required to do public notice unless they are located near schools.

However, with the revised OEHHA Guidelines, it is projected by staff that some diesel emergency back-up internal combustion engines could potentially have an estimated cancer risk greater than one in one million, the threshold above which the need for public notice is triggered for facilities with more than one permitted piece of equipment. While exempt from Rule 1401, these emergency engines are not exempt from Rule 212. Currently, more than 70 percent of them are already providing public notices because they are within 1,000 feet of a school. While some of these facilities may require additional language in the notice, compliance cost is not expected to become noticeably higher. However, staff projects that approximately 10 to 30 new emergency back-up engines annually will have a higher estimated cancer risk that is more than one in one million and are located greater than 1,000 feet away from a school. The new emergency engines that could potentially require the issuance of public notices are expected to be installed by a wide array of industries in the private sector and also by the public sector.

Small Businesses

The SCAQMD defines a "small business" in Rule 102 for purposes of fees as one which employs 10 or fewer persons and which earns less than \$500,000 in gross annual receipts. The SCAQMD also defines "small business" for the purpose of qualifying for access to services from the SCAQMD's Small Business Assistance Office (SBAO) as a business with an annual receipt of \$5 million or less, or with 100 or fewer employees. In addition to the SCAQMD's definition of a small business, the federal Clean Air Act Amendments (CAAA) of 1990 and the federal Small Business Administration (SBA) also provide definitions of a small business.

The CAAA classifies a business as a "small business stationary source" if it: (1) employs 100 or fewer employees, (2) does not emit more than 10 tons per year of either VOC or NO_x, and (3) is a small business as defined by SBA. The SBA definitions of small businesses vary by six-digit North American Industrial Classification System (NAICS) codes. In general terms, a small businesses must have no more than 500 employees for most manufacturing and mining industries, and no more than \$7 million in average annual receipts for most nonmanufacturing industries.²

² See the SBA website (<http://www.sba.gov/community/blogs/community-blogs/small-business-matters/what-small-business-what-you-need-know-and-wh>). The latest SBA definition of small businesses by industry can be found at <http://www.sba.gov/content/table-small-business-size-standards>.

All the definitions above apply at the firm level and do not apply to the public sector. PARs 1401, 1401.1, and 212 will be forward-looking and will not apply retroactively to previously issued permits; therefore, it is difficult to predict whether a facility that files a future permit application would be classified as a small business. However, as mentioned earlier, PAR 1401 includes a provision to allow spray booths to continue to use the previous OEHHA risk guidelines to calculate the cancer risk in consideration that this equipment category tends to be associated with smaller businesses such as wood coating operations and autobody facilities. Moreover, based on the distribution of existing permits that were issued between October 2009 and October 2014, it is estimated that, among the expected new and modified sources that could potentially need to install additional controls due to the Revised OEHHA Guidelines, there is a four percent probability that a new permit would belong to a small business as defined by Rule 102.

According to the Dun and Bradstreet database acquired in January 2015, five of the 22 existing AB2588 facilities that could potentially need additional controls due to the Revised OEHHA Guidelines would be classified as small businesses under the SBA definition. They are mostly metal plating and finishing or metal forging and heat treating facilities, with an estimated annual compliance cost of approximately \$40,000 (see next section for detailed discussion of compliance costs). Based on SCAQMD permit data, however, none of the 22 facilities were reported as a small business as defined under Rule 102. Among the 70 facilities that would need to submit HRAs for the first time or to update their HRAs and provide public notification, 19 were identified as small businesses in the Dun and Bradstreet data, but none were reported as a small business as defined under Rule 102.

COMPLIANCE COSTS

The Revised OEHHA Guidelines will require some facilities to reduce the estimated health risk in order to obtain a permit, or may have to do public notice, for new, relocated, or modified sources of TACs. For the existing AB2588 facilities, there also may be additional control equipment required. While the analysis below focuses on the costs to install and operate add-on air pollution control equipment, other options are available to facilities to decrease risk. Where applicable, facilities may decide to use different materials that have less or no toxic emissions, use different fuels, move their equipment to create a larger distance between sensitive populations, or possibly limit throughput. Modifying operations to decrease or eliminate the emissions of air toxics is often a more cost-effective option. For example, the use of clean burning fuels, reformulated coatings, alternative solvents or trivalent chromium plating, where applicable, may reduce risks, allow increased throughput and lower operating costs. When determining which option to implement, facilities will ultimately choose the most cost-effective option for their particular situation. In many cases, the option chosen will not be to install add-on air pollution control equipment. However, to conservatively estimate the cost impacts of the proposed rule, the analysis will assume that impacted facilities will utilize add-on control equipment.

All the costs discussed in this section are expressed in 2015 dollars. For the purpose of projecting future compliance costs in the near future, it is assumed that these costs would

remain the same within the analysis time frame and may increase only with inflation. The capital costs include installation and permitting fees. The analysis for risk determination would not increase SCAQMD staff time and result in additional costs as long as all currently requested information is provided with the application. Moreover, in order to compile the annual compliance costs for the additional controls assumed to be needed, it is assumed that facilities would finance the capital costs of control equipment at a real interest rate of four percent over its equipment life; as a sensitivity test, a real interest rate of one percent was also applied which is closer to the prevailing real interest rate.³

PAR 1401 and 1401.1

Rule 1401 requires the installation of Best Available Control Technology for Toxics (TBACT) if emissions would result in a risk above one in a million. A permit with TBACT can be issued if the resulting estimated risk is at or below ten in a million from the equipment. PAR 1401 costs will be incurred as potential applicants are required to install control equipment to permit equipment that would exceed a cancer risk of one in one million. As reported in Table 1 above, staff is anticipating approximately 28 permits annually to require installation of a control device to comply with PAR 1401 and assumes that no new or modified sources would be subject to PAR 1401.1 because they would choose to locate at a sufficient distant from schools to avoid the more stringent requirements. These facilities would still be subject to Rule 1401. While the types and sizes of control equipment will vary as determined by the applicant, staff is analyzing the annual costs based on previous control strategies utilized in similar situations.

- Metal Plating – It is expected that one metal plating shop will be required to install a high efficiency particulate arrestors (HEPA) to control nickel, hexavalent chromium or cadmium emissions. The capital cost of a HEPA system is \$40,000 with a projected equipment life of ten years. On an annual basis, the electricity cost is \$8,100 and the filter replacement cost is \$500.
- Crematories – One facility per year will likely require an oxidation catalyst to control for polycyclic aromatic hydrocarbons. The oxidation catalyst has a capital cost of \$140,000 with a projected equipment life of six years. However, there are no expected annual operating or maintenance costs.
- Plasma Arc and Laser Cutting – Approximately 24 plasma arc and laser cutting systems will require added air pollution control equipment annually to control hexavalent chromium emissions. An estimated 25% of the facilities have more than one cutting system and would only need one baghouse to control emissions from multiple cutting systems. The capital cost for each baghouse is \$29,600 with an equipment life of ten years. For all 18 baghouses, the annual capital cost is \$532,800.

³ The SCAQMD has since 1987 adopted a real interest rate of four percent for the purpose of cost-effectiveness analysis. In comparison, the federal Office of Management and Budget annually updates the discount rates that are to be used for cost-effectiveness analysis of federal programs and policies. These discount rates are based on Treasury borrowing rates on marketable securities of comparable maturity to the period of analysis. For calendar year 2015, the real interest rate is 0.9 percent for a ten-year project. See <https://www.federalregister.gov/articles/2015/01/29/2015-01616/discount-rates-for-cost-effectiveness-analysis-of-federal-programs> (accessed March 28, 2015).

On an annual basis, the electricity costs for all 18 baghouses are \$82,800 and the total bag replacement costs are \$19,800.

- Wet Gate Printing and Film Cleaning – One facility is projected to require an additional carbon adsorption system to control perchloroethylene emissions from wet gate/film cleaning operations. The capital cost of the carbon adsorber is \$176,000 with an equipment life of ten years. On an annual basis, the electricity costs are \$13,100 while carbon replacement costs would be \$5,700 annually.
- Asphalt and Concrete Batch Plants – One facility per year is estimated to require additional controls on diesel engines used to power an asphalt or concrete batch plant. The facility is projected to install a diesel particulate filter for \$22,800 with a projected equipment life of eight years. Annual operating costs consist of maintenance and disposal of filter waste at a cost of \$2,500.

Table 3 reports the projected compliance costs due to the additional controls needed for the expected 28 new or modified permits per year. Each year, the compliance costs due to PAR1401 are estimated to increase by an amount ranging from \$239,000 to \$255,000, depending on the real interest rate assumed (1%-4%). The machine tool manufacturing industry (NAICS 333517), where plasma arc and laser cutting facilities belongs, would bear the largest share of compliance costs (67%) due to a higher number of expected new or modified permits when compared to other potentially affected industries.

Table 3
Projected Compliance Costs by Industry Due to Additional Pollution Controls
for New or Modified Permits (2015 Dollars)¹

Industry Classification (6-Digit NAICS Code)	Number of Expected Permits Per Year	Projected Increase in Compliance Costs Per Year of Installing Additional Controls*		
		4% Real Interest Rate	1% Real Interest Rate	Percent Distribution
Electroplating, Plating, Polishing, Anodizing, and Coloring (332813)	1	\$14,000	\$13,000	5%
Cemeteries and Crematories (812220)	1	\$27,000	\$24,000	10%
Machine Tool Manufacturing (333517)	24	\$168,000	\$159,000	67%
Other Motion Picture and Video Industries (512199)	1	\$40,000	\$37,000	16%
Asphalt Paving Mixture and Block Manufacturing (324121)	1	\$6,000	\$5,000	2%
All Industries	28	\$255,000	\$239,000	100%

¹ Based on SCAQMD analysis of permits issued between October 2009 and October 2014.

* Numbers may not sum up due to rounding.

PAR 1402

PAR 1402 requires facilities to implement risk reductions if the facility causes an estimated cancer risk of 25 in one million or greater, which is the existing “action level” threshold in the rule. Facilities typically will add on control devices to limit toxic emissions. SCAQMD staff evaluated the main toxic driver(s) for 22 facilities that could be potentially impacted by the revised OEHHA Guidelines. Under the District’s AB 2588 program, facilities are divided into four implementation groups. Therefore, it is expected that, each year between 2015 and 2018, one-fourth of the 22 facilities (four to five) will install control equipment to reduce emissions below 25 in one million. The number of control devices by type assumed to be required over the quadrennial period is provided below along with the capital cost and operational and maintenance costs for each device. (Please refer to Table 2 regarding the type(s) of facilities potentially needing each type of control.)

- Carbon Adsorber – Four carbon adsorbers will be installed at a capital cost of \$176,000 each. The projected equipment life is ten years. Annual electricity costs are \$13,100 and carbon replacement costs would be \$5,700 annually.
- Thermal Oxidizer – One thermal oxidizer will be installed at a capital cost of \$1,100,000. The projected equipment life is 10 years. Annual electricity costs are \$134,700 while annual gas costs would be \$202,000 annually.
- HEPA Filters - Twelve HEPA filters will be installed at a capital cost of \$80,000 each. The projected equipment life is 10 years. The annual electricity cost is \$17,200 and the filter replacement cost is \$1,000 annually.
- Diesel Particulate Filters - Two facilities are projected to install a diesel particulate filter for \$120,000 each with a projected equipment life of eight years. Annual operating costs consist of maintenance and disposal of filter waste at a cost of \$13,300.
- Oxidation Catalysts – Three facilities are expected to install oxidation catalysts. Each has a capital cost of \$280,000 with a projected equipment life of six years. There are no expected annual operating or maintenance costs.
- Scrubbers – Fourteen scrubbers are expected to be installed. Each has a capital cost of \$54,700 with a projected equipment life of ten years. Annual electricity cost for the scrubbers is estimated to be \$5,500 each.

Table 4 shows the projected compliance costs due to the additional controls for the 22 existing AB2588 facilities that potentially could need additional pollution controls due to the Revised OEHHA Guidelines. From 2018 onward, after all the facilities are projected to have installed additional controls, the annual compliance costs due to PAR1402 are estimated to range from \$1.3 million to \$1.4 million, depending on the real interest rate assumed (1%-4%). Petroleum refineries (NAICS 324110) are expected to incur the largest share of compliance costs (47%), followed by the aircraft manufacturing industry (NAICS 336411, 21%). Other affected industries would account for three to nine percent of the projected annual compliance costs.

Table 4
Projected Compliance Costs by Industry for Existing AB2588 Facilities that
Potentially Could Need Additional Pollution Controls (2015 Dollars)

Industry Classification (6-Digit NAICS Code)	Number of Existing Facilities	Projected Annual Compliance Costs 2018 Onwards****		
		4% Real Interest Rate	1% Real Interest Rate	Percent Distribution
General Medical and Surgical Hospitals (622110)	1	\$53,000	\$48,000	4%
Sewage Treatment Facilities (221320)	3	\$93,000	\$86,000	7%
Aircraft Manufacturing (336411)	6	\$283,000	\$264,000	21%
Asphalt Paving Mixture and Block Manufacturing (324121)	1	\$53,000	\$48,000	4%
Machine Tool Manufacturing (333517)	1	\$40,000	\$38,000	3%
Industrial Process Furnace and Oven Manufacturing (333994)	3	\$93,000	\$87,000	7%
Electroplating, Plating, Polishing, Anodizing, and Coloring (332813)	3	\$121,000	\$114,000	9%
Petroleum Refineries (324110)	4	\$628,000	\$597,000	47%
All Industries	22	\$1,365,000	\$1,283,000	100.0%

* Numbers may not sum up due to rounding.

** Each year between 2015 and 2018, it is expected that one-fourth of the 22 facilities (four to five) will install additional control equipment to come into compliance.

In addition, PAR 1402 is also expected to require some existing AB2588 facilities to update their HRAs or submit HRAs for the first time, which would incur one-time costs. The complexity of the HRA is determined by the number of different processes contributing toxic emissions. For this analysis, an HRA is considered “basic” if 1-2 processes contribute, “intermediate” if 3-5 processes contribute and “complex” if more than five processes contribute to toxic emissions. Furthermore, HRAs conducted for the first time at a facility are considered more costly (complex) than updated HRAs. Staff has estimated the cost of HRAs by complexity as listed in Table 5.

Table 5
Projected HRA and Public Notification Cost
for Existing AB2588 Facilities (2015 Dollars)

Type and Complexity of HRA	Number of Existing Facilities	HRA Cost	Public Notification Cost
New HRA			
Basic	15	\$15,000	n.a.
Intermediate	10	\$45,000	n.a.
Complex	3	\$75,000	n.a.
Updated HRA (Without Additional Controls)			
Basic	14	\$10,000	\$1,700
Intermediate	16	\$20,000	\$1,700
Complex	12	\$30,000	\$1,700
Updated HRA (With Additional Controls)			
Complex	17	\$30,000	n.a.

Staff determined that 28 facilities that had not previously submitted HRAs would be requested to do so. Using the complexity criteria described above, 15 facilities would submit a basic new HRA, 10 would submit an intermediate new HRA and 3 would submit a complex new HRA. The total cost for new HRA submittal would be \$900,000. Moreover, staff also determined that 42 facilities would be required to update their HRAs and provide public notification. Of the 42 facilities, 14 would submit a basic updated HRA, 16 would submit an intermediate updated HRA and 12 would submit a complex updated HRA. The total cost for updated HRA submittal would be \$820,000. Public notification costs, which are one-time and include mailing and facility charges, are estimated to be \$1,700 per public notification. For the 42 facilities, the total public notification cost under PAR 1402 would be \$71,400. Lastly, 17 of the 22 facilities identified to be required to do risk reduction and install additional controls would also be required to submit updated HRAs. All 17 of the updated HRAs conducted for risk reduction purposes are considered to be complex. Thus the total cost for the risk reduction updated HRAs is estimated to be \$510,000. For these 17 facilities, it is expected that regardless of the Revised OEHHA Guidance, the estimated health risk would be greater than 10 in a million, therefore public notification costs were not attributed to this proposed rulemaking.

Overall, the cost to do all HRAs, new and updated, is estimated to be \$2.23 million. Adding in public notification cost, the total cost would arrive at \$2.30 million. To put these costs into perspective with the annualized compliance cost of control installation, the annualized cost for HRA and public notification over 10 years would be \$283,742 at 4% real interest rate and \$242,987 at 1% real interest rate.

PAR 212

Rule 212 requires facilities to provide public notice for increases of toxic emissions if the cancer risk increase is greater than one in one million unless the total facility-wide cancer risk is less than ten in one million. Staff projects that approximately 10 to 30 new emergency diesel internal combustion engines annually would have an increase in estimated cancer risk by more than one in one million and be greater than 1,000 feet from a school. Providing public notice is estimated to cost \$1,700. Each year, the compliance costs due to PAR 212 are estimated to be between \$17,000 and \$51,000, depending on the number of new notices required.

MACROECONOMIC IMPACTS ON REGIONAL ECONOMY

The REMI model (PI+ v1.6.7) was used to assess the total socioeconomic impacts of a policy change (i.e., the proposed amendments). The model links the economic activities in the counties of Los Angeles, Orange, Riverside, and San Bernardino, and for each county, it is comprised of five interrelated blocks: (1) output and demand, (2) labor and capital, (3) population and labor force, (4) wages, prices and costs, and (5) market shares.⁴

The assessment herein is performed relative to a baseline (“business as usual”) where the proposed amendments would not be implemented. The proposed amendments would create a policy scenario that can be summarized as such:

- Under PAR 1401, 28 new or modified permits each year would together incur compliance costs of \$239,000 to \$255,000 to install and operate additional control equipment and pay for permitting fees. The analysis is limited to the projected new, relocated, or modified sources permitted up to 2024 since it would be speculative to assume that the sources that will be permitted thereafter would continue requiring the same types of additional controls as currently assumed, due to changes and improvements in basic technology and control technology further into the future. It is assumed that no additional new or modified permits would be subject to PAR 1401.1 because they would choose to locate at a sufficient distant from schools to avoid the more stringent requirements.
- Under PAR 1402, 22 existing AB2588 facilities would incur an annual compliance costs totaling \$1.3 million to \$1.4 million to install and operate additional control equipment and pay for permitting fees. Consistent with the existing AB2588 program implementation schedule, the annual compliance costs are assumed to be evenly phased in over the period of 2015-2018 and remain the same until 2024, the last year of the analysis time frame. In addition to control equipment costs, 17 of the 22

⁴ Within each county, producers are made up of 66 private non-farm industries, three government sectors, and a farm sector. Trade flows are captured between sectors as well as across the four counties and the rest of U.S. Market shares of industries are dependent upon their product prices, access to production inputs, and local infrastructure. The demographic/migration component has 160 ages/gender/race/ethnicity cohorts and captures population changes in births, deaths, and migration. (For details, please refer to REMI online documentation at <http://www.remi.com/products/pi>.)

facilities would incur extra costs due to the need to update HRAs; moreover, 70 additional facilities under the AB2588 program would also incur costs related to new or updated HRAs and public notification.⁵ For the purpose of this socioeconomic analysis, the total one-time HRA and notification costs of \$2.30 million among the 87 facilities are assumed to be spread evenly over the period of 2015-2018. However, it is possible that the costs will be spread over a longer period of time, depending on operational feasibility, which would likely result in a smaller annual macroeconomic impact, especially in the first few years of rule implementation. Additionally, the cost estimates for impacts under PAR 1402 conservatively assume that facilities potentially impacted by the Revised OEHHA Guidelines have not undertaken any risk reduction measures since their last approved HRA or emission inventory. Based on a review of emission trends and pollution control equipment currently being installed, staff estimates that actual costs under PAR 1402 are likely to be 25% lower.

- Under PAR 212, 28 public notices at the cost of \$1,700 each are assumed to be needed annually for the installation of new emergency diesel internal combustion engines that are over the Rule 212 public notification health risk thresholds.

Direct effects of the proposed amendments have to be estimated and used as inputs to the REMI model in order for the model to assess secondary and induced impacts for all the actors in the four-county economy on an annual basis and across a user-defined horizon (2015 to 2024). Direct effects of the proposed amendments include additional costs to the affected entities and additional sales, by local vendors, of equipment, devices, or services that would meet the proposed requirements.⁶ Whereas all the compliance expenditures that are incurred by the affected facilities will increase their cost of doing business, the purchase of additional pollution control equipment, along with the spending on new and updated HRAs and public notification, will increase the sales of various sectors. Moreover, installation and maintenance of the control equipment would result in an increase in sales of many sectors as well. For example, the utility sector (NAICS 22) will benefit from the sales of additional electricity for the operation for most of the controls.

Table 5 lists the industry sectors modeled in REMI that would either incur or benefit from the compliance expenditures.⁷ It should be noted that, although staff was able to make assumptions about the geographical location of directly affected facilities based on the review of SCAQMD permits, the same could not be achieved for the businesses from whom the affected facilities would purchase control equipment and services. As a result,

⁵ Notice that one of the facilities that could need to update its HRA and issue public notification is a federal government entity. Therefore, its compliance cost is not modeled in the regional economic impact assessment while its spending is included when assuming that it would purchase the needed services from within the region. This is because the amount of increased expenses at the federal level is expected to have an infinitesimal economic impact on the region.

⁶ To compile the REMI inputs, all amounts expressed in 2015 dollars are converted to 2009 dollars using CoreLogic's Marshall & Swift Equipment Indexes: 2015 dollar amount x (2009 annual index ÷ 2015Q2 index).

⁷ It is worth mentioning that improved public health due to reduced air pollution emissions may also assert a positive effect on worker productivity and other economic factors; however, public health benefit assessment requires the modeling of air quality improvements. Therefore, it is conducted for Air Quality Management Plans and not for individual rules or rule amendments.

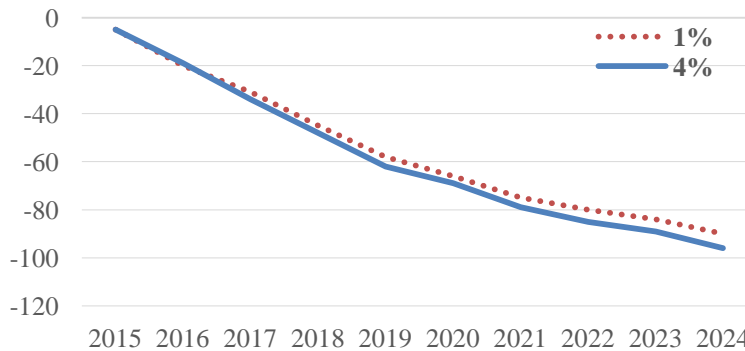
staff adopted the ad-hoc assumption that the affected facilities would purchase controls and other services from providers within the same county.

Table 6
Industries Incurring vs. Benefitting from Compliance Costs/Spending

Source of Compliance Costs	REMI Industries Incurring Compliance Costs (NAICS)	REMI Industries Benefitting from Compliance Spending (NAICS)
HEPA Filters	Petroleum and coal products manufacturing (324); Fabricated metal product manufacturing (332); Machinery manufacturing (333); Other transportation equipment manufacturing (3364-3369)	<i>Capital:</i> Machinery manufacturing (333)
		<i>O&M:</i> Utilities (22); Textile mills & textile product mills (313-314)
Oxidation Catalysts	Petroleum and coal products manufacturing (324); Hospitals (622); Personal and laundry services (812)	<i>Capital:</i> Machinery manufacturing (333)
Baghouses	Machinery manufacturing (333)	<i>Capital:</i> Machinery manufacturing (333)
		<i>O&M:</i> Utilities (22); Textile mills & textile product mills (313-314)
Carbon Adsorbers	Utilities (22); Other transportation equipment manufacturing (3364-3369); Motion picture and sound recording industries (512)	<i>Capital:</i> Machinery manufacturing (333)
		<i>O&M:</i> Utilities (22); Chemical manufacturing (325)
Diesel Particulate Filters	Petroleum and coal products manufacturing (324)	<i>Capital:</i> Machinery manufacturing (333)
		<i>O&M:</i> Waste management and remediation services (562)
Scrubbers	Utilities (22); Petroleum and coal products manufacturing (324); Fabricated metal product manufacturing (332); Machinery manufacturing (333); Other transportation equipment manufacturing (3364-3369)	<i>Capital:</i> Machinery manufacturing (333)
		<i>O&M:</i> Utilities (22)
Thermal Oxidizers	Petroleum and coal products manufacturing (324)	<i>Capital:</i> Machinery manufacturing (333)
		<i>O&M:</i> Utilities (22)
New and Updated HRAs	Various	Professional, scientific, and technical services (54)
Public Notices	Various	Administrative and support services (561)

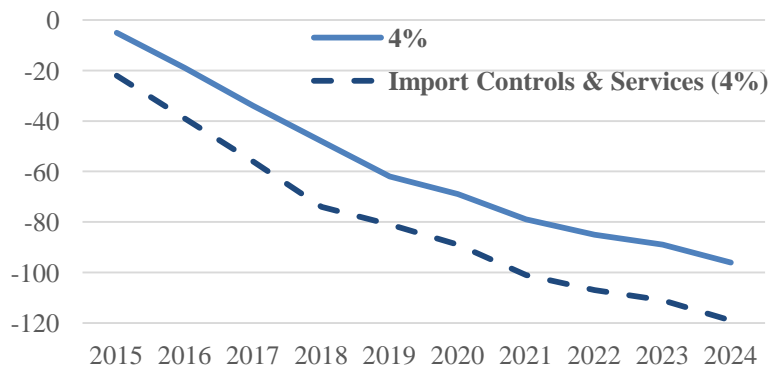
As shown in Figure 1, the proposed amendments are expected to result in approximately 10 to 100 annual jobs forgone between 2015 and 2024 when a 4-percent real interest rate is assumed (approximately 10 to 90 annual jobs with a 1-percent real interest rate). The projected job impacts represent less than 0.001 percent of the total employment in the four-county region. Almost all major sectors of the regional economy would be impacted by the projected reduction in employment. The manufacturing sector (NAICS 31-33), which is projected to bear the majority of estimated total compliance costs, would not lose more jobs than the other industry sectors. This is because other businesses in the manufacturing sector, specifically in the machinery manufacturing industry, are expected to benefit from the increased sale of various types of control equipment, thus offsetting the direct effect of compliance costs incurred by other manufacturing facilities.

Figure 1
Projected Regional Job Impact, 2015-2024



To sensitivity-test the assumption that the affected facilities would purchase controls and other services from providers within the same county, Figure 2 presented an alternative scenario where it is assumed that all equipment and services are imported from outside the region. At a 4-percent interest rate, the job impact expectedly became more negative. The number of jobs foregone increased by about 20 percent, to approximately 20 to 120 annual jobs foregone between 2015 and 2024.

Figure 2
Projected Regional Job Impact with Imported Equipment and Services, 2015-2024



EMISSION REDUCTION POTENTIAL

PAR 1401, 1401.1 and 1402 could potentially require the installation of additional air pollution control equipment as a result of implementing the Revised OEHHA Guidelines to reduce toxic emissions. These reductions are to ensure facilities can meet existing health risk thresholds specified in Rules 1401, 1401.1, and 1402.

NECESSITY OF RULE ADOPTION

Please refer to the Staff Report.

RULE ADOPTION RELATIVE TO COST-EFFECTIVENESS

Please refer to the Staff Report.

INCREMENTAL COST-EFFECTIVENESS

Please refer to the Staff Report.

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South Coast Air Quality Management District



DRAFT RISK ASSESSMENT PROCEDURES for Rules 1401, 1401.1 and 212

Version 8.0

June 5, 2015

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ATTACHMENTS.

PERMIT APPLICATION PACKAGES INCLUDING TABLES

**A: PERMIT APPLICATION PACKAGE “M”
effective July 5, 2015**

INTRODUCTION

Risk assessment procedures, including procedures for a simple risk screening, were originally developed by South Coast Air Quality Management District (SCAQMD) staff for the adoption of Rule 1401 - New Source Review of Toxic Air Contaminants, in June 1990. Since that time, this document has been revised several times to reflect updated risk assessment methodologies. This current version 8.0 has been updated to provide District specific guidance consistent with the OEHHA's 2015 revision to its Health Risk Assessment Guidance.

The purpose of this document is to:

- assist applicants and engineers to evaluate Rule 1401 and 1401.1 compliance;
- provide explanations and sample risk calculations; and
- provide industry worksheets.

This document describes the procedures for preparing risk assessments under Rule 1401 and Rule 212 – Standards for Approving Permits and Issuing Public Notice. It also applies to Rule 1401.1 for sources located near schools. It is intended to be a "living" document. That is, as new toxic air contaminants (TACs) are added, risk values changed, or procedures revised, the document will be updated. This version of "Risk Assessment Procedures for Rules 1401, 1401.1 and 212" is based on "The Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments" ("Guidance Manual") prepared by the state Office of Environmental Health Hazard Assessment (OEHHA) and approved on March 6, 2015. The Guidance Manual may be found at: http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf. The 2015 Guidance Manual supersedes OEHHA'S 2003 version of its Guidance Manual. Past procedures will be archived and TAC toxicity criteria have been separated by the time period of significant Rule 1401 changes (see attachments). The revised OEHHA Guidance Manual incorporates age sensitivity factors which will increase cancer risk estimates to residential and sensitive receptors by approximately 3 times, and more than 3 times in some cases depending on whether the toxic air contaminant has multiple pathways of exposure in addition to inhalation. Under the revised OEHHA Guidance Manual, even though the toxic emissions from a facility have not increased, the estimated cancer risk to a residential receptor will increase. Cancer risks for off-site worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged.

Background

There are four steps involved in the risk assessment process; 1) hazard identification, 2) exposure assessment, 3) dose-response assessment, and 4) risk characterization. Each step is briefly discussed below.

Hazard Identification

For air toxics sources, hazard identification involves determining the type of adverse health effect associated with exposure of the pollutant of concern emitted by a facility, including whether a pollutant is considered human carcinogen or a potential human carcinogen.

Exposure Assessment

The purpose of exposure assessment is to estimate the extent of public exposure to emitted substances for potential cancer, noncancer health hazards for chronic and acute, and repeated 8-hour exposures. This involves estimation of long-term (annual), short-term (1-hour maximum), and 8-hour average exposure levels.

Dose-Response Assessment

Dose-response assessment is the process of characterizing the relationship between exposure to a chemical by its modeled concentration. Dose can be calculated as follows:

Dose = Concentration x Exposure

Risk Characterization

This is the final step of the risk assessment in which the information from exposure assessment and dose-response assessment are combined to assess total risk to the surrounding community.

SCAQMD Rule 1401 History

Rule 1401, adopted June 1, 1990 and amended December 7, 1990, specified limits for maximum individual cancer risk (MICR) and excess cancer cases for new, relocated, or modified equipment which emits carcinogenic air contaminants. The rule was amended July 10, 1998 to include non-carcinogenic compounds. The rule was amended on March 17, 2000 to remove the requirement to assess cumulative risk from emissions from units permitted after 1990 located within 100 meters of the new equipment under evaluation for permit. And, the rule has been amended several times to change the list of regulated compounds (both additions and deletions) and their corresponding risk values (cancer potency factors and reference exposure levels).

Requirements

This document describes the procedures for determining cancer and non-cancer health effects for equipment subject to Rules 1401, 1401.1, and 212.

In general, these rules apply only if there is an increase in TAC emissions from new, relocated, or modified equipment. Details regarding applicability of these rules to facilities or equipment can be found within the rules themselves at: <http://www.aqmd.gov/home/regulations/rules/proposed-rules#1401>

Under Rule 1401, the following requirements must be met before a permit is granted for affected equipment.

- The cumulative increase from all TACs emitted from a single piece of equipment in maximum individual cancer risk (MICR) shall not exceed:

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- one in one million (1×10^{-6}) if Best Available Control Technology for Toxics (T-BACT) is not used; or,
- ten in one million (10×10^{-6}) if T-BACT is used;
- The cumulative cancer burden from all TACs emitted from a single piece of equipment (increase in cancer cases in the population) shall not exceed 0.5; and,
- Neither the chronic hazard index (HIC), the 8-hour chronic hazard index (HIC8), nor the total acute hazard index (HIA) from all TACs emitted from a single piece of equipment shall exceed 1.0 for any target organ system, or an alternate hazard index level deemed to be safe.

Rule 1401.1 is designed to be more health protective for school children than Rule 1401 by establishing more stringent risk requirements related to facility-wide cancer risk and non-cancer acute and chronic HI for new and relocated facilities emitting toxic air contaminants near schools, thereby reducing the exposure of toxic emissions to school children. For new facilities, the rule requires the facility-wide cancer risk to be less than one in one million at any school or school under construction within 500 feet of the facility. If there are no schools within 500 feet, the same risk levels must be met at any school or school under construction within 500 to 1,000 feet unless there is a residential or sensitive receptor within 150 feet of the facility. For relocating facilities, the facility must demonstrate, for each school or school under construction within 500 feet of the facility, that either: 1) the risk at the school from the facility in its new location is no greater than the risk at that same school when the facility was at its previous location, or 2) the facility-wide cancer risk at the school does not exceed one in one million. Unlike other SCAQMD risk-based rules, the required risk thresholds of Rule 1401.1 do not change based on whether or not the source is equipped with T-BACT.

Rule 212 also applies to Rule 1401 exempt sources. Rule 212 (c)(3) requires public notification if the MICR, based on Rule 1401 risk assessment procedures, exceeds one in one million (1×10^{-6}), due to a project's proposed construction, modification, or relocation for facilities with more than one permitted equipment unless the applicant can show the total facility-wide MICR is below ten in a million (10×10^{-6}). For facilities with a single permitted piece of equipment, the MICR level must not exceed ten in a million (10×10^{-6}). The circulation and distribution of the notifications must meet the criteria in Rule 212.

Revisions

The major revisions to this document include incorporation of updated risk assessment methodologies pursuant to OEHHA's 2015 update of its Guidance Manual. These include:

- Increased risk to children from cancer causing substances;
- Higher breathing rates for children;
- Lower exposure durations for residents and workers;
- Different multipathway calculation methodologies and factor;
- Incorporation of AERMOD air dispersion model into HARP2 in place of the previously used ISCST3 model in HARP;
- Inclusion of the 8-hr chronic non-cancer risk estimate;

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- Calculation of risk in individual age bins (e.g., third trimester, 0-2 years, etc.) rather than a single lifetime calculation;
- Removal of meteorological correction factors in favor of more precise dispersion factors provided for each meteorological station; and
- Inclusion of a short-term (i.e., 9-years) exposure risk calculation for permits that include a 'sunset' condition.

These items are described in greater detail in the following chapters. The first three come from the recent revisions to OEHHA's Guidance Manual. The last one is unique to the SCAQMD and these procedures.

OVERVIEW

This document provides several tiers for preparing a risk assessment, from a quick look-up table to a detailed risk assessment involving air quality dispersion modeling analysis. Permit applicants may use any of these tiers to demonstrate compliance with the risk limits of Rule 1401. The applicant should include a copy of the risk assessment with the permit application.

The tiers are designed to be used in order of increasing complexity with each higher tier providing a more refined estimate of risk than the lower tier. If compliance cannot be demonstrated using one tier, the permit applicant may proceed to the next tier. A permit applicant who can show compliance by using a lower tier does not need to perform an analysis for the higher tiers. In general, for most permits a detailed analysis is not required. The tiers are:

- Tier 1: Screening Emission Levels
- Tier 2: Screening Risk Assessment
- Tier 3: Screening Dispersion Modeling
- Tier 4: Detailed Risk Assessment

Please note that the OEHHA Guidance Manual “Tier” approach differs from these SCAQMD Risk Procedures “Tier” compliance. The OEHHA Tiers refer to the incorporation of stochastic modeling for the facility and population specific exposure parameters. In contrast, the SCAQMD Tiers refer to increasing complexity for deriving pollutant concentrations based on facility emissions. Regulatory compliance may be demonstrated with any SCAQMD Tier.

In addition, this document briefly discusses the Best Available Control Technology for Toxics (T-BACT) identification process for Rule 1401.

PRELIMINARY TASKS

Before conducting any of these risk assessment tiers, three preliminary tasks must be performed:

1. **Determine if the permitting action or equipment is exempt from the provisions of Rule 1401.** Exemptions are granted for:
 - * permit renewal or change of ownership;
 - * modifications with no increase in risk;
 - * functionally identical equipment replacement;
 - * equipment previously exempt under Rule 219 and filing for a permit to operate within one year of removing the Rule 219 exemption;
 - * modifications to terminate research projects;
 - * emergency internal combustion engines (ICEs) exempt under Rule 1304.

An additional exemption is granted for demonstrations of contemporaneous emission reductions such that no receptor experiences a total increase in MICR of greater than one in one million and the contemporaneous reduction occurs within 100 meters of the equipment.

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If the equipment falls under one of these exemptions, no further risk assessment is required.

- 2. Identify the toxic air contaminants (TAC) emitted by the permit unit.** The risk assessment must include those TACs emitted by the permit unit which were listed in the rule when the permit application was deemed complete by SCAQMD staff. Sets of tables corresponding to each rule revision are included at the end of this document as attachments (i.e. Attachment L, M, etc.). Determine the date on which the application was deemed complete and refer to the appropriate attachments. The first table in the attachment lists the TACs subject to Rules 1401, 1401.1 and Rule 212.

For guidance, California Air Resources Board (CARB) has prepared a table listing devices and processes as they relate to the types of emissions and the specific contaminants emitted. This table is available on the CARB webpage at: www.arb.ca.gov/ab2588/ab2588.htm. Click on “Inventory Guidelines”, and then on “Appendix C - Facility Guideline Index.” Please note that this table is not an exhaustive list. Facilities are, therefore, advised to use this table for guidance only.

Default toxic emission factors for TACs associated with combustion equipment have been developed for use in the AB2588 Program and are available on the SCAQMD webpage at: <http://www.aqmd.gov/docs/default-source/permitting/toxics-emission-factors-from-combustion-process-.pdf>. If better source specific data such as SCAQMD approved source tests, manufacturer’s data, or fuel analysis is available, it should be used rather than the default emission factors.

If no TACs listed in the applicable version of Rule 1401 are emitted by the equipment, no further risk assessment is required.

- 3. Estimate the quantity of emissions from the permit unit.** The appropriate emission estimation technique depends on the type of source. Techniques include emission testing, a mass balance or other engineering calculation, or emission factors for specific types of processes. The emissions used for the risk calculation should be post-control emissions (that is, reductions in emissions due to enforceable controls and permit conditions should be taken into account). SCAQMD permitting staff should be consulted regarding approved techniques for identifying contaminants and estimating emissions for specific sources.

The SCAQMD also has a broader mandate to ensure that permits are not granted to facilities which may endanger public health (California Health and Safety Code Section 41700). In addition, under Rule 212, the applicant may be required to evaluate other compounds that are determined to be potentially toxic. Therefore, an applicant may be required to evaluate risks from compounds not listed in the attachment as part of the permitting process if they are a concern for a specific source. These may include substances with irritant effects or other adverse health effects.

Tier 1: Screening Emission Levels

OVERVIEW OF TIER 1

Tier 1 involves a simple look-up table (Table 1.1) in which the equipment's emissions are compared to Screening Levels. The Screening Levels are pollutant emission thresholds which are not expected to produce a MICR greater than one in one million nor a hazard index greater than one.

Tier 1 can be used by applicants to determine whether or not detailed risk analysis will be required when filing for a permit. It can also be used by applicants and SCAQMD staff to determine whether a permit is required based on paragraph (s)(2) in Rule 219 – Equipment not Requiring a Written Permit Pursuant to Regulation II.

Tier 1 may be used only for a single emission source and a single toxic air contaminant. However, it can be used for multiple pollutants if the Multiple Pollutant Screening Level Procedure (described below) is followed.

INSTRUCTIONS FOR TIER 1

The Tier 1 analysis is performed as follows:

1. Determine the maximum annual emissions (for cancer and non-cancer 8-hour and chronic TACs) and determine the maximum hourly emissions (for non-cancer acute TACs).
2. Compare the emissions to the Screening Levels for that contaminant in Table 1.1. Columns are labeled with the distance to the nearest receptor.
3. If the maximum annual emissions or the maximum hourly emissions do not exceed the Screening Levels, the equipment will comply with Rule 1401 and does not require notice under Rule 212 for toxics.
4. If the maximum annual emissions or the maximum hourly emissions exceed the Screening Levels, proceed to Tier 2.

The Screening Levels in Table 1.1 were determined by back calculation, using the highest dispersion factors (χ/Q) established in Tables 2.1 through 5.6 that would not exceed a cancer risk of one in one million or an 8-hour or chronic or acute hazard index of one.

MULTIPLE POLLUTANT SCREENING LEVEL PROCEDURE

1. Calculate the Pollutant Screening Index for each TAC (PSI_{TAC}). For each carcinogenic and/or 8-hour or chronic compound, divide the maximum annual emissions (in pounds per year) of each TAC (Q_{lbpy}) by the Annual Pollutant Screening Level ($PSL_{TAC, Annual}$) in pounds per year, as contained in Table 1.1. For each acute compound, divide the maximum hourly emission (Q_{lbph}) of each TAC by the Hourly Pollutant Screening Level ($PSL_{TAC, Hourly}$) as contained in Table 1.1.

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$$PSI_{TAC, \text{ Cancer, 8-hr, or Chronic}} = Q_{lbpy, TAC} / PSL_{TAC, \text{ Annual}}$$

$$PSI_{TAC, \text{ Acute}} = Q_{lbph, TAC} / PSL_{TAC, \text{ Hourly}}$$

2. Calculate the Application Screening Index (ASI). Sum up the individual Pollutant Screening Indices for all chronic, 8-hr and carcinogenic pollutants (PSI_p) and, separately, for all acute TACs.

$$ASI_{\text{cancer, 8-hr, chronic}} = PSI_{TAC1, \text{ cancer, 8-hr, chronic}} + PSI_{TAC2, \text{ cancer, 8-hr, chronic}} + PSI_{TAC3, \text{ cancer, 8-hr, chronic}} + \dots$$

$$ASI_{\text{acute}} = PSI_{TAC1, \text{ acute}} + PSI_{TAC2, \text{ acute}} + PSI_{TAC3, \text{ acute}} + \dots$$

3. Neither the $ASI_{\text{cancer, 8-hr, chronic}}$, nor the ASI_{acute} can exceed one.

Refer to Example 2 (starting on page 33) for multiple pollutant screening.

If step 3 cannot be met, proceed to Tier 2.

Tier 2: Screening Risk Assessment

OVERVIEW OF TIER 2

Tier 2 is a screening risk assessment, which includes procedures for determining the level of risk from a source for Cancer Risk, Cancer Burden, Acute, 8-hour and Chronic Hazard Indices. If the estimated risk from Tier 2 screening is below Rule 1401 limits, then a more detailed evaluation is not necessary. Examples of calculations are provided at the end of the description of Tier 4 risk assessment. (See page 26)

If the screening risk assessment results in a risk estimate that exceeds the risk limits or the permit applicant feels that a more detailed evaluation would result in a lower risk estimate, the applicant has the option of conducting a more detailed analysis using Tier 3 or 4.

To perform a Tier 2 screening risk assessment, the following information is needed:

- **Maximum annual emissions** of each carcinogen and non-cancer 8-hour and chronic TAC, and the **maximum hourly emissions** of each non-cancer acute TAC;
- The **distance** from the permit unit to the nearest off-site residential and worker receptor(s);
- Certain source characteristics, such as **stack height** and/or **building dimensions**;
- **Operating schedule**: whether the permit unit will operate more or less than 12 hr/day; and
- **Geographic location** of the permit unit (e.g., city).

In order to perform a Tier 2 screening risk assessment, it is necessary to identify the nearest receptor location. For the purpose of calculating the MICR, 8-hour and chronic HI, a receptor is any location outside the boundaries of the facility at which a person could experience repeated, continuous exposure. For the purpose of calculating the acute HI, a receptor is any location outside the boundaries of the facility at which a person could experience exposure over a short timeframe. Receptor locations include residential, commercial and industrial areas, and other locations where sensitive receptors may be located. Residential receptor locations include current residential land uses and areas which may be developed for residential uses in the future, given existing or planned zoning. Commercial/industrial receptor locations include areas zoned for manufacturing, light or heavy industry, office or retail activity. Sensitive receptor locations include schools, hospitals, convalescent homes, day-care centers, and other locations where children, chronically ill individuals or other sensitive persons could be exposed to TACs.

When identifying receptor locations in order to calculate cancer risk, 8-hour or chronic hazard index, the potential for chronic (long-term) exposure should be considered. Land uses at which it is not possible for individuals to be exposed on a long-term basis such as roadways or highways should not be used. When identifying receptor locations to calculate acute hazard index, all off-site locations where there is the potential for acute exposure should be considered (i.e. fence-line receptor). Refer to Rule 1401 – New Source Review of Toxic Air Contaminants for more information regarding receptor locations to be considered.

For assessment of residential cancer risk, the risk is calculated in individual age bins (e.g., third trimester, 0-2 years, etc.) rather than a single lifetime calculation, whereas, for off-site worker, the default assumption is that working age begins at 16 years.

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**INSTRUCTIONS FOR CALCULATING MAXIMUM INDIVIDUAL CANCER RISK
(MICR)**

The MICR Calculation Worksheet in Appendix I can be used to help with the calculation. This worksheet can be included in the permit application as documentation of the MICR calculation.

MICR is calculated as follows:

$$\text{MICR} = \text{Cancer Potency (CP)} \times \text{Dose (D)} \times 10^{-6}$$

Where:

$$\text{Dose} = \text{Concentration} \times \text{Exposure}$$

$$\text{Concentration} = \text{GLC} = (\text{Q}_{\text{tpy}} \times \chi/\text{Q}) \times \text{MWF}$$

$$\text{Exposure}_{\text{AgeBin}} = \text{DBR}_{\text{AgeBin}} \times \text{ED}_{\text{AgeBin}} \times \text{ASF}_{\text{AgeBin}} \times \text{FAH}_{\text{AgeBin}}$$

$$\text{CEF}_R = (\text{Exposure}_{0.25-0} + \text{Exposure}_{0-2} + \text{Exposure}_{2-16} + \text{Exposure}_{16-30}) \times \text{EF}_R / \text{AT}$$

$$\text{Exposure}_R = \text{CEF}_R \times \text{MP}_R$$

$$\text{CEF}_W = \text{DBR}_W \times \text{ED}_W \times \text{EF}_W / \text{AT}$$

$$\text{Exposure}_W = \text{CEF}_W \times \text{MP}_W \times \text{WAF}$$

You may also use the following equation using **default combined exposure factor**:

$$\text{MICR}_R = \text{CP} \times \text{Q}_{\text{tpy}} \times \chi/\text{Q} \times \text{CEF}_R \times \text{MP}_R \times 10^{-6} \times \text{MWF}$$

$$\text{MICR}_W = \text{CP} \times \text{Q}_{\text{tpy}} \times \chi/\text{Q} \times \text{CEF}_W \times \text{MP}_W \times \text{WAF} \times 10^{-6} \times \text{MWF}$$

For Tier 2 screening risk assessment procedures for short-term projects, refer to Appendix IX.

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Term	Description	Where to Find
GLC	Ground Level Concentration = $Q_{\text{tpy}} \times \chi/Q$	
Q_{tpy}	Maximum emission rate (tons/yr)	Emission estimate specific to permit unit
χ/Q	Concentration at a receptor distance / Emission Rate [$(\mu\text{g}/\text{m}^3)/(\text{tons}/\text{yr})$]	Tables 2.1 thru 5.42 – Annual Tables 6.1 & 7.1 – Hourly
MWAF	Molecular Weight Adjustment Factor	Table 8.1
CP	Cancer Potency $(\text{mg}/\text{kg}\text{-day})^{-1}$	Table 8.1
REL	Reference Exposure Level $(\mu\text{g}/\text{m}^3)$	Table 8.1
MP	Multipathway Factor (if applicable)	Table 8.1
CEF	Combined Exposure Factor	Tables 9.1 and 9.2
DBR	Daily breathing rate $(\text{L}/\text{kg body weight}\text{-day})$	Tables 9.1 and 9.2
ASF	Age Specific factor (unitless)	Tables 9.1 and 9.2
ED_R	Exposure Duration (30 years) – Residential	Tables 9.1 and 9.2
ED_W	Exposure Duration (25 years) – Worker	Tables 9.1 and 9.2
FAH	Fraction of time spent at home (unitless)	Table 9.1
EF_R	Exposure Frequency, Residential = 0.96 (350 days / 365 days), unitless	Tables 9.1 and 9.2
EF_W	Exposure Frequency, Worker = 0.68 (250 days / 365 days), unitless	Tables 9.1 and 9.2
AT	Averaging Time (lifetime exposure = 70 years)	
WAF	Worker Adjustment Factor	Tables 10.1 and 10.2
10^{-6}	Micrograms to milligrams conversion, liters to cubic meters conversion	not applicable
	Target Organs	Tables 11.1 thru 11.3

Step 1: Estimate Emission Rate (Q_{tpy})

The maximum annual emissions of the TAC in tons/year (Q_{tpy}) must be estimated. The emission rate must be expressed in tons/year because the dispersion factors (χ/Q) are expressed in tons/year.

Step 2: Determine Release Type

Determine whether the permit unit is best characterized as a point source or a volume source:

- A **point source** is one that releases its emissions through a stack (designed with acceptable stack height). If the point source has a raincap or a horizontal release, a Tier 3 or 4 assessment is required.
- A **volume source** includes emissions that are unrestricted by any physical means (e.g. pipes or vents and/or vacuum or fan), including releases inside of a building or as fugitive emissions.

For permit units that have both point and volume releases, use the table that will result in the highest χ/Q value, or apportion the emissions between the point and volume sources.

Step 3: Determine Release Height

For a **point source**, determine the **stack height**, which is the distance from ground level to the top of the stack.

Acceptable Stack Height. Although a taller stack provides better dispersion, there are limits to the degree to which this factor can be incorporated into the risk assessment. Rule 1401 specifies that the stack height used to determine risk shall not exceed the “Acceptable Stack Height” for the permit unit. Acceptable stack height is defined as 2.5 times the height of the equipment or 2.5 times the height of the building housing the equipment, and may not exceed 65 meters (213 feet), unless the applicant demonstrates to the satisfaction of SCAQMD staff that a greater height is necessary. For example, for a building that is 14 feet high, the acceptable stack height is 35 feet, measured from ground level.

For a **volume source**, determine the **building height**, which is the distance from ground level to the top of the building in which the permit unit is located, and the **floor area**, which is the dimensions (length x width) of the building in which the permit unit is located.

An **area source** is similar to a volume source in that the emissions take place over an area (as opposed to a point such as from a stack). However, in an area source, the pollutants are released at a uniform height. Examples of area sources are storage piles, slag dumps, lagoons or ponds, and liquid spills. Toxic hydrocarbon emissions from open top and floating roof storage tanks are also often treated as elevated area sources. Use Tier 3 or 4 for area sources.

Step 4: Determine Operating Schedule

Determine whether the equipment will operate:

- 12 hr/day or less; or
- more than 12 hr/day

Step 5: Identify the Appropriate Meteorological Station

Attachment M provides the locations of meteorological stations in the air basin used for these calculations. Using Figures 1 and 2, or the links below, determine the Source Receptor Area (SRA) for the permit unit. Use Tables 12.1 and 12.2 to determine the meteorological site associated with the permit unit's SRA.

<http://www3.aqmd.gov/webappl/gisaqi2/VEMap3D.aspx>; and

<http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>

Step 6: Identify Type of Receptor and Distance from Receptor

Identify the nearest receptor locations. Receptor locations are off-site locations where persons may be exposed to emissions of a TAC from the equipment. Receptor locations include residential, commercial, and industrial land use areas, and other locations where sensitive populations may be located.

Residential receptor locations include current residential land uses and areas that may be developed for residential uses in the future, based on existing and planned zoning.

Worker receptor locations include areas zoned for manufacturing, light or heavy industry, retail activity, or other locations that are regular work sites.

Sensitive receptor locations include any residence including private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers and health facilities such as hospitals, retirement and nursing homes, long term care hospitals, hospices in addition to prisons, dormitories or similar live-in housing.

When identifying receptor locations to calculate MICR, the potential for chronic (long-term) exposure should be considered. Land uses at which it is not possible for individuals to be exposed on a long-term basis, either presently or in the future, should not be considered receptor locations for purposes of calculating MICR. Examples of such locations include flood channels, or roadways.

For a point source, the receptor distance is the distance from the center of the stack to the nearest receptor location.

For a volume source, the receptor distance is the distance from the edge of the building to the nearest receptor location.

Experience shows that in most cases, the receptor distance will be 50 meters or more. However, the table also provides χ/Q values for a 25-meter distance. The 25-meter distance should be used for circumstances in which there is a receptor located very close to the permit unit, for example, a residence located with a business, another business adjacent to the facility, or a sensitive receptor located less than 50 meters from the permit unit.

If the closest receptor location is a worker receptor, then the MICR must also be calculated for the closest residential or sensitive receptor. The greater of the two MICR values is used to determine compliance with the risk limits in the rule.

Care should be taken when estimating these distances since concentrations decrease rapidly with increasing distance. It is acceptable to linearly interpolate to estimate dispersion factors between the downwind distances given in the tables. If the receptor lies over 1,000 meters from the permit unit, use the concentration for 1,000 meters.

Step 7: Select χ/Q Value

What is a Dispersion Factor (χ/Q)?

The concentration of a contaminant decreases as it travels away from the site of release and spreads out or “disperses.” Dispersion factors (χ/Q) are numerical estimates of the amount of dispersion that occurs under specific conditions.

The amount of dispersion depends on the distance traveled, the height of release and meteorological conditions such as wind speed and atmospheric stability.

The dispersion factors for the screening risk assessment procedure give the estimated annual average ground-level concentration ($\mu\text{g}/\text{m}^3$) resulting from a source emitting one ton/year of a contaminant. For a more detailed explanation of derivation of χ/Q for each meteorological station, please refer to Appendix VI.

Several tables are provided for χ/Q , based on the source parameters and the meteorological station. Select the appropriate χ/Q value from the table based on the **meteorological station**, **source characteristics** (i.e., stack height for point sources and building height and building area for volume sources) and the **receptor distance**. The selection of the appropriate table is summarized below:

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Release Type	Building Area	Stack Height	Operating Schedule of Equipment	Table for χ/Q
Point	N/A	≥ 14 ft to 24 ft	≤ 12 hr/day	Table 2.1
			> 12 hr/day	Table 3.1
		> 24 ft to 49 ft	≤ 12 hr/day	Table 2.2
			> 12 hr/day	Table 3.2
		> 49 ft	≤ 12 hr/day	Table 2.3
			> 12 hr/day	Table 3.3
Volume	$\leq 3,000$ ft ²	≤ 20 ft	≤ 12 hr/day	Table 4.1
			> 12 hr/day	Table 5.1
	$> 3,000$ ft ² to 10,000 ft ²	≤ 20 ft	≤ 12 hr/day	Table 4.2
			> 12 hr/day	Table 5.2
	$> 3,000$ ft ² to 10,000 ft ²	> 20 ft	≤ 12 hr/day	Table 4.3
			> 12 hr/day	Table 5.3
	$> 10,000$ ft ² to 30,000 ft ²	≤ 20 ft	≤ 12 hr/day	Table 4.4
			> 12 hr/day	Table 5.4
	$> 10,000$ ft ² to 30,000 ft ²	> 20 ft	≤ 12 hr/day	Table 4.5
			> 12 hr/day	Table 5.5
	$> 30,000$ ft ²	> 20 ft	≤ 12 hr/day	Table 4.6
			> 12 hr/day	Table 5.6

Alternative Sets of Dispersion Factors (χ/Q) for Tier 2 Analysis Only

SCAQMD staff has developed alternative sets of dispersion factors to be used by certain industry or equipment categories. The Tier 2 χ/Q values for those categories are contained in separate appendices to this document along with supporting information as to how they were developed. Appendix VII contains χ/Q values for combustion sources such as diesel reciprocating internal combustion engines rated 50 bhp to 1,149 bhp, natural gas reciprocating internal combustion engines rated 50 bhp to 1,000 bhp, and natural gas boilers with an hourly rating of no more than 200 MMBTU/hr. Appendix VIII contains χ/Q values for crematoriums. Appendix IX contains χ/Q values for short-term projects. Appendix X contains χ/Q values for gasoline dispensing facilities. Appendix XI contains χ/Q values for spray booths.

Step 8: Identify Molecular Weight Adjustment Factor (MWAF)

Using Table 8.1, identify the Molecular Weight Adjustment Factor (MWAF) for the TAC.

What is a Molecular Weight Adjustment Factor (MWAF)?

MWAFs should be used when calculating the cancer risk, . For most of the Hot Spots toxic metals, the OEHHA cancer potency factor applies to the weight of the toxic metal atom contained in the overall compound. This ensures that the cancer potency factor is applied only to the fraction of the overall weight of the emissions that are associated with health effects of the metal.

For most of the Hot Spots toxic metals, the OEHHA cancer potency factors, acute and chronic RELs apply to the weight of the toxic metal atom contained in the overall compound. Some of the Hot Spots compounds contain various elements along with the toxic metal atom (e.g., “Nickel hydroxide”, CAS number 12054-48-7, has a formula of H_2NiO_2). Therefore, an adjustment to the reported pounds of the overall compound is needed before applying the OEHHA cancer potency factor for “Nickel and compounds” to such a compound. This ensures that the cancer potency factor, acute or chronic REL is applied only to the fraction of the overall weight of the emissions that are associated with health effects of the metal. In other cases, the Hot Spots metals are already reported as the metal atom equivalent (e.g., CAS 7440-02- , “Nickel”), and these cases do not use any further molecular weight adjustment. The appropriate molecular weight adjustment factors (MWAF) to be used along with the OEHHA cancer potency factors, acute and chronic RELs for Hot Spots metals can be found in the MWAF column of the table containing OEHHA/ARB Approved Health Values for use in Hot Spots Facility Risk Assessments.

Step 9: Identify Cancer Potency Factor (CP) and Reference Exposure Level (REL)

Using Table 8.1, identify the cancer potency factor (CP) for the TAC.

What is a Cancer Potency Factor (CP)?

The cancer potency factor is a measure of the cancer potency of a carcinogen. Cancer potency describes the potential risk of developing cancer per unit of average daily dose over a 70-year lifetime.

The cancer potency factors in these procedures were approved by the state Scientific Review Panel and prepared by the state Office of Environmental Health Hazard Assessment (OEHHA).

What is a Reference Exposure Level (REL)?

The concentration level at or below which no adverse health effects are anticipated for a specified exposure duration is termed the reference exposure level (REL). RELs are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. RELs are designed to protect the most sensitive individuals in the population by the inclusion of margins of safety. Since margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact.

Step 10: Identify Multi-pathway Factor (MP)

Using Table 8.1, identify the multi-pathway adjustment (MP) factor for the TAC, if applicable.

What is a Multi-Pathway Adjustment Factor (MP)?

The multi-pathway adjustment factor (MP) is used for substances that may contribute to risk from exposure pathways other than inhalation. These substances deposit on the ground in particulate form and contribute to risk through ingestion of soil or backyard garden vegetables or through other routes. The MP factor estimates the total risk in comparison to a given inhalation risk. MP factors are provided in Table 8.1.

These factors allow permit units that emit multi-pathway pollutants to use the risk screening procedure rather than proceeding directly to preparing a detailed risk assessment.

The MP factors are to be used only in urban residential or worker exposure situations. Note that there are separate MP factors for worker (MP_W), resident (MP_R) and short-term ($MP_{R,ST}$ and $MP_{W,ST}$) exposure (see Table 8.1 and Tables 9.11 to 9.32 in Appendix IX) since their potential routes and duration of exposure varies. If the facility is in the vicinity of other potential routes of population exposure such as agricultural areas, drinking water reservoirs, lakes or ponds used for fish that are consumed regularly, or areas used for livestock grazing, then these MP screening assumptions are not appropriate and a more detailed multi-pathway assessment (Tier 4) must be performed.

For a more detailed description of the derivation of the multipathway factors, please see Appendix II.

Step 11: Select Combined Exposure Factor (CEF)

Using Tables 9.1 and 9.2, select the appropriate CEF. The CEF for each exposure type (residential, worker, or short-term) combines default exposure parameters for DBR, ASF, ED, FAH, EF, and AT into a single value.

What are Daily Breathing Rate (DBR) Values?

Exposure to airborne chemicals occurs through inhalation and subsequent absorption into the body, potentially resulting in adverse health effects depending on toxicological properties of the chemical and other exposure parameters. For residential exposures, the breathing rates are determined for specific age groups (i.e., 3rd trimester, 0-2, 2-16, and 16-30 years). The Air Resources Board is developing an updated Risk Management Policy that includes recommendations for inhalation exposures. Information regarding ARB's Risk Management Policy (RMP) can be located at: <http://www.arb.ca.gov/toxics/toxics.htm>. For residential exposures, ARB's RMP recommends using the high end DBR (e.g., 95th percentile) for children from the 3rd trimester through age 2, and 80th percentile DBR for all other ages. This is reflected in Tables 9.1 and 9.2. For worker exposures, it is assumed that the working age begins at 16 years, and that exposures to facility emissions occur during the work shift which is typically up to 8 hours per day during work days.

What is Age Sensitivity Factor (ASF)?

Scientific data have shown that young animals are more sensitive than adult animals to exposure to many carcinogens. Therefore, OEHHA has developed age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure. OEHHA recommends an ASF of 10 for exposures that occur from the third trimester of pregnancy to 2 years, and an ASF of 3 for exposures that occur from 2 years through 15 years of age.

What is Exposure Duration (ED)?

A 30-year ED (residency time) should be used for residential and sensitive receptor locations. A 25-year ED should be used for off-site workers (i.e., receptor locations in commercial or industrial areas).

What is Fraction of Time Spent At Home (FAH)?

OEHHA and ARB have evaluated information from activity patterns databases to estimate the percentage of the day that people are at home. This information is used to adjust cancer risk from a facility's emissions, assuming that exposure to the facility's emissions are not occurring away from home. The FAH factor does not apply for workers since the worker is assumed to be present at the work site 100% of the work day. For Tiers 1, 2, and 3 screening purposes, the FAH is assumed to be 1 for ages 3rd trimester to 16. As a default, children are assumed to attend a daycare or school in close proximity to their home and no discount should be taken for time spent outside of the area affected by the facility's emissions. People older than age 16 are assumed to spend only 73% of their time at home.

What is Exposure Frequency (EF)?

Exposure Frequency (EF) is the number of days per year of exposure for the given scenario (i.e. residential, worker). OEHHA recommends use of 350 days/year for residential exposure (applicable to 30-year risk assessments), and 250 days/year for worker exposure.

What is Average Time (AT)?

Averaging Time (AT) is the lifetime exposure period OEHHA used to develop the cancer potency values. Cancer Potency (CP) factors are developed as estimates of cancer risk from exposure to a lifetime dose (i.e. 70 years) of a carcinogen. Since cancer risks are calculated on a yearly basis to account for age-specific factors (e.g., ASF, DBR, etc.) the CP factor must be divided by its original 70-year AT in the risk equation to generate an annual CP factor to be used in the cancer risk calculations. For AT, OEHHA recommends the use of 70 years.

Step 12: Calculate Worker Adjustment Factor (WAF)

What is Worker Adjustment Factor (WAF)?

In risk assessments, long-term averages are typically used for cancer risk calculations for residents and workers. Therefore, for an offsite worker, the long-term average should represent what the worker breaths during their work shift. However, the long-term averages calculated from AERMOD typically represent exposures for receptors that were present 24 hours a day and seven days a week which is the schedule of a residential receptor. When modeling a non-continuously emitting source (e.g., operating for 8 hours per day and 5 days per week), the long-term concentration has to be adjusted so that it is only based on the hours when the worker is present. WAF is the ratio between residential exposure and facility schedule. For screening purposes, the offsite worker schedule is assumed to always overlap with the facility's operating schedule.

For sources operating and emitting continuously (24 hours per day and 7 days per week), the worker is assumed to breathe the long-term annual concentration during their work shift and no adjustments are necessary when estimating the cancer risk. In these cases, the WAF is equal to one. For non-continuous sources operating, the appropriate WAF can be calculated using the following equation:

$$\text{WAF} = (\text{H}_{\text{residential}} / \text{H}_{\text{source}}) \times (\text{D}_{\text{residential}} / \text{D}_{\text{source}})$$

Where;

WAF = Worker adjustment factor

H_{residential} = The number of hour per day the long-term concentration is based on (always 24 hours)

H_{source} = The number of hours the source operates per day

D_{residential} = The number of days the per week the long-term residential concentration is based on (always 7 days)

D_{source} = The number of days the source operates per week

Although the 2015 OEHHA Guidance Manual allows the use of a discount factor (DF) when assessing inhalation cancer health impacts, if the offsite worker's schedule partially overlaps with the source's emission schedule, the DF should only be used when there are limits on the hours of operation specified in the facility's operating permits. Since SCAQMD permits do not typically include limits on the hours of operation, it is not appropriate to apply the DF when calculating the health impacts.

MICRs for Multiple Toxic Air Contaminants

If the equipment emits more than one TAC, the total MICR must be calculated. The total MICR is the sum of the MICRs for each of the TACs emitted by the equipment.

INSTRUCTIONS FOR CALCULATING CANCER BURDEN

The cancer burden is the estimated increase in the occurrence of cancer cases in a population as a result of exposures to TAC emissions from the equipment. The cancer burden for a population unit (city, census tract, sub-area or grid) is the product of the number of persons in the population and the estimated individual risk from TACs. The cancer burden only needs to be calculated if the MICR is greater than one (1) in one million.

The following procedure may be used to perform an acceptable screening analysis for cancer burden due to a single source of TAC:

- Calculate total MICR from all TACs from a single permit unit as previously outlined.
- Estimate the distance at which the MICR falls below one in one million. This distance can be estimated by back-calculating the distance that would result in a MICR of one in one million, using the χ/Q values in Tables 2.1 thru 5.6.
- Define a zone of impact in the shape of a circle. The radius (r) of this circle is the distance between the equipment and the point at which the risk falls below one in one million. The area of this circle is calculated using the equation for the area of a circle, which is $3.14 \times r^2$.
- Estimate the residential population within this zone of impact based on census data or a worst-case estimate. Generally, the residential population in the Basin is less than 4,000 persons/km², but some areas are as high as 7,000 persons/km².

For areas where census data is available, it should be used. Where there is no census data, 7,000 persons/km² should be used for the areas with high population densities and 4,000 persons/km² should be used for areas with low population densities. Where the population densities are unknown, use 7,000 persons/km².

- Calculate the screening level cancer burden by multiplying the total residential population in the zone of impact by the maximum individual cancer risk.

If the dispersion factors in Tables 2.1 thru 5.6 are not sufficient to estimate the distance at which MICR falls below one in one million, then a more refined risk assessment is warranted.

INSTRUCTIONS FOR CALCULATING CHRONIC, 8-HOUR, AND ACUTE HAZARD INDEX (HIC, HIC8, AND HIA)

Some TACs have the potential to cause non-cancer health risk due to short term (acute) or long term (chronic) exposures. The screening risk assessment for those TACs must estimate acute, 8-hour, and/or chronic hazard indexes as applicable. Like the calculation procedure for MICR, one must first identify when the application was deemed complete and select the appropriate set of risk tables found in the attachments (e.g. Attachment M, Attachment L, etc).

Reference Exposure Level (REL) is used as an indicator of potential adverse non-cancer health effects. An inhalation REL is a concentration level ($\mu\text{g}/\text{m}^3$) at which no adverse health effects are anticipated. Inhalation RELs are provided in Table 8.1.

When a health impact calculation is performed for a single substance, it is called the **Hazard Quotient (HQ)**. When several TACs affect the same organ system in the body (e.g., respiratory system, nervous system, reproductive system), there can be a cumulative effect on the target organ. In these cases, the sum of the Hazard Quotients of all chemicals emitted that impact the same target organ called total **Hazard Index (HI)** is evaluated.

Detailed procedures for calculating the total hazard index are provided in the 2015 OEHHA Guidance Manual. The equations used to calculate the chronic, 8-hour chronic, and acute Hazard Index (HIC, HIC8 and HIA) per target organ are as follows:

$$\text{Total HIC}_{\text{target organ}} = \{ [Q_{\text{tpy}, \text{TAC1}} \times (\chi/Q) \times \text{MP}_{\text{TAC1}} \times \text{MWF}] / \text{Chronic REL}_{\text{TAC1}} \}_{\text{target organ}} + \\ \{ [Q_{\text{tpy}, \text{TAC2}} \times (\chi/Q) \times \text{MP}_{\text{TAC2}} \times \text{MWF}] / \text{Chronic REL}_{\text{TAC2}} \}_{\text{target organ}} + \dots$$

$$\text{Total HIC8}_{\text{target organ}} = \{ [Q_{\text{tpy}, \text{TAC1}} \times (\chi/Q) \times \text{WAF} \times \text{MWF}] / \text{8-Hour REL}_{\text{TAC1}} \}_{\text{target organ}} + \\ \{ [Q_{\text{tpy}, \text{TAC2}} \times (\chi/Q) \times \text{WAF} \times \text{MWF}] / \text{8-Hour REL}_{\text{TAC2}} \}_{\text{target organ}} + \dots$$

$$\text{Total HIA}_{\text{target organ}} = \{ [Q_{\text{lbph}, \text{TAC1}} \times (\chi/Q)_{\text{hr}} \times \text{MWF}] / \text{Acute REL}_{\text{TAC1}} \}_{\text{target organ}} + \\ \{ [Q_{\text{lbph}, \text{TAC2}} \times (\chi/Q)_{\text{hr}} \times \text{MWF}] / \text{Acute REL}_{\text{TAC2}} \}_{\text{target organ}} + \dots$$

Note that the chronic HI is based upon an annual average emission per year whereas the acute HI is based upon a maximum one-hour emission level and the acute HI does not use a multi-pathway adjustment factor (MP). In addition, the 8-hour RELs were developed only for repeated, chronic daily 8-hour exposures (e.g. a typical worker or resident exposed to a facility that operates equal to or more than 8 hours per day and 5 days per week). The 8-hour HI is based upon the daily average 8-hour exposure only for those chemicals with 8-hour RELs. There are currently only a limited number of substances with an 8-hour inhalation REL. (See Table 8.1)

PROCEDURE FOR ALTERNATE HAZARD INDEX LEVEL EXEMPTION

Rule 1401 provides an exemption from the hazard index limit of one in cases in which a higher exposure level is deemed to be safe. This exemption has never been used. Under this exemption, the HIC and/or HIA limit of one does not apply if the applicant substantiates to the satisfaction of SCAQMD staff that at all receptor locations and for every target organ system, the total chronic and acute HI levels resulting from emissions from the equipment will not exceed alternate HI levels determined by OEHHA to be protective against adverse health effects. This applies only to TACs listed in Rule 1401 at the time the application was deemed complete. Refer to the attachments for the appropriate list of TACs.

Applicants should indicate in their permit application that they wish to apply for an exemption under the alternative hazard index provisions of the rule. The permit application should include both a risk assessment estimating the HIA and HIC levels and relevant information supporting the exemption. Depending on the particular health risks in question, additional information such as characterization of the surrounding population, the location of sensitive receptors, or other data may be required.

SCAQMD staff will consult with OEHHA staff regarding the request for the alternative HI level. If OEHHA staff finds that the levels of exposure to the public will not exceed levels that are protective against adverse health effects, the application will be eligible for the exemption.

In some cases, OEHHA staff may establish a general policy recommending different acceptable exposure levels for different exposed populations. For example, if exposure to a certain compound is particularly harmful to children but less of a concern for adults, OEHHA staff may determine as a general policy that higher exposure levels are acceptable in locations where children would not be exposed. OEHHA policy in these cases would be a basis for eligibility for the alternate hazard index exemption.

Tier 3: Screening Dispersion Modeling

Tier 3 uses a screening dispersion model to estimate risk. This tier requires more expertise than Tiers 1 and 2. For guidance on performing a Tier 3 analysis, refer to the SCAQMD webpage at: <http://www.aqmd.gov/home/permits/risk-assessment>.

Tier 3 screening dispersion modeling should only be used for a equipment with a single emission or release point. If there are multiple emission or release points, Tier 4 must be used. In addition, Tier 3 would only be beneficial for applications involving source parameters that differ substantially from those used to derive χ/Q values in Tables 2.1 thru 7.1 and Appendices VI through XI.

To perform a Tier 3 analysis, the following is needed:

- Air dispersion modeling expertise;
- An EPA-approved screening dispersion model program such as AERSCREEN, which can be downloaded from www.epa.gov/scram001; and
- Additional equipment information such as stack gas temperature, stack gas exit velocity or flow rate, stack inside diameter, and albedo, Bowen ratio, and surface roughness of the appropriate meteorological station.

It should be noted that AERSCREEN estimates peak one-hour concentrations for HIA calculations. For the MICR and HIC calculations, use the annual average concentration estimated in the AERSCREEN output. Note that when modeling an area source in AERSCREEN, only the one-hour concentration is estimated. The EPA's user's guide for screening models states the following for area sources: "Do not use the multiplying factors to correct for averaging times greater than 1 hour. Concentrations close to an area source will not vary as much as those for point sources in response to varying wind directions, and the meteorological conditions which are likely to give maximum 1-hour concentrations can persist for several hours. Therefore it is recommended that the maximum 1-hour concentration be conservatively assumed to apply for averaging periods out to 24 hours."

In a Tier 3 approach, the Tier 2 equations for MICR, HIC, and HIA continue to be used except that a screening dispersion model is used to estimate each pollutant concentration. Thus, the Tier 3 equations to be used are as follows:

$$\text{MICR}_R = \text{CP} \times \text{PeakConc} \times \text{CEF}_R \times \text{MP}_R \times 10^{-6} \times \text{MWF}$$

$$\text{MICR}_W = \text{CP} \times \text{PeakConc} \times \text{CEF}_W \times \text{MP}_W \times \text{WAF} \times 10^{-6} \times \text{MWF}$$

$$\text{Total HIC}_{\text{target organ}} = \Sigma \{[\text{AveConc}_{\text{TAC}} \times \text{MP} \times \text{MWF}]/\text{Chronic REL}_{\text{TAC}}\}_{\text{target organ}}$$

$$\text{Total HIC}_8_{\text{target organ}} = \Sigma \{[\text{AveConc}_{\text{TAC}} \times \text{WAF} \times \text{MWF}]/8\text{-Hour REL}_{\text{TAC}}\}_{\text{target organ}}$$

$$\text{Total HIA}_{\text{target organ}} = \Sigma \{[\text{PeakConc}_{\text{TAC}} \times \text{MWF}]/\text{Acute REL}_{\text{TAC}}\}_{\text{target organ}}$$

PeakConc is the peak one-hour pollutant concentration estimated by AERSCREEN and AveConc is the annual average concentration in the AERSCREEN output file. Refer to the section on Tier 2, Screening Risk Assessment for explanation of the other variables in the equations.

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If the MICR, HIC, HIC8, and HIA do not exceed the rule limits, then the equipment complies with Rule 1401 and no further analysis is required. If any risk value exceeds the rule limits, then proceed to Tier 4.

Tier 4: Detailed Risk Assessment

Tier 4 is a detailed risk assessment using the Hotspots Analysis and Reporting Program Version 2 (HARP 2) software developed by ARB which replaces the prior version and incorporates the information in the 2015 OEHHA Guidance Manual. The HARP 2 software and documentation can be obtained at <http://www.arb.ca.gov/toxics/harp/harp.htm>. The U.S. EPA air quality dispersion model called AERMOD is used by HARP 2 to estimate the concentration of pollutants in place of the previously used ISCST3 model. ISCST3 dispersion modeling will no longer be allowed for determining TAC concentrations. ARB recommends AERMOD for Hot Spots risk assessments. AERMOD documentation is available at: http://www.epa.gov/ttn/scram/dispersion_prefrec.htm#aermod. Meteorological data for use in HARP 2 and AERMOD can be downloaded from <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod>.

Tier 4 is an option if neither Tier 2 nor Tier 3 can demonstrate compliance, or if the applicant wishes to obtain a more refined estimate of the cancer and non-cancer risk. Since Tier 4 involves detailed modeling using actual meteorological data from the closest air monitoring station, it will often result in a less conservative estimate of the risk than either Tiers 2 or 3. Tier 4 modeling will be most useful for analyses that have source parameters that differ substantially from defaults in Tables 2.1 through 7.1 and Appendices VI through XI, and/or analyses whose closest receptors do not lie immediately downwind of the emission sources.

A detailed risk assessment should be performed by individuals with experience and training in air quality modeling and risk assessment. In addition, SCAQMD modeling staff should be consulted before performing a detailed risk assessment. For guidance on performing a detailed risk assessment, refer to SCAQMD webpage at: <http://www.aqmd.gov/home/permits/risk-assessment>.

Written guidance on preparing a detailed risk assessment is contained in an OEHHA document titled, "Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015)" which may be obtained at: http://www.oehha.ca.gov/air/hot_spots/hotspots2015.html.

SCAQMD modeling staff has prepared supplemental risk assessment guidance which must be followed by all applicants submitting Tier 4 assessments. SCAQMD's supplemental guidance is available at: <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/health-risk-assessment>. Lastly, SCAQMD guidance on using AERMOD can be found at: <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/modeling-guidance>.

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EXAMPLE 1: MICR, CANCER BURDEN, & HIC CALCULATION

The facility does not have operating schedule restrictions and is located in an industrial and residential area. Chromium 6+ (hexavalent chromium) is emitted from the manufacturing process from one piece of equipment, which is fitted with control equipment considered as T-BACT. Chromium 6+ is a carcinogen and has chronic non-carcinogenic risks.

The application was deemed complete on July 15, 2015.

The nearest receptor distances:

Worker (Industrial) = 328 feet (100 meters)

Residential = 492 feet (150 meters)

Operating Schedule: 24 hours/day, 7 days/week since no schedule restrictions are included in the permit conditions.

Stack height = 28 ft

Facility location: Ontario, CA

TACs: Chromium 6+

Emission rates for the TACs are listed in Table A below.

Note: The maximum hourly emissions should be estimated based on the maximum operating parameters in any hour.

Table A

TAC	Emission Rate		
	Q _{lbph} (lbs/hr)	Q _{lbpy} (lbs/yr)	Q _{tpy} (tons/yr)
Chromium 6+	2.63E-07	2.30E-03	1.15E-06

(The list of TACs and their corresponding emission rates are for illustration purposes only. They may not reflect actual conditions.)

First, identify the appropriate risk assessment tables (included in the appendices) based upon when the application was deemed complete. In this case, the tables for applications deemed complete on or after July 5, 2015 (i.e., Permit Application Package “M”) are used.

Second, calculate MICR for those TACs that have Inhalation Cancer Potency Values from Table 8.1. Table B below identifies the TACs and their corresponding inhalation cancer potency values for MICR calculations.

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Table B

TAC	Inhalation Cancer Potency (CP) (mg/kg-day) ⁻¹
Chromium 6+	5.10E+02

Based on the above table, MICR will be evaluated for residential and worker receptors for chromium 6+.

From Table 8.1, we can also determine if the emitted pollutant is carcinogenic, chronic, 8-hour chronic, and/or acute. The results are as follows:

TAC	MICR (cancer)	HIC (chronic)	8-hr HIC (chronic)	HIA (Acute)
Chromium 6+	√	√ (MP)		

MP indicates that the multi-pathway adjustment factor will be different than 1.0.

Next, for chronic and acute substances, review Tables 11.1, 11.2 and 11.3 to determine the target organs affected by TACs due to chronic and/or acute toxicity. Table C below indicates the target organs affected by the chronic TACs with chronic toxicity. In the table, check marks (√) indicate the affected target organs.

Table C (Chronic Toxicity)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Chromium 6+							√					√	

HEM: Hematopoietic system
RESP: Respiratory system

Since no chronic 8-hour and acute health values have been adopted in Rule 1401 for chromium 6+, no target organs have been identified for those impacts.

Tier 1: Screening Emission Levels

The nearest receptor location should be used, in this case the worker location of 100m should be used.

Please note that this step is used to approximate the equipment's potential risk.

For Tier 1, the equipment's TACs emissions (annual and/or maximum hourly) should be compared with the Screening Levels for the chromium 6+ in Table 1.1 as appropriate. The annual emission rate for chromium 6+ in Table 1.1 is 4.31E-04 pounds per year at a distance of 100m. No maximum

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hourly emissions are presented in Table 1.1 because no acute value has been adopted in Rule 1401 for chromium 6+.

Please note that the cumulative cancer/chronic risk cannot exceed the emissions presented in Table 1.1. In this example, this facility did not pass Tier I since the annual emissions (2.30E-03 lb/yr) are greater than those presented in Table 1.1 (4.31E-04 lb/yr) and would have to proceed to Tier 2 to demonstrate compliance with Rule 1401.

Tier 2: Screening Risk Assessment

Step 1: Estimate Emission Rate (Q_{tpy})

According to Table A of the example, $Q_{\text{tpy}} = 1.15\text{E-}06$.

Step 2: Determine Release Type

The TAC is released from one piece of equipment fitted with control equipment. This would be treated as a **point source**.

Step 3: Determine Release Height

The piece of equipment has a stack height of **28 feet**.

Step 4: Determine Operating Schedule

The equipment can operate 24 hours/day and 7 days/week as there are no restrictions on hours of use. Therefore, the operating schedule is **more than 12 hours/day**.

Step 5: Identify the Appropriate Meteorological Station

The facility is located in Ontario and according to Figure 1 in Attachment M, the closest monitoring station is **Upland**.

Step 6: Identify Type of Receptor and Distance from Receptor

There are two identified receptor types – a **worker receptor located 100 meters** away and a **residential receptor located 150 meters** away.

Step 7: Select χ/Q Value

Since the point source operates more than 12 hours/day and is 28 feet high, the χ/Q values from Table 3.2 for Upland at a distance of 100 meters (**4.35**) and 150 meters (**2.97**) were used. The χ/Q value at 150 meters was interpolated between 100 meters and 200 meters.

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Step 8: Identify MAAF

The MAAF value for Chromium 6+ (1) was found in Table 8.1.

Step 9: Identify CP and REL

The CP value (5.10E+02) and chronic REL value (2.00E-01) for Chromium 6+ was found in Table 8.1. Note that there is no acute REL value for Chromium 6+.

Step 10: Identify MP

The MP values (Cancer MP_R = 1.60, Cancer MP_W = 1.02, Chronic MP_R = 2.44, Chronic MP_W = 1.00) for Chromium 6+ was found in Table 8.1.

Step 11: Select CEF

The CEF values (CEF_R = 676.63, CEF_W = 56.26) for residential and worker exposures were found in Tables 9.1 & 9.2.

Step 12: Calculate WAF

Since the point source operates 24 hours/day and 7 days/week, the WAF value (1.0) was found in Table 10.2.

MICR Calculation

(1) Worker: $MICR_W = CP \times Q_{tpy} \times \chi/Q \times CEF_W \times MP_W \times WAF \times 10^{-6} \times MAAF$

TAC	CP	Q _{tpy}	χ/Q	CEF _W	MP _W	WAF	MAAF	MICR
Chromium 6+	5.10E+02	1.15E-06	4.35	56.26	1.02	1	1	1.46 x 10 ⁻⁷

(2) Resident: $MICR_R = CP \times Q_{tpy} \times \chi/Q \times CEF_R \times MP_R \times 10^{-6} \times MAAF$

TAC	CP	Q _{tpy}	χ/Q	CEF _R	MP _R	MAAF	MICR
Chromium 6+	5.10E+02	1.15E-06	2.97	676.63	1.60	1	1.89 x 10 ⁻⁶

Please note that the higher of the worker and residential cancer risks needs to be selected. This value will be entered in MICR field in the NSR, 1401 section. In this example, the maximum cancer risk is at the residential receptor.

Cancer Burden Calculation
SCAQMD

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Cancer burden should always be calculated if the MICR exceeds one in a million, regardless of the type of receptor. Since the cancer risk at the residential receptor was calculated to be 1.89×10^{-6} , the cancer burden needs to be calculated.

Estimate of distance at which MICR falls below one in one million.

The distance at which the MICR falls below one in one million requires you to take the reciprocal of the calculated MICR multiplied by 1.0×10^{-6} . This factor (F) will be the multiplier to the χ/Q value used in determining the MICR.

$$F = (1 / \text{MICR}) \times 1.0 \times 10^{-6}$$

$$F = (1 / 1.89 \times 10^{-6}) \times 1.0 \times 10^{-6}$$

$$F = 0.529$$

Determination of the new downwind distance will be based upon a new χ/Q value calculated by multiplying the originally used χ/Q value by F.

Therefore,

$$\text{New } \chi/Q = 2.97 \times 0.529$$

$$\text{New } \chi/Q = 1.57$$

Using Table 3.2, the new χ/Q lies between downwind distances of 200 to 300 meters. Interpolating for the new downwind distance gives is 201 meters.

This new Downwind Distance is where the MICR will fall below one in one million.

Define Zone of Impact

The zone of impact (ZI) is calculated using the New Downwind Distance as the radius of a circle and calculating the area of that circle.

Therefore,

$$\text{ZI} = 3.14 r^2$$

$$\text{ZI} = 3.14 (0.201 \text{ km})^2$$

$$\text{ZI} = 0.13 \text{ km}^2$$

Estimate the population within the ZI

ZI should include both worker and residential populations.

For areas where census data is available, it should be used. Where there is no census data, 7,000 persons/km² should be used for the areas with high population densities and 4,000 persons per

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square kilometer should be used for areas with low population densities. Where the population densities are unknown, use 7,000 persons per square kilometer.

In this example we have no information on census data or population density, therefore,

$$\text{Zone of Impact Population} = \text{ZI} \times \text{Population Density}$$

$$\text{Zone of Impact Population} = 0.13 \text{ km}^2 \times 7,000 \text{ person/ km}^2$$

$$\text{Zone of Impact Population} = 910 \text{ persons}$$

Calculate Cancer Burden

For a screening level analysis, the cancer Burden (CB) is estimated using the zone of impact population multiplied by the calculated MICR.

Therefore,

$$\text{CB} = 910 \text{ persons} \times 1.89 \times 10^{-6}$$

$$\text{CB} = \mathbf{0.00172}$$

Hazard Index Calculations

Chronic, 8-hour chronic and acute hazard indices should be calculated for each target organ. Since no acute or 8-hr chronic health values have been adopted for chromium 6+, only the chronic hazard index is estimated.

Chronic Hazard Index:

$$\text{HIC} = \Sigma [(Q_{\text{tpy}}) \times (\chi/Q)_{\text{chronic}} \times \text{MP} \times \text{MWAF}] / (\text{Chronic REL})$$

Based on Table 11.1, the target organs for the TACs for chronic toxicity have been listed in Table C. The Chronic Hazard Index for the TACs in this example are calculated as follows:

Chromium 6+:

Affects hematopoietic and respiratory systems.

$$\text{Worker: HIC} = [1.15\text{E-}06 \times 4.35 \times 1.00 \times 1] / (2.00\text{E-}01) = \mathbf{2.5\text{E-}05}$$

$$\text{Resident: HIC} = [1.15\text{E-}06 \times 2.97 \times 2.44 \times 1] / (2.00\text{E-}01) = \mathbf{4.2\text{E-}05}$$

Since there is only one TAC, the HI does not need to be summed across the target organs.

Summary of Results

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	MICR	HIC	HIC8	HIA
Worker	1.46 x 10 ⁻⁷	2.5E-05	N/A	N/A
Resident	1.89 x 10 ⁻⁶	4.2E-05	N/A	N/A
Rule 1401 Threshold	10 x 10 ⁻⁶	1	1	1
Exceeds Threshold?	No	No	N/A	N/A

RESULT:

- *MICRs for residential and commercial receptors do not exceed 10 x 10⁻⁶ (ten in one million).*
- *Cancer burden is less than 0.5.*
- *HICs for residential and commercial receptors are less than 1.*
- *There are no health values associated with the chronic 8-hour or acute exposures and those hazard indices have not been calculated.*

The equipment in this example contains T-BACT; therefore, it would pass the Rule 1401 MICR limit. A Tier 3 or 4 analysis is not necessary.

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EXAMPLE 2: MICR, CANCER BURDEN, HIC, HIC8, & HIA CALCULATIONS

An industrial operation generates benzene, arsenic and dioxin emissions.

The application was deemed complete on July 15, 2015.

Volume source: Building dimensions 40'(W) x 70'(L) x 17'(H)

The nearest receptor distances are:

Worker (Industrial) = 100 meters

Residential = 500 meters

Permitted Operating Schedule: 8 hr /day, 5 days/wk, 50 wks/yr = 2,000 hours/year

Facility location: Azusa, CA

TACs: Arsenic, Benzene, Dioxin, Nickel hydroxide.

Emission rates for the TACs are listed in Table A below.

Note: The maximum hourly emissions should be estimated based on the maximum operating parameters in any hour.

Table A

TAC	Emission Rate		
	Q _{1bph} (lbs/hr)	Q _{1bpy} (lbs/yr)	Q _{1tpy} (tons/yr)
Arsenic	8.30E-06	1.66E-02	8.30E-06
Benzene	7.50E-03	1.50E+01	7.50E-03
Dioxin	6.10E-10	1.22E-06	6.10E-10
Nickel hydroxide	2.30E-03	4.60E+00	2.30E-03

(The list of TACs and their corresponding emission rates are for illustration purposes only. They may not reflect actual conditions.)

First, identify the appropriate risk assessment tables (included in the appendices) based upon when the application was deemed complete. In this case, the tables for applications deemed complete on or after July 5, 2015 (i.e., Permit Application Package “M”) are used.

Second, calculate MICR for those TACs that have Inhalation Cancer Potency Values from Table 8.1. Table B below identifies the TACs and their corresponding inhalation cancer potency values for MICR calculations.

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Table B

TAC	Inhalation Cancer Potency (CP) (mg/kg-day)⁻¹
Arsenic	1.20 x 10 ⁺¹
Benzene	1.00 x 10 ⁻¹
Dioxin	1.30 x 10 ⁺⁵
Nickel hydroxide	9.10 x 10 ⁻¹

Based on the above table, MICR will be evaluated for residential and worker receptors for arsenic, benzene, dioxin, and calcium chromate.

From Table 8.1, we can also determine if the emitted pollutant is carcinogenic, chronic, 8-hour chronic, and/or acute. The results are as follows:

TAC	MICR (cancer)	HIC (chronic)	8-hr HIC (chronic)	HIA (Acute)
Arsenic	√ (MP)	√ (MP)	√	√
Benzene	√	√	√	√
Dioxin	√ (MP)	√ (MP)		
Nickel hydroxide	√	√		

MP indicates that the multi-pathway adjustment factor will be different than 1.0.

Next, for chronic and acute substances, review Tables 11.1, 11.2 and 11.3 to determine the target organs affected by TACs due to chronic and/or acute toxicity. Tables C, D, and E below indicate the target organs affected by the TACs with chronic toxicity, chronic 8-hour toxicity, and acute toxicity, respectively. In the table, check marks (√) indicate the affected target organs.

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Table C (Chronic Toxicity)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			√	√						√	√	√	√
Benzene							√						
Dioxin	√			√	√		√				√	√	
Nickel hydroxide				√			√				√	√	

AL: Alimentary system (liver)
 BN: Bones and teeth
 CV: Cardiovascular system
 DEV: Developmental
 END: Endocrine system
 EYE: Eye
 HEM: Hematopoietic system
 IMM: Immune system
 KID: Kidney
 NS: Nervous system
 REP: Reproductive system
 RESP: Respiratory system
 SKIN: Skin

Table D (Chronic 8-hour Toxicity)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			√	√						√	√	√	√
Benzene							√						
Dioxin													
Nickel hydroxide								√				√	

Table E (Acute Toxicity)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			√	√						√	√		
Benzene				√			√	√			√		
Dioxin													
Nickel hydroxide								√					

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Tier 1: Screening Emission Levels

The nearest receptor location should be used, in this case the worker location of 100m should be used.

For Carcinogenic and/or Chronic Compounds:

Calculate the Pollutant Screening Index for each pollutant (PSI_P).

$$PSI_P = Q_{lbpy,P} / PSL_P$$

The Q_{lbpy} is based upon the annual emissions of each TAC (lbs/yr). The PSLs are found in Table 1.1 and are expressed in lb/yr.

Sum up the individual Pollutant Screening Indices for each pollutant (ΣPSI_P).

TAC	$Q_{lbpy,P}$	PSL_P	PSI_P
Arsenic	1.66E-02	3.01E-03	5.51
Benzene	1.50E+01	3.51E+00	4.27
Dioxin	1.22E-06	2.70E-06	0.45
Nickel hydroxide	4.60E+00	6.09E-01	7.55
		$\Sigma PSI_P =$	17.85

Calculate the Application Screening Index (ASI).

$$ASI_{\text{cancer and/or chronic}} = \Sigma PSI_P = 17.85$$

For Acute Compounds:

Calculate the Pollutant Screening Index for each pollutant (PSI_P).

$$PSI_P = Q_{lbph,P} / PSL_P$$

The Q_{lbph} is based upon the maximum hourly emissions (lb/hr). The PSLs for acute compounds are found in Table 1.1 and are expressed in lb/hr.

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Sum up the individual pollutant screening indices for each acute pollutant ($\sum \text{PSI}_p$).

TAC	$Q_{\text{lbph,P}}$	PSL_p	PSI_p
Arsenic	8.30E-06	8.91E-04	9.32E-03
Benzene	7.50E-03	1.20E-01	6.25E-02
Nickel hydroxide	2.30E-03	1.41E-03	1.63E+00
$\sum \text{PSI}_p =$			1.70

Calculate the Application Screening Index (ASI).

$$\text{ASI}_{\text{acute}} = \sum \text{PSI}_p = 1.70$$

Please note that the cumulative cancer/chronic risk and the cumulative acute hazard index exceeded 1. In this example, this facility did not pass Tier 1 as the ASI exceeded 1 for cancer/chronic and acute. Since this Tier I screening was calculated to be greater than 1, the applicant would have to proceed with further health risk screening assessment procedures.

Tier 2: Screening Risk Assessment

Step 1: Estimate Emission Rate (Q_{tpy})

The emission rates are listed in Table A of the example.

Step 2: Determine Release Type

The TAC is released from a building with dimensions of 40' x 70' (2,800 ft² area) and height of 17 feet. This would be treated as a **volume source**.

Step 3: Determine Release Height

Since the source is a volume source, the release height is not relevant.

Step 4: Determine Operating Schedule

The facility operates 8 hours/day and 5 days/week as specified in the permit conditions. Therefore, the operating schedule is **less than 12 hours/day**.

Step 5: Identify the Appropriate Meteorological Station

The facility is located in Azusa and according to Figure 1 in Attachment M, the closest monitoring station is **Azusa**.

Step 6: Identify Type of Receptor and Distance from Receptor

There are two identified receptor types – a **worker receptor located 100 meters** away and a **residential receptor located 500 meters** away.

Step 7: Select χ/Q Value

Since the volume source of 2,800 ft² and height of 17 feet operates less than 12 hours/day, the χ/Q values from Table 4.1 for Azusa at a distance of 100 meters (**1.15**) and 500 meters (**0.06**) were used.

Step 8: Identify MWAF

The MWAF values for all TACs were found in Table 8.1.

Step 9: Identify CP and REL

The CP values and chronic REL values for all TACs were found in Table 8.1.

Step 10: Identify MP

The MP values for all TACs were found in Table 8.1.

Step 11: Select CEF

The CEF values (**CEFR = 676.63**, **CEFW = 56.26**) for residential and worker exposures were found in Tables 9.1 & 9.2.

Step 12: Calculate WAF

Since the volume source operates 8 hours/day and 5 days/week, the WAF value (**4.2**) was found in Table 10.2.

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MICR Calculation

(1) Worker: $MICR_W = CP \times Q_{tpy} \times \chi/Q \times CEF_W \times MP_W \times WAF \times 10^{-6} \times MWAF$

TAC	CP	Q _{tpy}	χ/Q	CEF _W	MP _W	WAF	MWAF	MICR
Arsenic	1.20 x 10 ⁺¹	8.30E-06	1.15	56.26	4.52	4.2	1	1.22 x 10 ⁻⁷
Benzene	1.00 x 10 ⁻¹	7.50E-03	1.15	56.26	1.00	4.2	1	2.04 x 10 ⁻⁷
Dioxin	1.30 x 10 ⁺⁵	6.10E-10	1.15	56.26	7.58	4.2	1	1.63 x 10 ⁻⁷
Nickel hydroxide	9.10 x 10 ⁻¹	2.30E-03	1.15	56.26	1.00	4.2	0.6332	3.60 x 10 ⁻⁷
TOTAL								8.50 x 10⁻⁷

(2) Resident: $MICR_R = CP \times Q_{tpy} \times \chi/Q \times CEF_R \times MP_R \times 10^{-6} \times MWAF$

TAC	CP	Q _{tpy}	χ/Q	CEF _R	MP _R	MWAF	MICR
Arsenic	1.20 x 10 ⁺¹	8.30E-06	0.06	676.63	9.71	1	3.93 x 10 ⁻⁸
Benzene	1.00 x 10 ⁻¹	7.50E-03	0.06	676.63	1.00	1	3.04 x 10 ⁻⁸
Dioxin	1.30 x 10 ⁺⁵	6.10E-10	0.06	676.63	25.72	1	8.28 x 10 ⁻⁸
Nickel hydroxide	9.10 x 10 ⁻¹	2.30E-03	0.06	676.63	1.00	0.6332	5.38 x 10 ⁻⁸
TOTAL							2.06 x 10⁻⁷

Please note that the higher of the worker and residential cancer risks needs to be selected. This value will be entered in MICR field in the NSR, 1401 section. In this example, the maximum cancer risk is at the worker receptor.

Cancer Burden Calculation

Cancer burden should always be calculated if the MICR exceeds one in a million, regardless of the type of receptor. For this example, cancer burden was not calculated because neither worker nor residential risk exceeded one in a million.

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Hazard Index Calculations

Chronic, 8-hour and acute hazard indices should be calculated for each target organ.

Chronic Hazard Index:

Worker: $HIC_W = \Sigma [(Q_{tpy}) \times (\chi/Q)_{chronic} \times MP_W \times MWAFF] / (\text{Chronic REL})$

Resident: $HIC_R = \Sigma [(Q_{tpy}) \times (\chi/Q)_{chronic} \times MP_R \times MWAFF] / (\text{Chronic REL})$

Based on Table 11.1, the target organs for the TACs for chronic toxicity have been listed in Table C. The Chronic Hazard Index for the TACs in this example are calculated as follows:

Arsenic: $HIC_W = [8.30E-06 \times 1.15 \times 28.37 \times 1] / (1.50E-02) = \mathbf{1.8E-02}$

$HIC_R = [8.30E-06 \times 0.06 \times 88.03 \times 1] / (1.50E-02) = \mathbf{2.9E-03}$

Benzene: $HIC_W = [7.50E-03 \times 1.15 \times 1.00 \times 1] / (3.00E+00) = \mathbf{2.9E-03}$

$HIC_R = [7.50E-03 \times 0.06 \times 1.00 \times 1] / (3.00E+00) = \mathbf{1.5E-04}$

Dioxin: $HIC_W = [6.10E-10 \times 1.15 \times 307.60 \times 1] / (4.00E-05) = \mathbf{1.2E-04}$

$HIC_R = [6.10E-10 \times 0.06 \times 6.73 \times 1] / (4.00E-05) = \mathbf{2.8E-04}$

Nickel hydroxide: $HIC_W = [2.30E-03 \times 1.15 \times 1.00 \times 0.6332] / (1.40E-02) = \mathbf{1.2E-01}$

$HIC_R = [2.30E-03 \times 0.06 \times 1.00 \times 0.6332] / (1.40E-02) = \mathbf{6.2E-03}$

(1) Worker: HIC_W (summed across each target organ)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			1.8E-2	1.8E-2						1.8E-2	1.8E-2	1.8E-2	1.8E-2
Benzene							2.9E-3						
Dioxin	1.2E-4			1.2E-4	1.2E-4		1.2E-4				1.2E-4	1.2E-4	
Nickel hydroxide				1.2E-1			1.2E-1				1.2E-1	1.2E-1	
TOTAL	1.2E-4		1.8E-2	1.4E-1	1.2E-4		1.2E-1			1.8E-2	1.4E-1	1.4E-1	1.8E-2

(2) Resident: HIC_R (summed across each target organ)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			2.9E-3	2.9E-3						2.9E-3	2.9E-3	2.9E-3	2.9E-3
Benzene							1.5E-4						
Dioxin	2.8E-4			2.8E-4	2.8E-4		2.8E-4				2.8E-4	2.8E-4	
Nickel hydroxide				6.2E-3			6.2E-3				6.2E-3	6.2E-3	
TOTAL	2.8E-4		2.9E-3	9.4E-3	2.8E-4		6.6E-3			2.9E-3	9.4E-3	9.4E-3	2.9E-3

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8-Hour Chronic Hazard Index:

Worker: $HIC8_W = \Sigma [(Q_{tpy}) \times (\chi/Q)_{chronic} \times WAF] / (8\text{-hour Chronic REL})$

Resident: $HIC8_R = \Sigma [(Q_{tpy}) \times (\chi/Q)_{chronic} \times WAF] / (8\text{-hour Chronic REL})$

Based on Table 11.3, the target organs for the TACs with chronic RELs have been listed in Table D. The 8-hour chronic hazard indices for the TACs in this example are calculated as follows:

Arsenic: $HIC8_W = [8.30E-06 \times 1.15 \times 4.2 \times 1] / (1.50E-02) = 2.7E-03$
 $HIC8_R = [8.30E-06 \times 0.06 \times 1.0 \times 1] / (1.50E-02) = 3.3E-05$

Benzene: $HIC8_W = [7.50E-03 \times 1.15 \times 4.2 \times 1] / (3.00E+00) = 1.2E-02$
 $HIC8_R = [7.50E-03 \times 0.06 \times 1.0 \times 1] / (3.00E+00) = 1.5E-04$

Dioxin: There are no 8-hour chronic REL values established for dioxin.

Nickel hydroxide: $HIC8_W = [2.30E-03 \times 1.15 \times 4.2 \times 0.6332] / (6.00E-02) = 1.2E-01$
 $HIC8_R = [2.30E-03 \times 0.06 \times 1.0 \times 0.6332] / (6.00E-02) = 1.5E-03$

(1) Worker: $HIC8_W$ (summed across each target organ)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			2.7E-3	2.7E-3						2.7E-3	2.7E-3	2.7E-3	2.7E-3
Benzene							1.2E-2						
Dioxin													
Nickel hydroxide								1.2E-1				1.2E-1	
TOTAL			2.7E-3	2.7E-3			1.2E-2	1.2E-1		2.7E-3	2.7E-3	1.2E-1	2.7E-3

(2) Resident: $HIC8_R$ (summed across each target organ)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			3.3E-5	3.3E-5						3.3E-5	3.3E-5	3.3E-5	3.3E-5
Benzene							1.5E-4						
Dioxin													
Nickel hydroxide								1.5E-3				1.5E-3	
TOTAL			3.3E-5	3.3E-5			1.5E-4	1.5E-3		3.3E-5	3.3E-5	1.5E-3	3.3E-5

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Acute Hazard Index:

For all acute compounds with RELs developed over 1 hour average, the acute hazard indices are estimated using the equation below:

$$\text{Worker \& Resident: HIA} = [Q_{\text{lbph}} \times (\chi/Q)_{\text{hr}}] / (\text{Acute REL})$$

Based on Table 11.2, the target organs for the TACs have been listed in Table E. The χ/Q values were taken from Table 7. Since the

Note: The χ/Q values in Table 7 are based upon the maximum hourly emission rates.

Arsenic: $\text{HIA}_W = [8.30\text{E-}06 \times 107.4 \times 1] / (2.00\text{E-}01) = \mathbf{4.5\text{E-}03}$

$\text{HIA}_R = [8.30\text{E-}06 \times 10.44 \times 1] / (2.00\text{E-}01) = \mathbf{4.3\text{E-}04}$

Benzene: $\text{HIA}_W = [7.50\text{E-}03 \times 107.4 \times 1] / (2.70\text{E+}01) = \mathbf{3.0\text{E-}02}$

$\text{HIA}_R = [7.50\text{E-}03 \times 10.44 \times 1] / (2.70\text{E+}01) = \mathbf{2.9\text{E-}03}$

Dioxin: **There are no acute REL values established for dioxin.**

Nickel hydroxide: $\text{HIA}_W = [2.30\text{E-}03 \times 107.4 \times 0.6332] / (2.00\text{E-}01) = \mathbf{7.8\text{E-}01}$

$\text{HIA}_R = [2.30\text{E-}03 \times 10.44 \times 0.6332] / (2.00\text{E-}01) = \mathbf{7.6\text{E-}02}$

(1) Worker: HIA_W (summed across each target organ)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			4.5E-3	4.5E-3						4.5E-3	4.5E-3		
Benzene				3.0E-2			3.0E-2	3.0E-2			3.0E-2		
Dioxin													
Nickel hydroxide								7.8E-1					
TOTAL			4.5E-3	3.5E-2			3.0E-2	8.1E-1		4.5E-3	3.5E-2		

(2) Resident: HIA_R (summed across each target organ)

TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Arsenic			4.3E-4	4.3E-4						4.3E-4	4.3E-4		
Benzene				2.9E-3			2.9E-3	2.9E-3			2.9E-3		
Dioxin													
Nickel hydroxide								7.6E-2					
TOTAL			4.3E-4	3.3E-3			2.9E-3	7.9E-2		4.3E-4	3.3E-3		

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Summary of Results

	MICR	HIC	HIC8	HIA
Worker	8.50 x 10 ⁻⁷	1.4E-01	1.2E-01	8.1E-01
Resident	2.06 x 10 ⁻⁷	9.4E-03	1.5E-03	7.9E-02
Rule 1401 Threshold	1 x 10 ⁻⁶	1	1	1
Exceeds Threshold?	No	No	No	No

RESULT:

- *MICRs for residential and commercial receptors do not exceed 1 x 10⁻⁶ (one in one million).*
- *Calculation of cancer burden is not necessary.*
- *HIC, HIC8, and HIA for residential and commercial receptors are less than 1 for all organ systems.*

The equipment in this example does not contain T-BACT; therefore, it would pass the Rule 1401 limits. A Tier 3 or 4 analysis is not necessary.

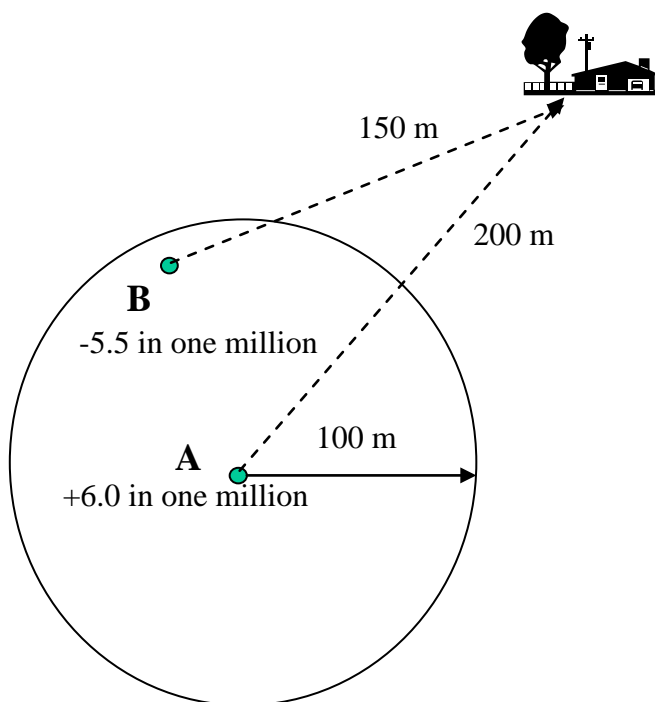
EXAMPLE 3: CONTEMPORANEOUS RISK REDUCTION

Rule 1401(g)(2)(A): The requirements of paragraph (d)(1) and (d)(4) shall not apply if the applicant demonstrates that a contemporaneous risk reduction resulting in a decrease in emissions will occur such that both of the following conditions are met:

- (i) no receptor location will experience a total increase in MICR of greater than one in one million due to the cumulative impact of both the permit unit and the contemporaneous risk reduction, and*
- (ii) the contemporaneous risk reduction occurs within 100 meters of the permit unit.*

T-BACT shall be used on permit units exempted under this subparagraph if the MICR from the permit unit exceeds one in one million (1×10^6).

Note: All permit applications associated with the increases and decreases in risk for contemporaneous risk reduction must be submitted together and the reduction in risk must occur before the start of operation of the equipment that will have an increase in risk.



Assumptions:

Units A and B: Only have cancer impacts.

Unit A: New equipment, installed with T-BACT, MICR = 6.0 in one million

Unit B: Existing equipment with decreased MICR of 5.5 in one million due to change in operating conditions or process. Unit B emissions, prior to modification, resulted in an 8 in a million risk for the nearest receptor. After modification, Unit B risk is 2.5 in a million which is a decrease of 5.5 in a million.

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Receptor R1: The increased risk for Receptor R1 is the MICR for Unit A less the decrease in risk for Unit B.

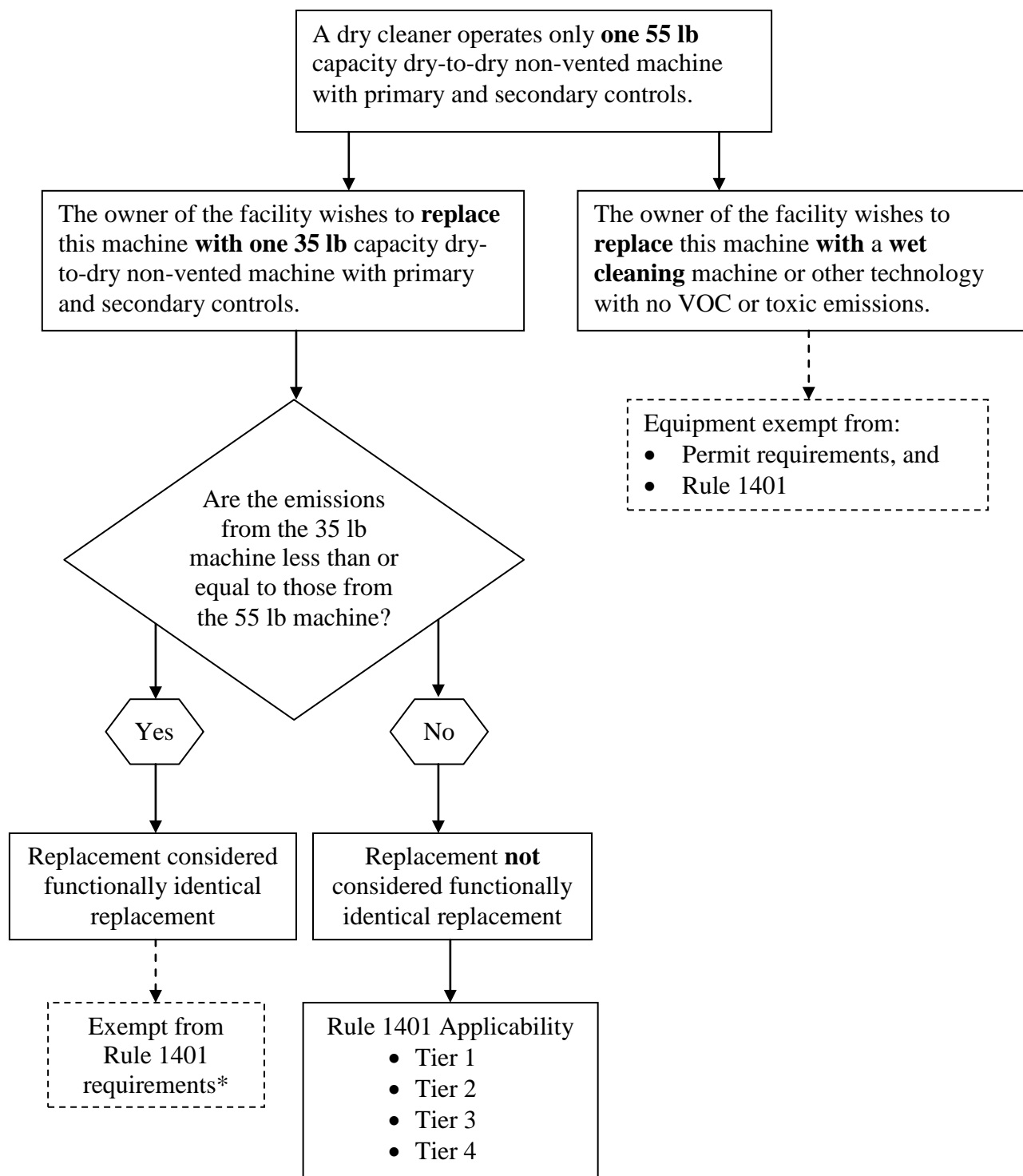
$$6.0 - 5.5 = 0.5 \text{ in one million.}$$

Note: This demonstration is best achieved with a Tier 4 analysis (detailed air dispersion modeling) and must be performed for all possible receptors.

RESULT:

- *Equipment was installed using T-BACT.*
- *No receptor experiences an increase in risk greater than one in one million.*
- *The contemporaneous risk reduction occurs within 100 meters of the new equipment.*
- *If all other rule requirements are met, a permit would be issued.*

EXAMPLE 4: FUNCTIONALLY IDENTICAL EQUIPMENT REPLACEMENT



* Rule 1421(d)(1)(F) allows for the functionally identical equipment replacement of **only one** machine. Please note that all perchloroethylene machines must comply with Rule 1402 as well. As of December 31, 2020, no new or existing dry cleaning facility may use a perchloroethylene dry cleaning system.

BEST AVAILABLE CONTROL TECHNOLOGY FOR TOXICS

Best Available Control Technology for Toxics (T-BACT) is not required if the MICR is less than or equal to one in one million. If cancer risk is greater than one in a million, T-BACT is required and must reduce risk to less than or equal to 10 in a million.

SIC Codes, which describe industry types or classifications, or SCC Codes, which describe emitting processes or equipment, can be used to help identify T-BACT. If no standard is available, SCAQMD staff works with the applicant to identify T-BACT when required.

SCAQMD staff is continually examining and updating control technologies that comply with the definition presented in Rule 1401(c)(2). However, in many situations T-BACT is equivalent to BACT. The applicant is encouraged to contact the SCAQMD permit processing division for current T-BACT information.

T-BACT EXAMPLES

<i>Type of Industry:</i>	<i>Wood Finishing</i>
<i>Type of Emitting Process:</i>	<i>Wood Coatings</i>
<i>Specific TAC Emissions:</i>	<i>Ethyl Benzene, Formaldehyde</i>
<i>Applicable BACT:</i>	<i>Thermal Oxidizer</i>
<i>T-BACT:</i>	<i>Thermal Oxidizer</i>

BACT = T-BACT

With T-BACT, risk is 10 in one million or less

T-BACT is acceptable

<i>Type of Industry:</i>	<i>Metal Plating</i>
<i>Type of Emitting Process:</i>	<i>Nickel Plating, Chromium Plating</i>
<i>Specific TAC Emissions:</i>	<i>Nickel, Hexavalent Chromium</i>
<i>Applicable BACT:</i>	<i>Wet Scrubber</i>
<i>T-BACT:</i>	<i>HEPA</i>

With T-BACT, risk is 10 in one million or less

T-BACT is acceptable

APPENDIX I

Calculation Worksheets

**Maximum Individual Cancer Risk (MICR) Calculation Worksheet
Acute Hazard Index (HIA) Calculation Worksheet
Chronic Hazard Index (HIC) Calculation Worksheet
8-Hour Chronic Hazard Index (HIC8) Calculation Worksheet**

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Maximum Individual Cancer Risk (MICR) CALCULATION WORKSHEET

Facility Name: _____

Facility Address: _____

Description of Equipment: _____

Equipment is (circle one): **Point Source** or **Volume Source**

Toxic Air Contaminants Emitted by Equipment	Maximum Annual Emissions, Q_{tpy} (lb/yr)	Maximum Annual Emissions, Q_{tpy} (ton/yr)	CP (Table 8.1)	MICR MP (Table 8.1)	
				Resident	Worker
1.					
2.					
3.					

Equipment operates (circle one) ≤ 12 hr/day or > 12 hr/day

If equipment is a **point source**, enter **Stack Height:** _____ ft

If equipment is a **volume source**, enter **Building Height:** _____ ft & **Floor Area:** _____ ft²

Distance to nearest residential or sensitive receptor: _____ m &

Off-site worker receptor: _____ m

Nearest **SCAQMD meteorological station:** _____ (Tables 12.1 & 12.2 & Fig 1 & 2)

Select χ/Q and **WAF Tables** as follows (circle tables selected)

	Point Source	Volume Source
≤ 12 hr/day	Tables 2.1, 2.2, 2.2, 10.1	Tables 4.1, 4.2, 4.3, 4.4, 4.6, 4.6, 10.1
> 12 hr/day	Tables 3.1, 3.2, 3.3, 10.2	Tables 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 10.2

Select **CP** and **MP** from Table 8.1

χ/Q value for nearest residential/sensitive receptor: _____

for nearest off-site worker receptor: _____

WAF value for nearest residential/sensitive receptor: 1.0

for nearest off-site worker receptor: _____

CEF value for nearest residential/sensitive receptor: 676.63

for nearest off-site worker receptor: 56.2

MICR CALCULATION

TACs	CP	Q_{tpy}	χ/Q	CEF	MP	WAF	10^{-6}	MWAF	MICR
1.		x	x	x	x	x	x 10^{-6}	x	=
2.		x	x	x	x	x	x 10^{-6}	x	=
3.		x	x	x	x	x	x 10^{-6}	x	=
4.		x	x	x	x	x	x 10^{-6}	x	=

MICR = _____

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Chronic Hazard Index (HIC) CALCULATION WORKSHEET

Target Organ/System*: (Table 11.1)

Facility Name: _____

Facility Address: _____

Description of Equipment: _____

Equipment operates (circle one) ≤ 12 hr/day or > 12 hr/day

Equipment is (circle one): **Point Source** or **Volume Source**

If equipment is a **point source**, enter:

Stack Height: _____ ft

If equipment is a **volume source**, enter

Building Height: _____ ft & **Floor Area:** _____ ft²

Distance to **nearest residential or sensitive receptor:** _____ meters

Distance to **nearest off-site worker receptor:** _____ meters

Nearest **SCAQMD meteorological station:** _____ (Tables 12.1 & 12.2 & Fig 1 & 2)

Select χ/Q as follows (circle tables selected)

	Point Source	Volume Source
≤ 12 hr/day	Tables 2.1, 2.2, 2.2	Tables 4.1, 4.2, 4.3, 4.4, 4.6, 4.6
> 12 hr/day	Tables 3.1, 3.2, 3.3	Tables 5.1, 5.2, 5.3, 5.4, 5.5, 5.6

Select **Chronic REL** and **Chronic MP** from Table 8.1

Toxic Air Contaminants Emitted by Equipment	Maximum Annual Emissions, Q_{lbyy} (lb/yr)	Maximum Annual Emissions, Q_{tpy} (ton/yr)	Dispersion Factor (χ/Q)	Chronic Reference Exposure Level (REL)	Chronic Multi-pathway Factor (MP)
1.					
2.					
3.					
2.					
3.					

CHRONIC HAZARD INDEX (HIC) CALCULATION:

$\Sigma [(Q_{tpy}) \times (\chi/Q) \times MP] / (\text{Chronic REL})$ for each TAC

TACs	Q_{tpy}	χ/Q	MP	REL	HIC
1.	x	x	/	=	
2.	x	x	/	=	
3.	x	x	/	=	

* A worksheet needs to be filled out for each affected target organ/system.

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8-Hour Chronic Hazard Index (HIC8) CALCULATION WORKSHEET

Target Organ/System*: _____ (Table 11.3)

Facility Name: _____

Facility Address: _____

Description of Equipment: _____

Equipment operates (circle one) ≤ 12 hr/day or > 12 hr/day

Equipment is (circle one): **Point Source** or **Volume Source**

If equipment is a **point source**, enter:

Stack Height: _____ ft

If equipment is a **volume source**, enter

Building Height: _____ ft & **Floor Area:** _____ ft²

Distance to nearest residential or sensitive receptor: _____ meters

Distance to nearest off-site worker receptor: _____ meters

Nearest SCAQMD meteorological station: _____ (Tables 12.1 & 12.2 & Fig 1 & 2)

	Point Source	Volume Source
≤ 12 hr/day	Tables 2.1, 2.2, 2.2, 10.1	Tables 4.1, 4.2, 4.3, 4.4, 4.6, 4.6, 10.1
> 12 hr/day	Tables 3.1, 3.2, 3.3, 10.2	Tables 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 10.2

Select **8-Hour Chronic REL** and **8-Hour Chronic MP** from **Table 8.1**; and **WAF** from **Table 10.2**

Toxic Air Contaminants Emitted by Equipment	Maximum Annual Emissions, Q _{lbyy} (lb/yr)	Maximum Annual Emissions, Q _{tpy} (ton/yr)	Dispersion Factor (χ/Q)	Worker Adjustment Factor (WAF)	Chronic Reference Exposure Level (REL)
1.					
2.					
3.					

8-HOUR CHRONIC HAZARD INDEX (HIC8) CALCULATION:

$\Sigma [(Q_{tpy}) \times (\chi/Q) \times WAF] / (8\text{-Hour Chronic REL})$ for each TAC

TAC	Q _{tpy}	χ/Q	WAF	REL	HIC8
1.	x	x	/		=
2.	x	x	/		=
3.	x	x	/		=

* A worksheet needs to be filled out for each affected target organ/system.

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Acute Hazard Index (HIA) CALCULATION WORKSHEET

Target Organ/System*: (Table 11.2)

Facility Name: _____

Facility Address: _____

Description of Equipment: _____

Equipment is (circle one): **Point Source** or **Volume Source**

If equipment is a **point source**, enter:

Stack Height: _____ ft

If equipment is a **volume source**, enter

Building Height: _____ ft & **Floor Area:** _____ ft²

Distance to **nearest residential or sensitive receptor:** _____ meters

Distance to **nearest off-site worker receptor:** _____ meters

Nearest **SCAQMD meteorological station:** _____ (Tables 12.1 & 12.2 & Fig 1 & 2)

Select χ/Q : _____

Select χ/Q : from Table 6.1 if Point Source or from Table 7.1 if Volume Source

Select **Acute REL** from Table 8.1

Toxic Air Contaminants Emitted by Equipment	Maximum Hourly Emissions, Q_{lbph} (lb/hr)	Peak Hourly Dispersion Factor χ/Q	Acute Reference Exposure Level (REL)
1.			
2.			
3.			

ACUTE HAZARD INDEX (HIA) CALCULATION:

$[Q_{lbph} \times (\chi/Q)] / (\text{Acute REL})$

	TAC	Q_{lbph}	χ/Q	REL	HIA
1.		x	/	=	
2.		x	/	=	
3.		x	/	=	

* A worksheet needs to be filled out for each affected target organ/system.

APPENDIX II

Derivation of Tier 2 Multi-pathway Adjustment Factors (MP)

DERIVATION OF TIER 2 MULTI-PATHWAY ADJUSTMENT FACTORS (MP)

MULTI-PATHWAY FACTORS (MP)

Toxic air contaminants enter the body through a number of routes: inhalation; absorption through the skin; and ingestion from contaminated food, water, milk and soil. To account for uptake of toxics through routes of exposure other than inhalation, risk assessments often include a “multi-pathway” exposure analysis.

To simplify the screening risk assessment, multi-pathway adjustment (MP) factors were developed. The inhalation risk is multiplied by the MP factors to account for the additional health risk due to other pathways of exposure.

SCAQMD staff has previously developed multi-pathway factors in its risk assessment and screening procedures. For this update of the risk assessment procedures, the methodology has been updated and multi-pathway factors have been developed for additional compounds.

The MP factors were developed using the Risk Assessment Standalone Tool (RAST) build 15071, a computer software package that calculates risks based on ground level concentrations (GLC). Assumptions and parameters used to develop the MP factors are listed below:

Risk assessment options:

- Deposition velocity – 0.02 m/sec
- OEHHA default exposures are assumed for mother’s milk, homegrown produce, and soil exposure
- A ‘warm’ climate, typical for Southern California is assumed for the dermal exposure pathway
- For noncancer chronic risk estimates, the “OEHHA Derived Method” risk analysis method is used. In this approach, the inhalation pathway is always considered a driving pathway, the next two dominant (driving) exposure pathways use the high-end point-estimates of exposure, while the remaining exposure pathways use mean point estimates.
- For residential cancer risk estimates, the “RMP (Derived) Method” risk analysis method is used. In this method, if inhalation is one of the top two dominant pathways, the method uses the breathing rate at 95th percentile of exposure for ≤ 2 years of age, and the breathing rate at the 80th percentile exposure for > 2 years of age. If inhalation is not the top two dominant pathways, it uses mean. For worker cancer risk, the “OEHHA Derived Method” risk analysis method is used.
- Pathways considered for residential exposure include inhalation, soil ingestion, dermal absorption, homegrown produce, and mother’s milk.
- Pathways considered for worker exposure include inhalation, soil ingestion, and dermal absorption.

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- The cancer risk estimates, including the Derived equations (both OEHHA and Adjusted), are based on 30-year exposures.
- The chronic multipathway factors (resident and worker) for the group listing of polychlorinated biphenyls (CAS number 57465-28-8) has been assigned those of its individual subspecies (243.908 and 10.82, respectively). (The group listing of PCBs does not include the Toxicity Equivalency Factors as developed by the World Health Organization 1997 and as adopted by the Office of Environmental Health Hazards Assessment in 2015.) PCB 126 (3,3',4,4',5-Pentachlorobiphenyl), CAS number 57465-28-8 was used in the calculation of the screening approach since it has the most stringent REL. In a case that a facility provides speciated PCB data, or other justification is available, different MP factor can be used subject to SCAQMD approval.

APPENDIX III

**PROCEDURES FOR ADDRESSING NON-DETECTED COMPOUNDS
AND BLANKS IN RISK ASSESSMENT**

**Procedures for Addressing Non-detected Toxic Air Contaminants
and Blanks in Risk Assessment**

INTRODUCTION

This appendix describes guidelines for estimating emissions of non-detected toxic air contaminants (TACs) and using blanks in emissions estimations for purposes of preparing health risk assessments for Rules 1401, 1402 and the Air Toxics “Hot Spots” program (AB 2588). Procedures are the same for preparing risk assessments for Rules 1401, 1402 and AB2588, however the lists of compounds are different. Rule 1401 uses only cancer potency factors (CPc) and reference exposure levels (RELs) approved by the Scientific Review Panel and prepared by the state Office of Environmental Health Hazard Assessment (OEHHA), whereas Rule 1402 and AB2588 use different sources for CPs and RELs, including draft numbers.

Under previous policy, the SCAQMD required that if a TAC could be present in emissions from a source but not detected during air testing, it must be assumed to be present below the limit of detection (LOD). This approach has been applied to stack testing, to measurements such as laboratory analysis of materials, and other monitoring and measurement methods. The concentration of non-detected TACs were to be reported as one-half (1/2) of the LOD.

Concerns were raised that this policy of carrying undetected TACs through a health risk assessment at half of the LOD could inflate risk estimates and might require facilities to install control equipment for emissions that may not be present. In addition, it would not be possible to detect the TAC after its emissions had been controlled and reduced.

Also, in the past, the SCAQMD did not allow any adjustments in the measured values of samples based on the results of reagent blanks. Concerns were raised that in certain cases the concentration of TACs measured in reagent blanks should be deducted from the actual measured samples.

To address these concerns, SCAQMD staff worked closely with affected facilities such as publicly owned treatment works (POTWs) and others during previous rulemaking efforts for Rules 1401 and 1402 to develop guidelines for addressing non-detected TACs and blanks in risk assessment.

OVERVIEW

The new approach begins with an initial level of screening to determine whether or not a TAC is likely to be present and therefore should be tested for. If the conditions in the screening guidelines are met, no further testing or analysis is required. If a TAC does not pass the screening guidelines, the facility must quantify and report the emissions of the compound through testing or other methods as approved by SCAQMD staff. The reported emission levels are calculated based on the number of test runs or analyses that are below the LOD.

SCREENING GUIDELINES

For a TAC to be excluded from testing or analysis and hence quantification for health risk assessment, it must meet either condition A, B, or C listed below.

Proof for exclusion of any TAC based on literature studies on physical nature or chemistry of the compounds to substantiate the findings, and any prior analysis or testing shall be deemed complete for SCAQMD approval. Any prior testing must have been conducted according to SCAQMD's approved test methods or other recognized standards, as approved by SCAQMD staff.

If a list of TACs to be tested for is agreed upon but is subsequently discovered by the facility or the SCAQMD that additional compounds may be present, SCAQMD staff may require that the facility test for the presence of the additional TACs.

The screening criteria to be used for determining the presence of TACs are the following.

Condition A: No likelihood of the presence of a TAC

A facility may choose to demonstrate that there is no likelihood of a TAC being present in the raw materials, process streams or materials introduced into the equipment or process. The methodology or documentation to show proof of the non-existence of the TAC must be deemed complete with the source test protocol or test method analysis protocol for SCAQMD approval. If the evidence to substantiate the absence of a TAC is insufficient, or SCAQMD staff has reason to believe that the TAC may be present, it must be tested for and quantified (see Cases 1, 2, and 3).

For example, a facility operator can demonstrate the absence of cadmium in emissions from the melting of lead ingots in a pot furnace by presenting the following documentation:

- Certified analysis of the lead ingots showing that cadmium is not a constituent of the ingot.
- Description of the process substantiating that no other material is added to the furnace that will contribute to cadmium emissions. The operator must also provide analysis for the fuel used in the process to demonstrate that it does not contain cadmium.
- Documentation substantiating that melting lead ingots without cadmium present in the ingot in a pot furnace will not result in the emissions of cadmium when the firebricks or pot liner are heated during the melting operations.

In addition, the facility operator may submit test results based on tests performed within the last two years, or a longer period if the facility can demonstrate that no significant changes have occurred to the SCAQMD-approved test method, process equipment or process materials, that indicate cadmium was reported as below LOD.

Condition B: Absence of a TAC or its precursors in the process

If there is any evidence that precursors, which could lead to formation of a TAC during a process or reaction, may be present, then a facility may have to test for the TAC. To be excluded from testing and quantification requirements, the facility must provide documentation to demonstrate, based on test results, that none of the essential precursors are present in the material or process. This is similar to the previous criteria and differs only in that precursor compounds that could contribute to the formation of the subject TAC must also be identified as not being present.

An example is emission of dioxins from a waste incinerator. In this case, test data may be available to show that there are no dioxins present in the waste stream being incinerated. However, the presence of chlorine and hydrocarbons in the combustion process could result in the formation of products of incomplete combustion (PICs) such as dioxins or other toxic compounds. Testing for these compounds would be required unless the facility operator demonstrates that none of the essential precursors are present in the waste stream or the process itself.

Condition C: Special TAC list for POTWs

Unlike other industrial sources whose potential toxic air emissions are relatively well defined and which contain limited species, proving the absence of TACs from emissions from POTWs is more difficult. This is because the instantaneous discharge of wastewater from various residential, commercial and industrial system users could potentially result in the presence of different toxic contaminants in the influent sewage. Therefore, it is recommended that a special TAC list be developed for POTWs to select appropriate TACs for testing and determination of health risk associated with air emissions from liquid phase and sludge treatment processes.

The special TAC list for POTWs will be approved by SCAQMD staff with consideration given to information including but not limited to the following:

1. The Pooled Emission Estimating Program (PEEP) identified and selected compounds under the AB 2588 emissions inventory program, as approved by SCAQMD staff.
2. The Joint Emissions Inventory Program (JEIP) identified and selected compounds under SCAQMD Rule 1179 inventory requirements, as approved by SCAQMD staff.
3. TACs that have a reasonable likelihood of being present in the air emissions of POTWs, based on other test results or information sources, as approved by SCAQMD staff.

Additionally, based on the specific sources of sewage for certain POTWs, specific TACs in addition to the ones identified through the above steps could be added or deleted from the list on a case-by-case basis.

Based on the special TAC list for POTWs as developed from the above procedure and subject to approval by SCAQMD staff, facilities will be required to quantify the listed compounds through

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testing or other methods approved by SCAQMD staff for inclusion in the health risk assessment. The facility will not have to test for compounds not included in the special TAC list for POTWs, and the inclusion of non-listed TACs in the health risk assessment is not required. However, if after the industry-specific list is developed and approved, the facility or the SCAQMD later discovers information that additional TACs may be present, SCAQMD staff may revise the industry-specific list and may require the facility to quantify emissions of such TACs that were previously excluded from quantification.

QUANTIFICATION OF EMISSIONS BASED ON SOURCE TEST RESULTS

The cases listed below explain the process for quantification of emissions based on the source test results.

Treatment of Test Runs Below LOD

If some test runs are below LOD, quantification of the TAC depends on the percent of the test runs and analyses that are below LOD. Three possible scenarios are discussed below. In all of these cases, all of the following three conditions must be met:

1. All tests should be performed using SCAQMD-approved test methods, triplicate sample runs and SCAQMD-approved detection limits. When non-detected values are reported, the actual analytical limit of detection for all runs and the number of sample runs shall be reported; and
2. The data from the analyses or tests were obtained within a period of two (2) years prior to the time the data is to be used by SCAQMD staff, unless the facility demonstrates to the SCAQMD's satisfaction that earlier test data remain valid due to lack of significant changes in test methods, process equipment or process materials; and
3. For cyclic operations or variations in feedstock, the tests or analyses conducted should be representative of the variations in loads, feed rates and seasons, if applicable. In such cases, an adequate number of test runs should be conducted for all cyclic or seasonal operations.

Case #1: TAC is not detected in any test runs or analyses

In situations in which all test runs and analyses consistently indicate levels below the LOD, the compound can be identified as "not detected" and its inclusion in the health risk assessment will not be required, provided all three conditions listed above are met.

Case #2: TAC is detected in less than 10% of the test runs or analyses

In situations in which a compound has been detected and the percentage of samples in which it is detected is less than ten percent, and provided that all three conditions listed above are met, the following procedure shall be used to average the results:

1. For those runs or analyses that were below LOD, assign zero.
2. Average the measured values obtained for the runs that were above LOD with zero values for the runs below LOD and report the final average result for use in the risk estimation.

Case #3: TAC is detected in 10% or more of the test runs or analyses

In cases in which ten or more percent of the test runs and analyses show measured values of a TAC above the LOD, and provided that all three condition listed above are met, the following procedure shall be used to average the results:

1. For those runs or analysis that were below LOD, assign one half (1/2) of the corresponding LOD for each run.
2. Average the measured values obtained for the runs that were above LOD with 1/2 LOD values for the runs below LOD and report the final average result for use in the risk estimation.

In cases in which there are fewer than ten samples (for example, two triplicate samples have been taken) and a TAC has been detected in one or more samples, the following procedures shall be used.

- If the TAC is detected in one sample, use Case #2.
- If the TAC is detected in two or more samples, use Case #3.

Use of Reagent Blanks

Reagent blank values may be subtracted from sample values under the conditions specified below. In order to use these procedures, it will be necessary to obtain from SCAQMD staff, prior to the test or analyses, a determination as to the maximum allowable value for the blank.

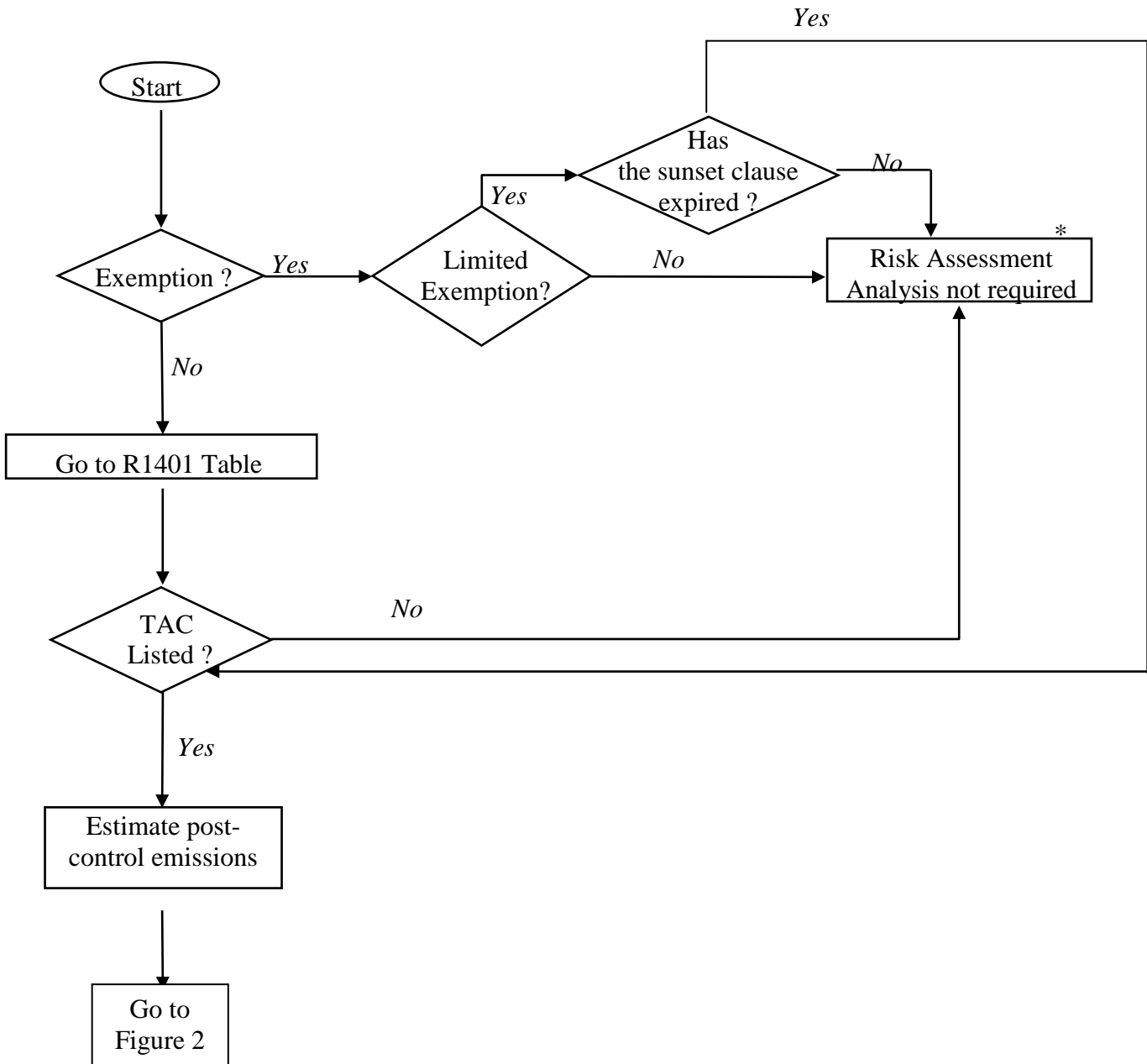
If the level of the TAC in the reagent blank is less than or equal to the maximum allowable blank, the reagent blank may be subtracted. The data must be reported with and without the correction. If the level of the TAC in the reagent blank is greater than the maximum allowable blank and the concentration of the sample is greater than 3 times the reagent blank value, then the maximum allowable reagent blank value can be subtracted. The data must be reported with and without correction.

APPENDIX IV

FLOW CHARTS AND DIAGRAMS

Note: The reader needs to ascertain the date in which the subject equipment's permit application was deemed complete. This date is used to identify the correct set of permitting tables (see Attachments) to be used for permit processing.

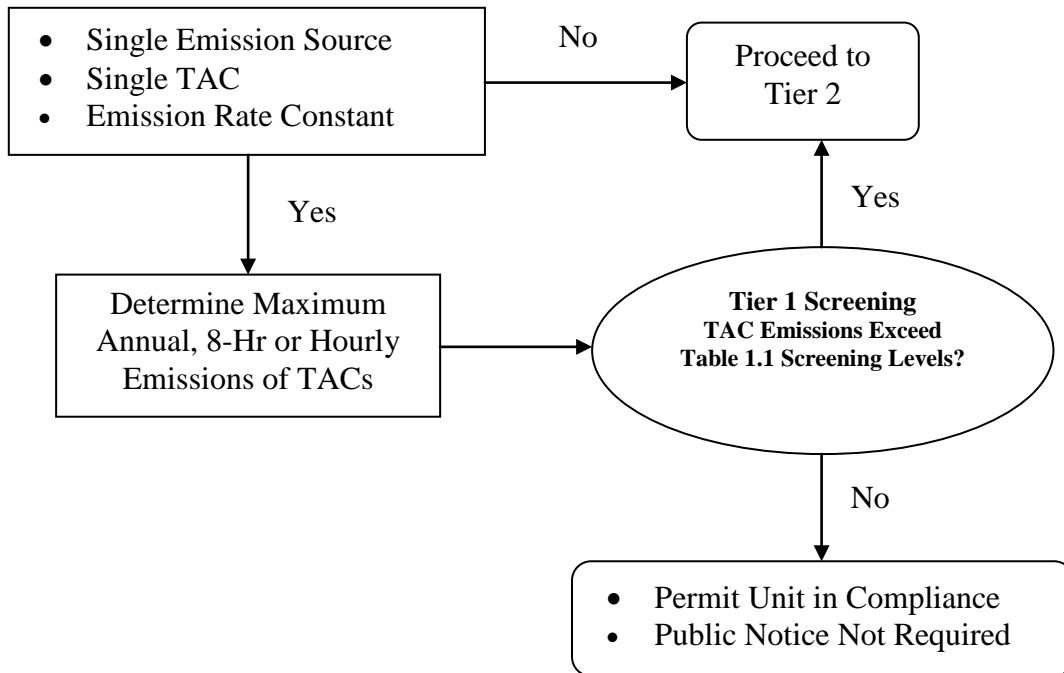
**Figure 1
Preliminary Tasks**



* Consult with SCAQMD staff for other TACs not listed in Table 1.1, which potentially endanger public health or may require a Rule 212 evaluation.

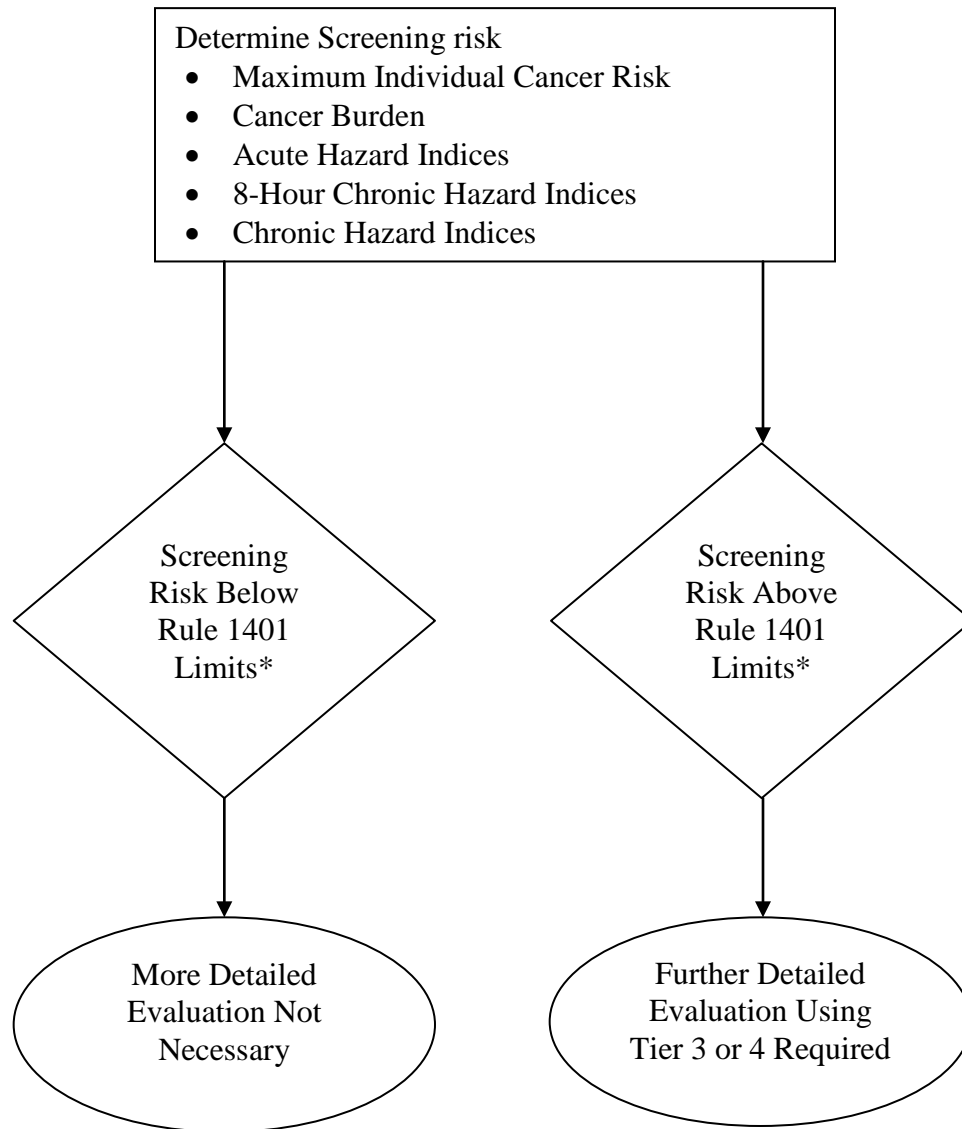
**Figure 2
Tier 1 - Screening Levels**

Tier 1 involves comparing emissions or source specific units from a piece of equipment to Screening Levels



**Figure 3A
Tier 2 - Screening Levels**

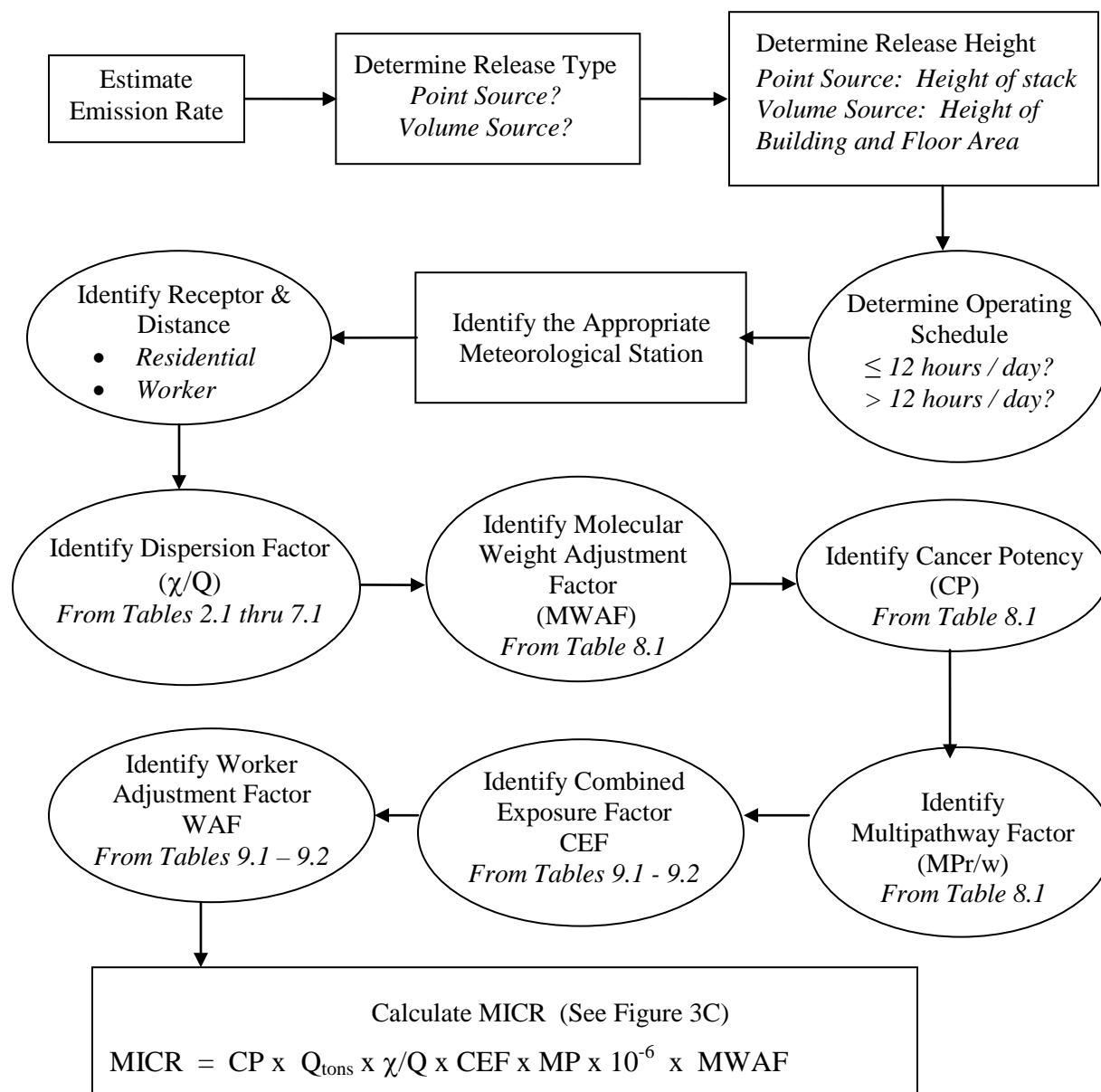
Tier 2 is a screening risk assessment, which includes procedures for determining level of risk from MICR, Cancer Burden, Acute, 8-Hour Chronic & Chronic Hazard Indices



* *Level of Concern:*

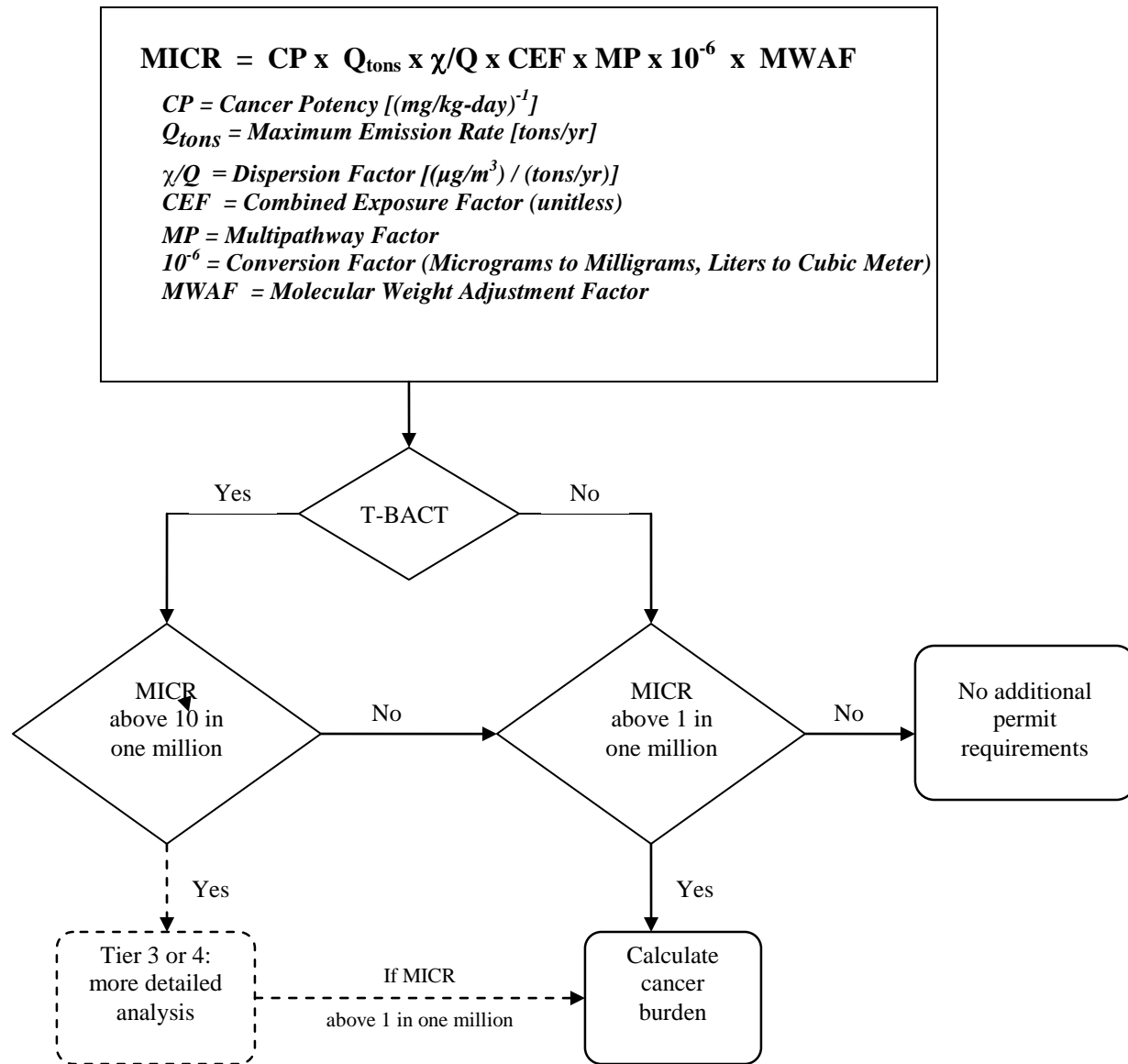
- *MICR exceeds one in one million with no T-BACT*
- *MICR exceeds 10 in one million with T-BACT*
- *Cancer burden exceeds 0.5*
- *HIA, HIC8 or HIC exceeds 1 for any target organ system*

**Figure 3B
Tier 2 - Maximum Individual Cancer Risk (MICR) Calculation**



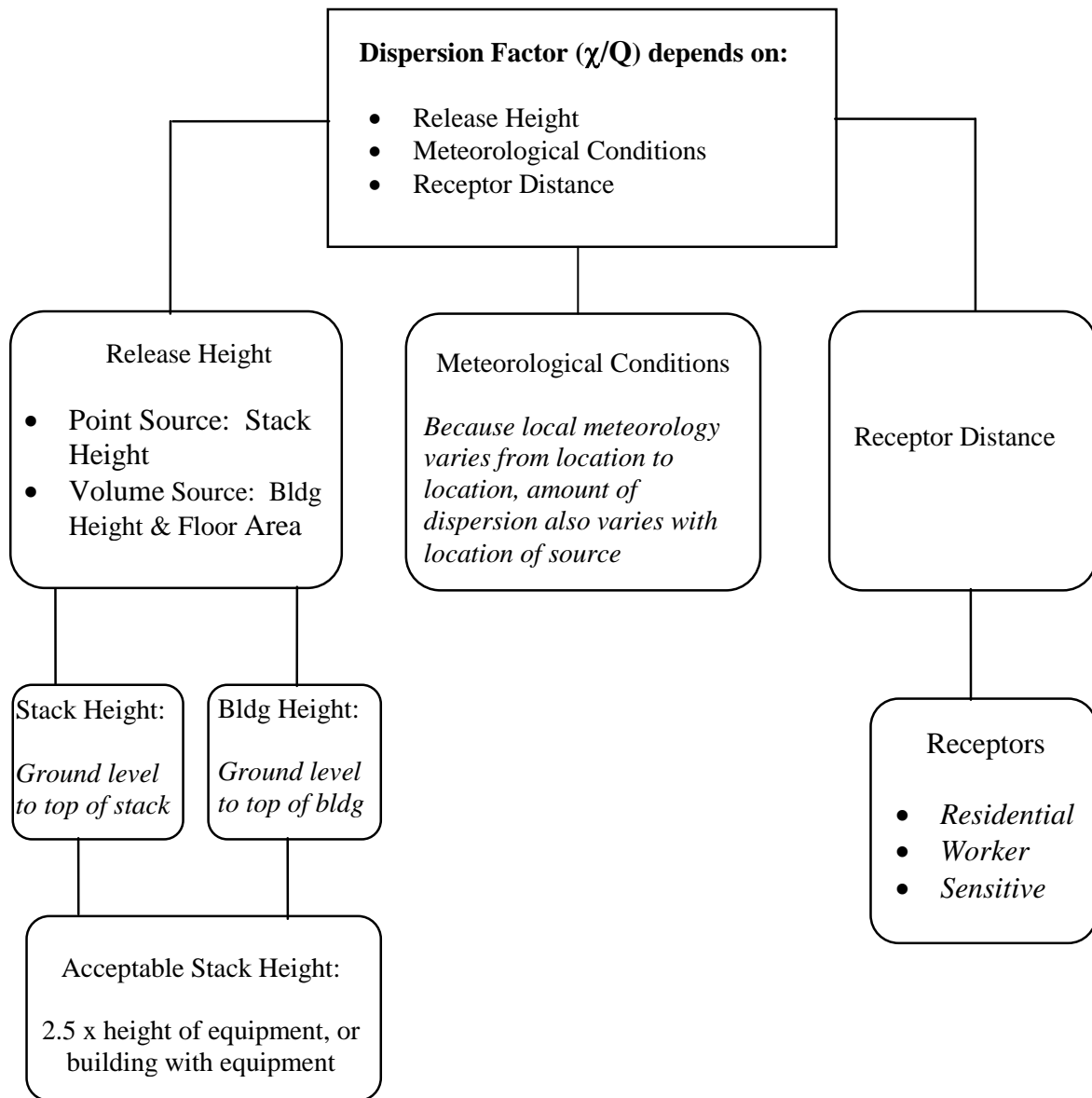
*If MICR exceeds one in one million, cancer burden must also be estimated.
(See Figure 4.)*

**Figure 3C
Tier 2 - Maximum Individual Cancer Risk (MICR) Equation**



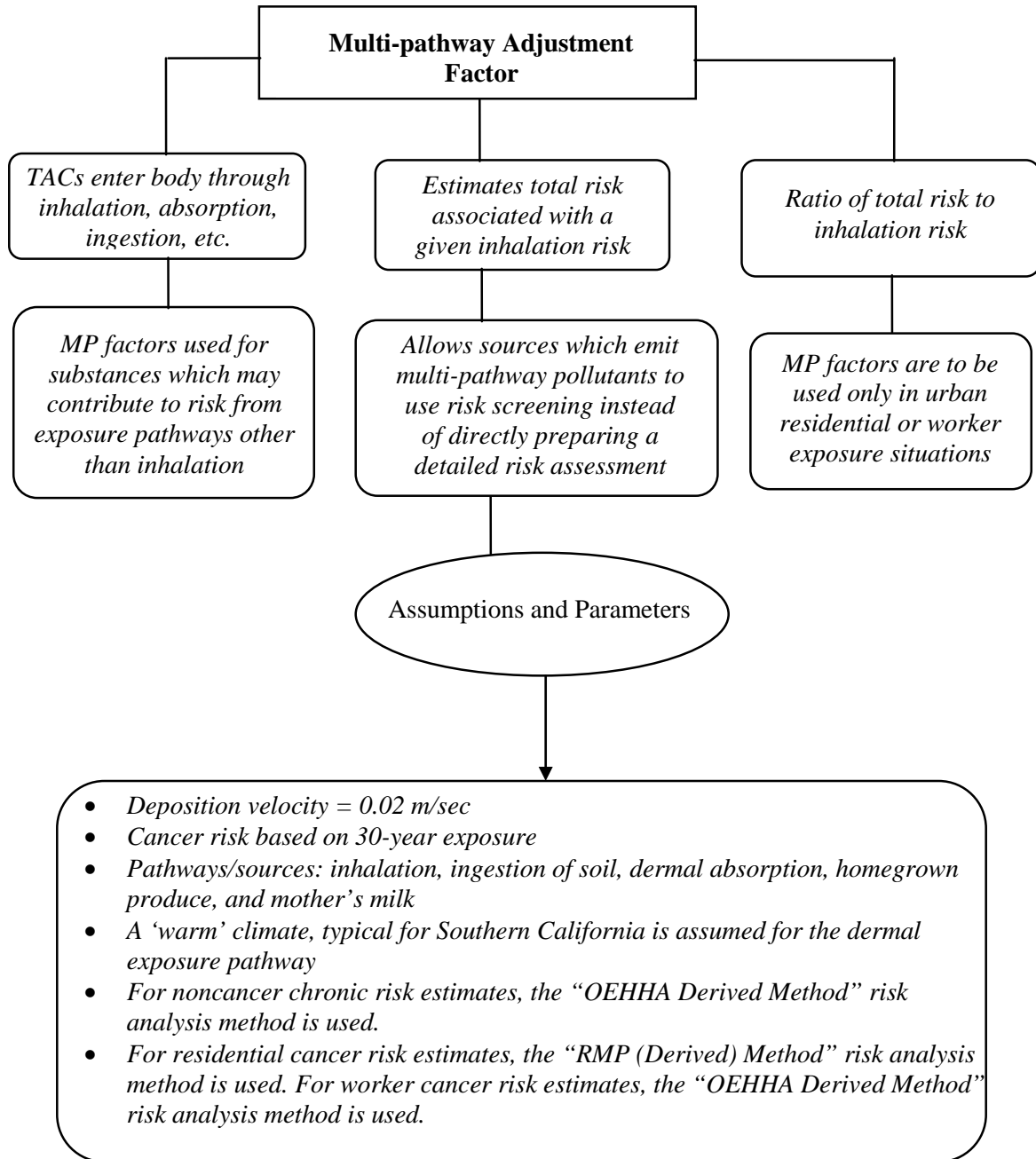
**Figure 3D
Tier 2 - Dispersion Factor**

Dispersion Factor (χ/Q): Numerical estimates of the amount of decrease in concentration of a contaminant as it travels away from the site of release.



**Figure 3E
Tier 2 - Multi-pathway Adjustment Factor**

Multi-pathway Adjustment Factor (MP)

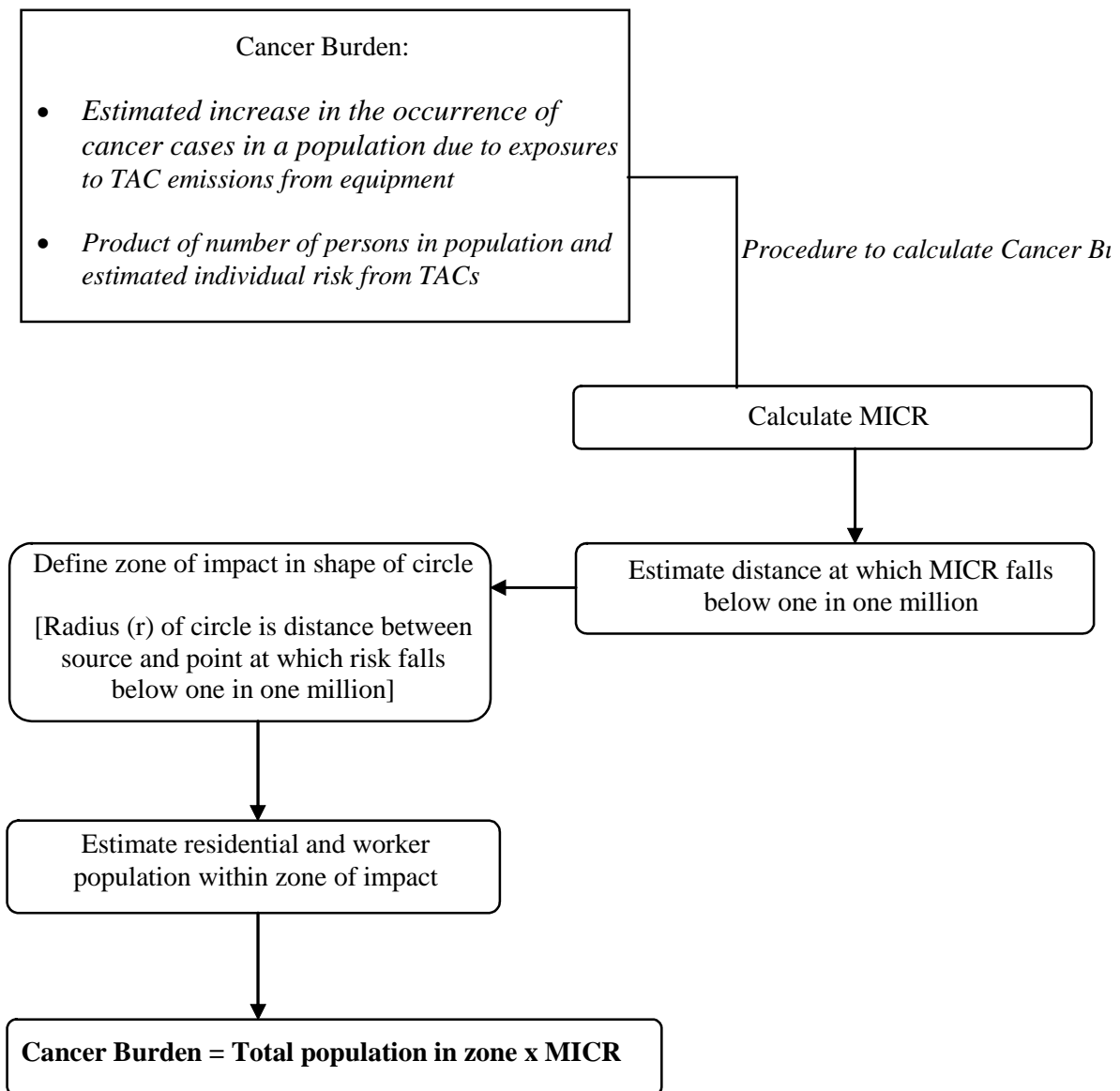


**Figure 3F
Tier 2 - Combined Exposure Factor**

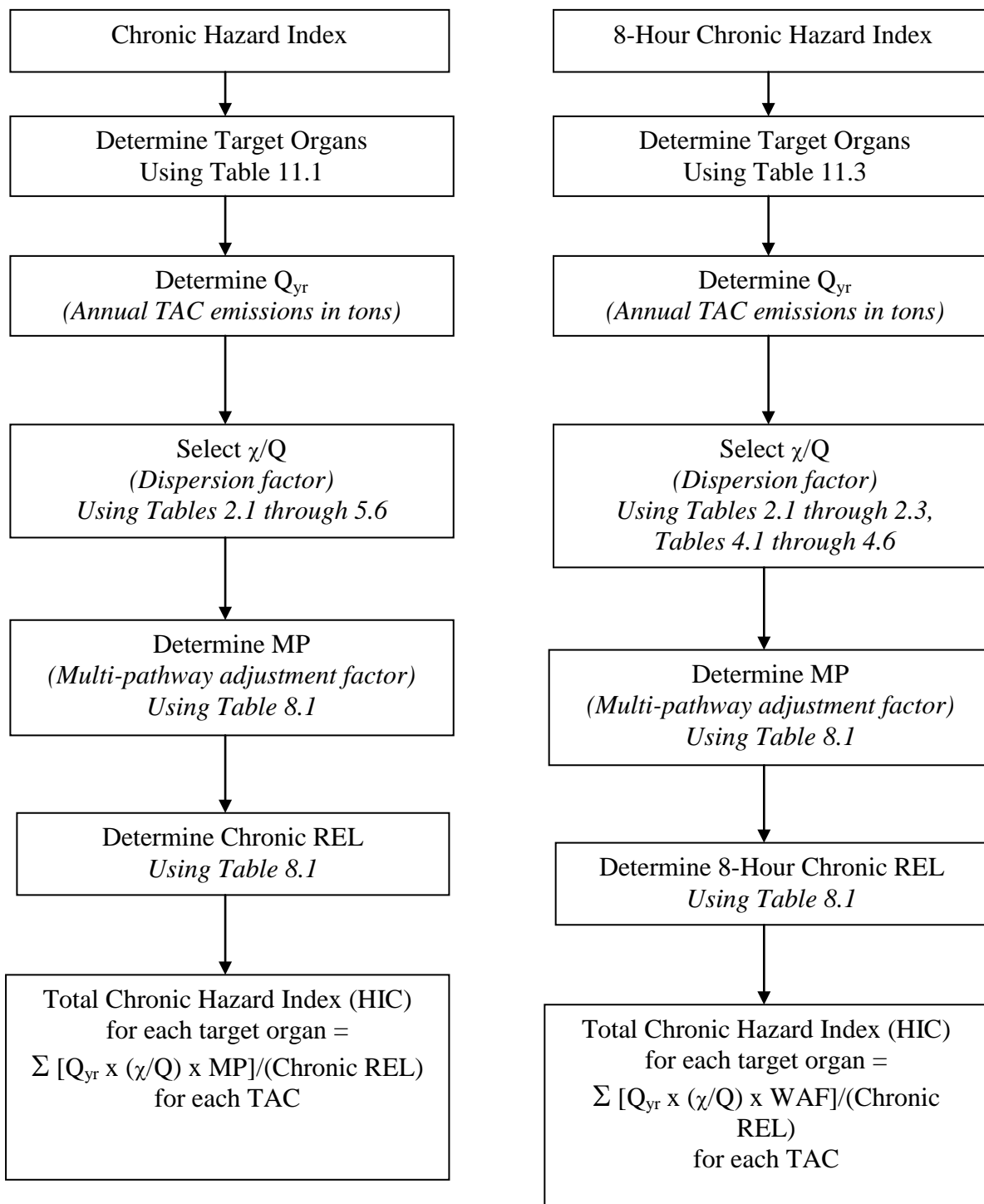
Combined Exposure Factor (CEF)

<p style="text-align: center;">CEF</p> <p>Combines default exposure parameters for:</p> <ul style="list-style-type: none">• Daily Breathing Rate (DBR)• Age Sensitivity Factor (ASF)• Exposure Duration (ED)• Fraction of Time Spent at Home (FAH)• Exposure Frequency (EF)• Average Time (AT) <p style="text-align: center;"><i>From Tables 9.1 and 9.2</i></p>
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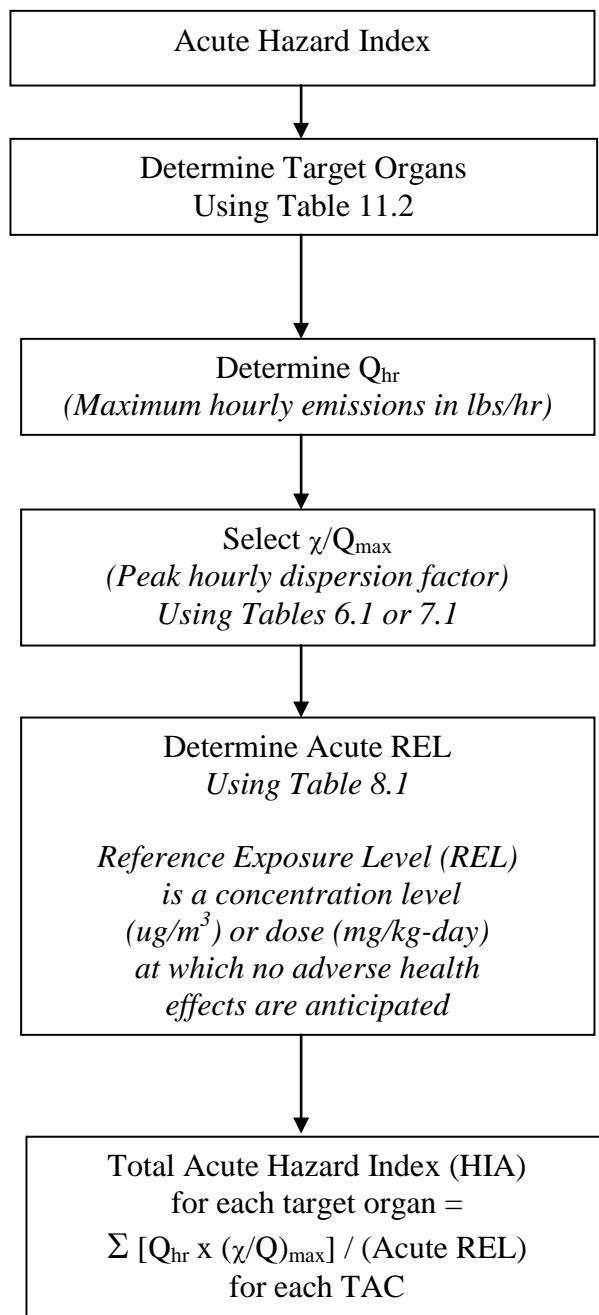
**Figure 4
Cancer Burden**



**Figure 5
Chronic and 8-Hour Chronic Hazard Index (HIC and HIC8)**



**Figure 6
Acute Hazard Index (HIA)**



APPENDIX V

RULE 1401 EXEMPTION PROVISIONS

Exemption Provisions

Rule 1401 (g)(1)(A): Permit Renewal or Change of Ownership

Any equipment which is in continuous operation, without modification or change in operating conditions, for which a new permit to operate is required solely because of permit renewal or change of ownership.

Rule 1401 (g)(1)(B): Modification with No Increase in Risk

A modification of a permit unit that causes a reduction or no increase in the cancer burden, MICR or acute or chronic HI at any receptor location.

Rule 1401 (g)(1)(C): Functionally Identical Replacement

A permit unit replacing a functionally identical permit unit, provided there is no increase in maximum rating or increase in emissions of any toxic air contaminants. For replacement of dry cleaning permit units only, provided there is no increase in any toxic air contaminants.

Rule 1401 (g)(1)(D): Equipment Previously Exempt Under Rule 219

Equipment which previously did not require a written permit pursuant to Rule 219 that is no longer exempt, provided that the equipment was installed prior to the Rule 219 amendment eliminating the exemption and a complete application for the permit is received within one (1) year after the Rule 219 amendment removing the exemption.

Rule 1401 (g)(1)(E): Modifications to Terminate Research Projects

Modifications restoring the previous permit conditions of a permit unit, provided that: the applicant demonstrates that the previous permit conditions were modified solely for the purpose of installing innovative control equipment as part of a demonstration or investigation designed to advance the state of the art with regard to controlling emissions of toxic air contaminants; the emission reductions achieved by the demonstration project are not used for permitting any equipment with emission increases under the contemporaneous emission reduction exemption as specified in paragraph (g)(2); the demonstration project is completed within two (2) years; and a complete application is submitted no later than two (2) years after the date of issuance of the permit which modified the conditions of the previous permit for the purpose of the demonstration or investigation.

Rule 1401 (g)(1)(F): Emergency Internal Combustion Engines

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Emergency internal combustion engines that are exempted under Rule 1304.

Rule 1401 (g)(1)(G): Wood Product Stripping (Expired)

Wood product stripping permit units, provided that the risk increases due to emissions from the permit unit owned or operated by the applicant for which complete applications were submitted on or after July 10, 1998 will not exceed a MICR of 100 in one million (1.0×10^{-4}) or a total acute or chronic hazard index of five (5) at any receptor location. This exemption shall not apply to permit applications received after January 10, 2000, or sooner if the Executive Officer makes a determination that T-BACT is available to enable compliance with the requirements of paragraphs (d)(1), (d)(2) and (d)(3).

Rule 1401 (g)(1)(H): Gasoline Transfer and Dispensing Facilities (Expired)

For gasoline transfer and dispensing facilities, as defined in Rule 461 – Gasoline Transfer and Dispensing, the Executive Officer shall not, for the purposes of paragraphs (d)(1) through (d)(5), consider the risk contribution of methyl tert-butyl ether for any gasoline transfer and dispensing permit applications deemed complete on or before December 31, 2003. If the state of California extends the phase-out requirement for methyl tert-butyl ether as an oxygenate in gasoline, the limited time exemption shall be extended to that expiration date or December 31, 2004, whichever is sooner.

Rule 1401 (g)(2): Contemporaneous Risk Reduction

Simultaneous risk reduction such that an increase in MICR or HI from a equipment will be mitigated by a risk reduction from another equipment within 100 meters and the net impact on any receptor will be less than or equal to an increased MICR of 1 in 1 million or an HI of 1, provided that both applications for the increase and decrease are deemed complete together, the risk reduction occurs first, and the reduction is enforceable.

APPENDIX VI

**TIER 2 SCREENING TABLES
FOR NON-COMBUSTION SOURCES
FOR USE IN RULE 1401**

Introduction

The purpose of this report is to document the methods used by SCAQMD staff to estimate cancer risks from non-combustion sources. The methods are consistent with SCAQMD's risk assessment procedures for Rule 1401 and were used to update the Rule 1401 Tier 2 screening tables using AERMOD.

Emission Inventory Methods

In order to determine the appropriate emission rates to use, please contact the appropriate SCAQMD Engineering staff (<http://www.aqmd.gov/contact/permitting-staff>) for more information.

Exposure Modeling Methods

Air quality modeling was performed using AERMOD (American Meteorological Society/U.S. EPA Regulatory Model). As of December 9, 2006, U.S. EPA promulgated AERMOD as a replacement for ISCST3 (Industrial Source Complex – Short Term, Version 3) as the recommended dispersion model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

AERMOD (version 14134) was executed using the urban option, which is SCAQMD policy for all permitting in its jurisdiction. The U.S. EPA regulatory default options, with the exception of the FLAT terrain option, were implemented and the SCAQMD AERMOD-ready meteorological data was used. The County populations used are based on the 2008 estimates from the U.S. Census Bureau. The Los Angeles County population was 9,862,049; Orange County population was 3,010,759; Riverside County population was 2,100,516; and San Bernardino County population was 2,015,355. SCAQMD's meteorological data is updated on a tri-annual basis and the population estimates will also be updated at that time.

For screening purposes, flat terrain was assumed. Although this is appropriate for most projects within the South Coast Air Basin, it is important to note that if complex terrain is present, the screening tables are not appropriate to be used and project-specific modeling using the elevated terrain option is recommended.

The non-combustion sources were modeled as either a point source or volume source with the parameters presented in Tables 1 and 2. Consistent with the modeling prepared for SCAQMD's risk assessment procedures for Rule 1401, building downwash effects were analyzed for point sources with a 20 meter by 30 meter building, 4 meters high.

Table 1: Stack Parameters for Point Sources

Source ID	Release Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
P1	4.27	0*	10	0.3
P2	7.62	0*	10	0.3
P3	15.24	0*	10	0.3

Note: * The temperature used in AERMOD was set to 0 K, which indicates that the ambient temperature was used in the model run.

Table 2: Stack Parameters for Volume Sources

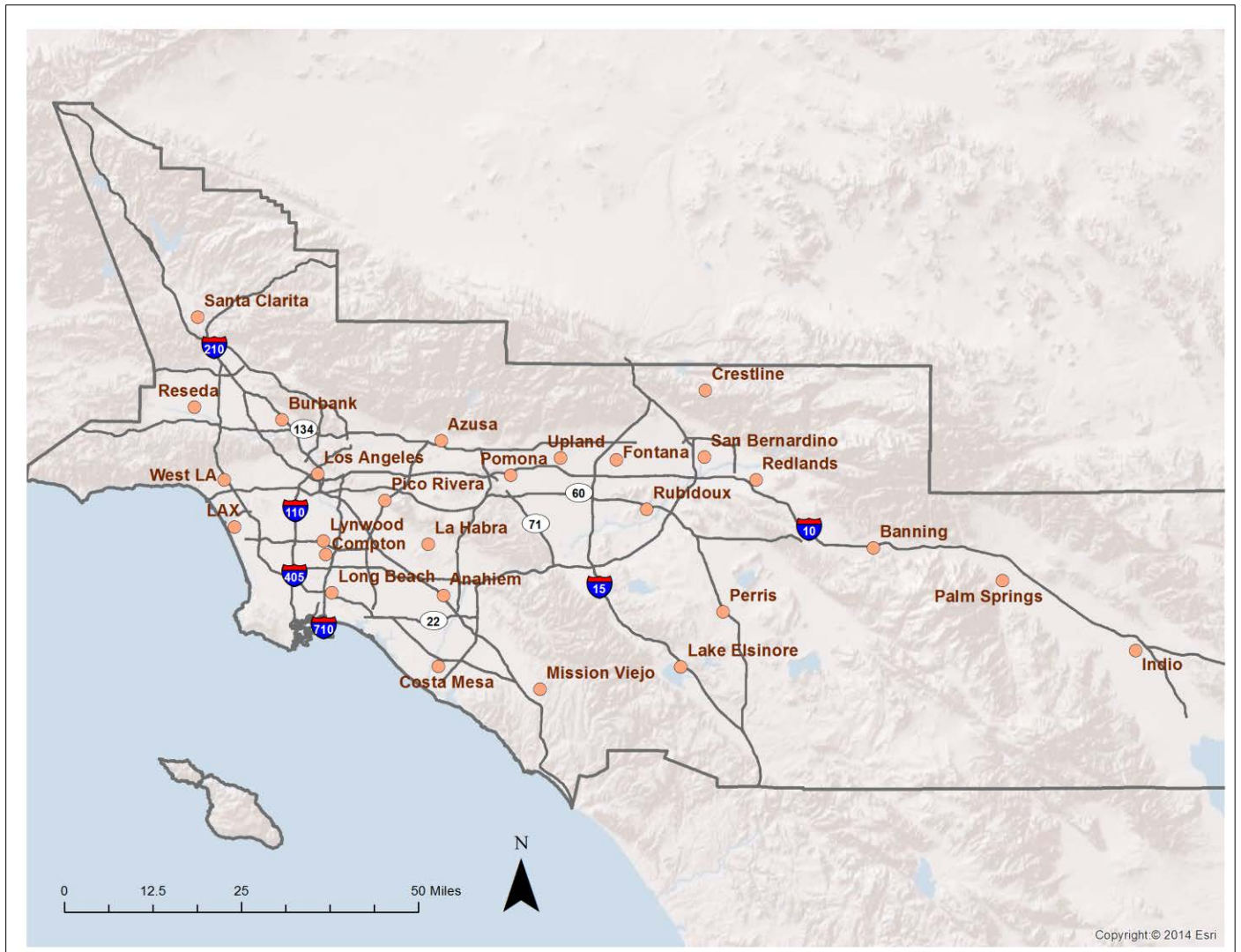
Source ID	Release Height (m)	Initial Lateral Dimension (m)	Initial Vertical Dimension (m)
V1	2.29	2.84	2.13
V2	2.29	5.01	2.13
V3	4.57	5.01	4.25
V4	2.29	8.679	2.13
V5	4.57	8.679	4.25
V6	4.57	15.04	4.25

Modeling was performed at 27 SCAQMD meteorological stations shown in Figure 1. The locations of each of the sites are given in Table 3. The data are available on the SCAQMD website (<http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod>). A polar receptor grid is assumed at ten degree azimuth increments at the following downwind distances: 25, 50, 75, 100, 200, 300, 500, and 1,000 meters.

The peak model-predicted impacts at each downwind distance over the 36 azimuth angles for each meteorological station were used to develop the attached tables.

A sample AERMOD model input file is provided in Exhibit 1.

Figure 1: Meteorological Monitoring Stations in the South Coast Air Basin



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Table 3: Locations of Meteorological Stations and Elevations

Station name	UTM Coordinates (km)		<u>Lat./Long. Coordinates</u>		<u>Elevation</u>
	Easting	Northing	Latitude	Longitude	(m)
Anaheim	413.14	3743.57	33:49:50	117:56:19	41
Azusa	414.81	3777.47	34:08:11	117:55:26	182
Banning	513.10	3753.19	33:55:15	116:51:30	660
Burbank	378.62	3782.24	34:10:33	118:19:01	175
Central LA	386.79	3770.00	34:03:59	118:13:36	87
Compton	388.59	3751.88	33:54:05	118:12:18	22
Costa Mesa	414.16	3726.19	33:40:26	117:55:33	20
Crestline	474.62	3788.76	34:14:29	117:16:32	1387
Fontana	454.62	3773.19	34:06:01	117:29:31	367
Indio	572.67	3729.90	33:42:30	116:12:57	-4
La Habra	411.98	3754.08	33:55:31	117:57:08	82
Lake Elsinore	469.33	3726.13	33:40:35	117:19:51	406
LAX	367.83	3757.80	33:57:15	118:25:49	42
Long Beach	389.99	3743.04	33:49:25	118:11:19	30
Lynwood	388.07	3754.73	33:55:44	118:12:39	29
Mission Viejo	437.39	3721.17	33:37:49	117:40:30	170
Palm Springs	542.46	3745.73	33:51:10	116:32:28	171
Perris	478.91	3738.58	33:47:20	117:13:40	442
Pico Rivera	401.31	3763.61	34:00:37	118:04:07	58
Pomona	430.78	3769.61	34:04:00	117:45:00	270
Redlands	486.36	3768.50	34:03:32	117:08:52	481
Reseda	358.76	3785.11	34:11:57	118:31:58	228
Riverside	461.64	3762.10	34:00:02	117:24:55	250
San Bernardino	474.76	3773.82	34:06:24	117:16:25	305
Santa Clarita	359.48	3805.52	34:23:00	118:31:42	375
Upland	441.96	3773.66	34:06:14	117:37:45	379
West LA	365.54	3768.52	34:03:02	118:27:24	97

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Exhibit 1: AERMOD Model Input File for Non-Combustion Sources

```

CO STARTING
TITLEONE R1401 Risk Assessment Procedures - Anah
TITLETWO 8 hrs/day; 7 days/week; 52 weeks/yr
MODELOPT CONC FLAT
AVERTIME 1 PERIOD
POLLUTID Any
RUNORNOT RUN
ERRORFIL ERRORS.OUT
URBANOPT 3010759 OC
CO FINISHED

SO STARTING
LOCATION P1 POINT 0.0 0.0 0.0
LOCATION P2 POINT 0.0 0.0 0.0
LOCATION P3 POINT 0.0 0.0 0.0

** Point Source      Q      RelHgt  Temp    Vel     Dia
** -----
SRCPARAM P1 0.0865 4.27 0 10.0 0.3
SRCPARAM P2 0.0865 7.62 0 10.0 0.3
SRCPARAM P3 0.0865 15.24 0 10.0 0.3

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 SO BUILDLLEN P3 29.05 24.91 20.00 24.91 29.05 32.32
 SO BUILDLLEN P3 34.60 35.84 35.98 35.03 33.02 30.00
 SO BUILDLLEN P3 33.02 35.03 35.98 35.84 34.60 32.32
 SO BUILDLLEN P3 29.05 24.91 20.00 24.91 29.05 32.32
 SO BUILDLLEN P3 34.60 35.84 35.98 35.03 33.02 30.00
 SO XBADJ P3 -16.51 -17.52 -17.99 -17.92 -17.30 -16.16
 SO XBADJ P3 -14.53 -12.45 -10.00 -12.45 -14.53 -16.16
 SO XBADJ P3 -17.30 -17.92 -17.99 -17.52 -16.51 -15.00
 SO XBADJ P3 -16.51 -17.52 -17.99 -17.92 -17.30 -16.16
 SO XBADJ P3 -14.53 -12.45 -10.00 -12.45 -14.53 -16.16
 SO XBADJ P3 -17.30 -17.92 -17.99 -17.52 -16.51 -15.00
 SO YBADJ P3 0.00 0.00 0.00 0.00 0.00 0.00
 SO YBADJ P3 0.00 0.00 0.00 0.00 0.00 0.00
 SO YBADJ P3 0.00 0.00 0.00 0.00 0.00 0.00
 SO YBADJ P3 0.00 0.00 0.00 0.00 0.00 0.00
 SO YBADJ P3 0.00 0.00 0.00 0.00 0.00 0.00
 SO YBADJ P3 0.00 0.00 0.00 0.00 0.00 0.00

URBANSRC P1
 URBANSRC P2
 URBANSRC P3

SO EMISFACT P1-P3 HROFDY 8*0.0 8*1.0 8*0.0

SRCGROUP P1 P1
 SRCGROUP P2 P2
 SRCGROUP P3 P3

SO SRCGROUP ALL

SO FINISHED

RE STARTING
 GRIDPOLR POL1 STA
 ORIG 0.0 0.0
 DIST 25 50 75 100 200 300 500 1000
 GDIR 36 10.0 10.0
 GRIDPOLR POL1 END
 RE FINISHED

ME STARTING
 SURFFILE anah8.sfc
 PROFFILE anah8.pfl
 SURFDATA 0 2006
 UAIRDATA 3190 2006
 PROFBASE 0.0 METERS
 ME FINISHED

OU STARTING
 RECTABLE 1 FIRST
 RECTABLE ALLAVE FIRST
 PLOTFILE 1 P1 FIRST AM1T1P1.TXT
 PLOTFILE PERIOD P1 AM1T2P1.TXT
 PLOTFILE 1 P2 FIRST AM1T1P2.TXT
 PLOTFILE PERIOD P2 AM1T2P2.TXT
 PLOTFILE 1 P3 FIRST AM1T1P3.TXT
 PLOTFILE PERIOD P3 AM1T2P3.TXT

OU FINISHED

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Results

Figure 2 shows the source receptor areas (SRA) within the South Coast Air Basin and Table 4 lists the appropriate meteorological station to use for each SRA.

Figure 2: Source/Receptor Areas

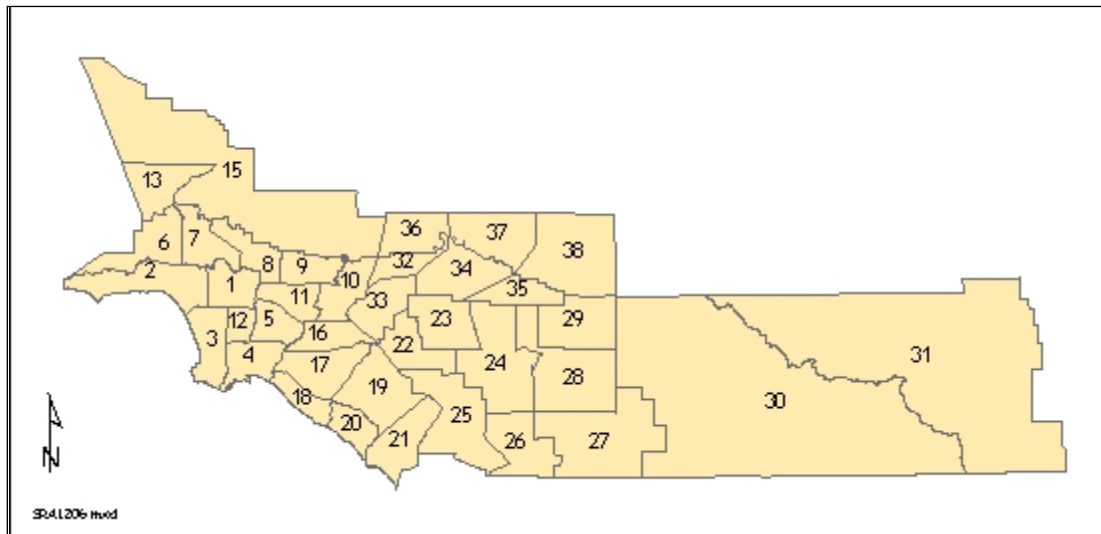


Table 4: Meteorological Stations for Each Source/Receptor Area.

Meteorological Station	Source/ Receptor Area	Meteorological Station	Source/ Receptor Area
Anaheim	17	Compton/Lynwood	12
Azusa	8, 9	Mission Viejo	19, 21
Banning	29	Perris	24, 28
Burbank	7	Palm Springs	30, 31
Central LA	1	Pico Rivera	5, 11
Crestline	37	Pomona	10
Costa Mesa	18, 20	Redlands	35, 38
Fontana	34	Reseda	6
Indio	30	Riverside	22, 23
La Habra	16	Santa Clarita	13, 15
Lake Elsinore	25, 26, 27	San Bernardino	34
LAX	3	Upland	32, 33, 36
Long Beach	4	West LA	2

The Tier 2 tables developed using this methodology are included in Permit Application Attachment “M” for the Risk Assessment Procedures for Rules 1401 & 212.

APPENDIX VII

**TIER 2 SCREENING TABLES
FOR COMBUSTION SOURCES
(NATURAL GAS BOILERS, NATURAL GAS INTERNAL COMBUSTION
ENGINES, DIESEL INTERNAL COMBUSTION ENGINES)
FOR USE IN RULE 1401**

Introduction

The purpose of this report is to document the methods used by SCAQMD staff to estimate cancer risks from natural gas-fueled boilers, natural gas-fueled internal combustion engines (ICEs) and diesel-fueled ICEs. The methods are consistent with SCAQMD's risk assessment procedures for Rule 1401 and were used to update the Rule 1401 Tier 2 screening tables using AERMOD.

Emission Inventory Methods

In order to determine the appropriate/default emission rates to use for fuel combustion sources, please refer to "Supplemental Instructions, Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory, Annual Emissions Reporting Program" (<http://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/supplemental-instructions-for-ab2588-facilities.pdf>) for more information.

Exposure Modeling Methods

Air quality modeling was performed using AERMOD (American Meteorological Society/U.S. EPA Regulatory Model). As of December 9, 2006, U.S. EPA promulgated AERMOD as a replacement for ISCST3 (Industrial Source Complex – Short Term, Version 3) as the recommended dispersion model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

AERMOD (version 14134) was executed using the urban option, which is SCAQMD policy for all permitting in its jurisdiction. The U.S. EPA regulatory defaults options, with the exception of the FLAT terrain option, were implemented and the SCAQMD AERMOD-ready meteorological data was used. The County populations used are based on the 2008 estimates from the U.S. Census Bureau. The Los Angeles County population was 9,862,049; Orange County population was 3,010,759; Riverside County population was 2,100,516; and San Bernardino County population was 2,015,355. SCAQMD's meteorological data is updated on a tri-annual basis and the population estimates will also be updated at that time.

For screening purposes, flat terrain was assumed. Although this is appropriate for most projects within the South Coast Air Basin, it is important to note that if complex terrain is present, the screening tables are not appropriate to be used and project-specific modeling using the elevated terrain option is recommended.

Combustion source stacks were modeled as a point source with the stack parameters presented in Table 1. These parameters were based on the San Joaquin Valley Unified Air Pollution Control District's modeling parameters¹. Consistent with the modeling prepared for SCAQMD's risk

¹ San Joaquin Valley Unified Air Pollution Control District, Draft Staff Report with Appendices for Proposed Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document, SCAQMD

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assessment procedures for Rule 1401, building downwash effects were analyzed with a 20 meter by 30 meter building, 4 meters high.

Table 1: Stack Parameters by Combustion Source Type

Source ID	Equipment Rating	Release Height (m)	Stack Inside Diameter (m)	Gas Exit Temp. (K)	Gas Exit Velocity (m/s)	Gas Exit Flow Rate (m ³ /min)
Gaseous Fuel Fired (Natural Gas) Boilers						
B1	0 – 4.9 MMBTU/hr	9.0	0.40	440	5	37.7
B2	5 – 9.9 MMBTU/hr	9.0	0.50	470	7	82.5
B3	10 – 19.9 MMBTU/hr	9.0	0.55	470	9	128.3
B4	20 – 29.9 MMBTU/hr	10.0	0.67	470	10	211.5
B5	30 – 49.9 MMBTU/hr	10.0	0.72	495	12	293.1
B6	50 – 149.9 MMBTU/hr	14.0	1.10	440	10	570.2
B7	150 – 200 MMBTU/hr	16.0	1.50	430	12	1,272.3
Natural Gas Reciprocating Internal Combustion Engines						
N1	50 – 74.9 BHP	4.0	0.07	850	40	9.2
N2	75 – 149.9 BHP	4.0	0.08	850	65	19.6
N3	150 – 249.9 BHP	4.0	0.14	890	55	50.8
N4	250 – 999.9 BHP	5.0	0.19	820	60	102.1
N5	> 1,000 BHP	7.0	0.35	750	65	375.2
Diesel Reciprocating Internal Combustion Engines						
D1	50 – 174.9 BHP	3.0	0.09	760	65	24.8
D2	175 – 299.9 BHP	3.0	0.12	760	55	37.3
D3	300 – 399.9 BHP	3.0	0.13	760	80	63.7
D4	400 – 599.9 BHP	3.0	0.15	770	90	95.4
D5	600 – 1,149.9 BHP	4.0	0.17	800	160	217.9

Modeling was performed at 27 SCAQMD meteorological stations shown in Figure 1. The locations of each of the sites are given in Table 2. The data are available on the SCAQMD website (<http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod>). A polar receptor grid is assumed at ten degree azimuth increments at the following downwind distances: 25, 50, 75, 100, 200, 300, 500, and 1,000 meters.

The peak model-predicted impacts at each downwind distance over the 36 azimuth angles for each meteorological station were used to develop the attached tables.

A sample AERMOD model input file is given in Exhibit 1.

found at http://www.valleyair.org/Workshops/postings/2014/10-09-14_OEHHA/Draft-Staff-Report-9-23-14.pdf, accessed on March 2, 2015.

Figure 1: Meteorological Monitoring Stations in the South Coast Air Basin



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Table 2: Locations of Meteorological Stations and Elevations

Station name	UTM Coordinates (km)		<u>Lat./Long. Coordinates</u>		<u>Elevation</u>
	Easting	Northing	Latitude	Longitude	(m)
Anaheim	413.14	3743.57	33:49:50	117:56:19	41
Azusa	414.81	3777.47	34:08:11	117:55:26	182
Banning	513.10	3753.19	33:55:15	116:51:30	660
Burbank	378.62	3782.24	34:10:33	118:19:01	175
Central LA	386.79	3770.00	34:03:59	118:13:36	87
Compton	388.59	3751.88	33:54:05	118:12:18	22
Costa Mesa	414.16	3726.19	33:40:26	117:55:33	20
Crestline	474.62	3788.76	34:14:29	117:16:32	1387
Fontana	454.62	3773.19	34:06:01	117:29:31	367
Indio	572.67	3729.90	33:42:30	116:12:57	-4
La Habra	411.98	3754.08	33:55:31	117:57:08	82
Lake Elsinore	469.33	3726.13	33:40:35	117:19:51	406
LAX	367.83	3757.80	33:57:15	118:25:49	42
Long Beach	389.99	3743.04	33:49:25	118:11:19	30
Lynwood	388.07	3754.73	33:55:44	118:12:39	29
Mission Viejo	437.39	3721.17	33:37:49	117:40:30	170
Palm Springs	542.46	3745.73	33:51:10	116:32:28	171
Perris	478.91	3738.58	33:47:20	117:13:40	442
Pico Rivera	401.31	3763.61	34:00:37	118:04:07	58
Pomona	430.78	3769.61	34:04:00	117:45:00	270
Redlands	486.36	3768.50	34:03:32	117:08:52	481
Reseda	358.76	3785.11	34:11:57	118:31:58	228
Riverside	461.64	3762.10	34:00:02	117:24:55	250
San Bernardino	474.76	3773.82	34:06:24	117:16:25	305
Santa Clarita	359.48	3805.52	34:23:00	118:31:42	375
Upland	441.96	3773.66	34:06:14	117:37:45	379
West LA	365.54	3768.52	34:03:02	118:27:24	97

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Exhibit 1: AERMOD Model Input File for Combustion Sources

CO STARTING
 TITLEONE COMBUSTION SCREENING TABLE - ANAH
 TITLETWO 8 HRS/DAY; 7 DAYS/WEEK; 52 WEEKS/YR
 MODELOPT CONC FLAT
 AVERTIME 1 PERIOD
 POLLUTID ANY
 RUNORNOT RUN
 URBANOPT 3010759 OC
 CO FINISHED

SO STARTING
 LOCATION D1 POINT 0.0 0.0 0.0
 LOCATION D2 POINT 0.0 0.0 0.0
 LOCATION D3 POINT 0.0 0.0 0.0
 LOCATION D4 POINT 0.0 0.0 0.0
 LOCATION D5 POINT 0.0 0.0 0.0
 LOCATION N1 POINT 0.0 0.0 0.0
 LOCATION N2 POINT 0.0 0.0 0.0
 LOCATION N3 POINT 0.0 0.0 0.0
 LOCATION N4 POINT 0.0 0.0 0.0
 LOCATION N5 POINT 0.0 0.0 0.0
 LOCATION B1 POINT 0.0 0.0 0.0
 LOCATION B2 POINT 0.0 0.0 0.0
 LOCATION B3 POINT 0.0 0.0 0.0
 LOCATION B4 POINT 0.0 0.0 0.0
 LOCATION B5 POINT 0.0 0.0 0.0
 LOCATION B6 POINT 0.0 0.0 0.0
 LOCATION B7 POINT 0.0 0.0 0.0

** POINT SOURCE	Q	RELHGT	TEMP	VEL	DIA		
** SRCPARAM D1	0.0865	3.0	760	65.0	0.09		
SRCPARAM D2	0.0865	3.0	760	55.0	0.12		
SRCPARAM D3	0.0865	3.0	760	80.0	0.13		
SRCPARAM D4	0.0865	3.0	770	90.0	0.15		
SRCPARAM D5	0.0865	4.0	800	160.0	0.17		
SRCPARAM N1	0.0865	4.0	850	40.0	0.07		
SRCPARAM N2	0.0865	4.0	850	65.0	0.08		
SRCPARAM N3	0.0865	4.0	890	55.0	0.14		
SRCPARAM N4	0.0865	5.0	820	60.0	0.19		
SRCPARAM N5	0.0865	7.0	750	65.0	0.35		
SRCPARAM B1	0.0865	9.0	440	5.0	0.40		
SRCPARAM B2	0.0865	9.0	470	7.0	0.50		
SRCPARAM B3	0.0865	9.0	470	9.0	0.55		
SRCPARAM B4	0.0865	10.0	470	10.0	0.67		
SRCPARAM B5	0.0865	10.0	495	12.0	0.72		
SRCPARAM B6	0.0865	14.0	440	10.0	1.10		
SRCPARAM B7	0.0865	16.0	430	12.0	1.50		
BUILDHGT D1		4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D1		4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D1		4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D1		4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D1		4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D1		4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID D1		24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID D1		35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID D1		35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID D1		24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID D1		35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID D1		35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN D1		33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN D1		29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN D1		34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN D1		33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN D1		29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN D1		34.60	35.84	35.98	35.03	33.02	30.00
XBADJ D1		-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ D1		-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ D1		-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ D1		-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ D1		-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ D1		-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ D1		0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D1		0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D1		0.00	0.00	0.00	0.00	0.00	0.00

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YBADJ	D1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	D2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	D2	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	D2	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	D2	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	D2	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	D2	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	D2	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	D2	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	D2	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	D2	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	D2	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	D2	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	D2	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	D2	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	D2	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	D2	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	D2	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	D2	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	D2	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	D2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	D3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	D3	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	D3	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	D3	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	D3	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	D3	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	D3	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	D3	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	D3	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	D3	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	D3	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	D3	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	D3	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	D3	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	D3	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	D3	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	D3	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	D3	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	D3	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	D3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	D3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	D4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	D4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	D4	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	D4	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	D4	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	D4	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	D4	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	D4	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	D4	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	D4	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	D4	34.60	35.84	35.98	35.03	33.02	30.00

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

BUILDLLEN D4	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN D4	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN D4	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ D4	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ D4	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ D4	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ D4	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ D4	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ D4	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ D4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D4	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT D5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT D5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID D5	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID D5	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID D5	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID D5	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID D5	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID D5	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN D5	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN D5	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN D5	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN D5	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN D5	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN D5	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ D5	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ D5	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ D5	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ D5	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ D5	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ D5	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ D5	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT N1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID N1	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N1	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N1	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID N1	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N1	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N1	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN N1	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N1	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N1	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN N1	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N1	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N1	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ N1	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N1	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N1	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ N1	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N1	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N1	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT N2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N2	4.00	4.00	4.00	4.00	4.00	4.00

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

BUILDHGT N2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID N2	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N2	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N2	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID N2	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N2	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N2	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN N2	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N2	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N2	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN N2	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N2	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N2	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ N2	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N2	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N2	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ N2	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N2	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N2	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT N3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID N3	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N3	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N3	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID N3	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N3	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N3	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN N3	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N3	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N3	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN N3	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N3	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N3	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ N3	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N3	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N3	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ N3	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N3	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N3	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ N3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT N4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT N4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID N4	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N4	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N4	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID N4	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID N4	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID N4	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN N4	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N4	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N4	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN N4	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN N4	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN N4	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ N4	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ N4	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ N4	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ N4	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

XBADJ	N4	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	N4	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	N4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N4	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	N5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	N5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	N5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	N5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	N5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	N5	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	N5	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	N5	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	N5	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	N5	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	N5	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	N5	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	N5	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	N5	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	N5	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	N5	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	N5	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	N5	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	N5	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	N5	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	N5	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	N5	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	N5	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	N5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	N5	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	B1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B1	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	B1	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B1	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B1	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	B1	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B1	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B1	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	B1	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B1	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B1	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	B1	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B1	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B1	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	B1	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B1	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B1	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	B1	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B1	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B1	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	B1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	B2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B2	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	B2	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B2	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B2	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	B2	24.91	29.05	32.32	34.60	35.84	35.98

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

BUILDWID B2	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID B2	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN B2	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN B2	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN B2	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN B2	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN B2	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN B2	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ B2	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ B2	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ B2	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ B2	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ B2	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ B2	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ B2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT B3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B3	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID B3	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID B3	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID B3	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID B3	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID B3	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID B3	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN B3	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN B3	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN B3	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN B3	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN B3	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN B3	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ B3	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ B3	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ B3	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ B3	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ B3	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ B3	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ B3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT B4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT B4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID B4	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID B4	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID B4	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID B4	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID B4	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID B4	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN B4	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN B4	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN B4	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN B4	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN B4	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN B4	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ B4	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ B4	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ B4	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ B4	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ B4	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ B4	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ B4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ B4	0.00	0.00	0.00	0.00	0.00	0.00

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

YBADJ	B4	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	B5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B5	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	B5	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B5	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B5	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	B5	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B5	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B5	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	B5	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B5	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B5	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	B5	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B5	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B5	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	B5	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B5	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B5	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	B5	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B5	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B5	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	B5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B5	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B5	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	B6	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B6	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B6	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B6	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B6	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B6	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	B6	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B6	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B6	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	B6	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B6	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B6	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	B6	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B6	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B6	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	B6	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B6	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B6	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	B6	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B6	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B6	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	B6	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B6	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B6	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	B6	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B6	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B6	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B6	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B6	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B6	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	B7	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B7	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B7	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B7	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B7	4.00	4.00	4.00	4.00	4.00	4.00
BUILDHGT	B7	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	B7	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B7	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B7	35.84	34.60	32.32	29.05	24.91	20.00
BUILDWID	B7	24.91	29.05	32.32	34.60	35.84	35.98
BUILDWID	B7	35.03	33.02	30.00	33.02	35.03	35.98
BUILDWID	B7	35.84	34.60	32.32	29.05	24.91	20.00
BUILDLLEN	B7	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B7	29.05	24.91	20.00	24.91	29.05	32.32
BUILDLLEN	B7	34.60	35.84	35.98	35.03	33.02	30.00
BUILDLLEN	B7	33.02	35.03	35.98	35.84	34.60	32.32
BUILDLLEN	B7	29.05	24.91	20.00	24.91	29.05	32.32

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

BUILDLEN	B7	34.60	35.84	35.98	35.03	33.02	30.00
XBADJ	B7	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B7	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B7	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
XBADJ	B7	-16.51	-17.52	-17.99	-17.92	-17.30	-16.16
XBADJ	B7	-14.53	-12.45	-10.00	-12.45	-14.53	-16.16
XBADJ	B7	-17.30	-17.92	-17.99	-17.52	-16.51	-15.00
YBADJ	B7	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B7	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B7	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B7	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B7	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	B7	0.00	0.00	0.00	0.00	0.00	0.00

URBANSRC D1
URBANSRC D2
URBANSRC D3
URBANSRC D4
URBANSRC D5
URBANSRC N1
URBANSRC N2
URBANSRC N3
URBANSRC N4
URBANSRC N5
URBANSRC B1
URBANSRC B2
URBANSRC B3
URBANSRC B4
URBANSRC B5
URBANSRC B6
URBANSRC B7

SO EMISFACT D1-D5 HROFDY 8*0.0 8*1.0 8*0.0
SO EMISFACT N1-N5 HROFDY 8*0.0 8*1.0 8*0.0
SO EMISFACT B1-B7 HROFDY 8*0.0 8*1.0 8*0.0

SRCGROUP D1 D1
SRCGROUP D2 D2
SRCGROUP D3 D3
SRCGROUP D4 D4
SRCGROUP D5 D5
SRCGROUP N1 N1
SRCGROUP N2 N2
SRCGROUP N3 N3
SRCGROUP N4 N4
SRCGROUP N5 N5
SRCGROUP B1 B1
SRCGROUP B2 B2
SRCGROUP B3 B3
SRCGROUP B4 B4
SRCGROUP B5 B5
SRCGROUP B6 B6
SRCGROUP B7 B7

SO FINISHED

RE STARTING
GRIDPOLR POL1 STA
ORIG 0.0 0.0
DIST 25 50 75 100 200 300 500 1000
GDIR 36 10.0 10.0
GRIDPOLR POL1 END
RE FINISHED

ME STARTING
SURFFILE ANAH8.SFC
PROFFILE ANAH8.PFL
SURFDATA 0 2006
UAIRDATA 3190 2006
PROFBASE 0.0 METERS
ME FINISHED

OU STARTING
RECTABLE 1 FIRST
RECTABLE ALLAVE FIRST
PLOTFILE 1 D1 FIRST AM1T1D1.TXT
PLOTFILE PERIOD D1 AM1T2D1.TXT
PLOTFILE 1 D2 FIRST AM1T1D2.TXT
PLOTFILE PERIOD D2 AM1T2D2.TXT
PLOTFILE 1 D3 FIRST AM1T1D3.TXT
PLOTFILE PERIOD D3 AM1T2D3.TXT

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212

PLOTFILE 1 D4 FIRST AM1T1D4.TXT
PLOTFILE PERIOD D4 AM1T2D4.TXT
PLOTFILE 1 D5 FIRST AM1T1D5.TXT
PLOTFILE PERIOD D5 AM1T2D5.TXT
PLOTFILE 1 N1 FIRST AM1T1N1.TXT
PLOTFILE PERIOD N1 AM1T2N1.TXT
PLOTFILE 1 N2 FIRST AM1T1N2.TXT
PLOTFILE PERIOD N2 AM1T2N2.TXT
PLOTFILE 1 N3 FIRST AM1T1N3.TXT
PLOTFILE PERIOD N3 AM1T2N3.TXT
PLOTFILE 1 N4 FIRST AM1T1N4.TXT
PLOTFILE PERIOD N4 AM1T2N4.TXT
PLOTFILE 1 N5 FIRST AM1T1N5.TXT
PLOTFILE PERIOD N5 AM1T2N5.TXT
PLOTFILE 1 B1 FIRST AM1T1B1.TXT
PLOTFILE PERIOD B1 AM1T2B1.TXT
PLOTFILE 1 B2 FIRST AM1T1B2.TXT
PLOTFILE PERIOD B2 AM1T2B2.TXT
PLOTFILE 1 B3 FIRST AM1T1B3.TXT
PLOTFILE PERIOD B3 AM1T2B3.TXT
PLOTFILE 1 B4 FIRST AM1T1B4.TXT
PLOTFILE PERIOD B4 AM1T2B4.TXT
PLOTFILE 1 B5 FIRST AM1T1B5.TXT
PLOTFILE PERIOD B5 AM1T2B5.TXT
PLOTFILE 1 B6 FIRST AM1T1B6.TXT
PLOTFILE PERIOD B6 AM1T2B6.TXT
PLOTFILE 1 B7 FIRST AM1T1B7.TXT
PLOTFILE PERIOD B7 AM1T2B7.TXT
OU FINISHED

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

Results

Figure 2 shows the source receptor areas (SRA) within the South Coast Air Basin and Table 3 lists the appropriate meteorological station to use for each SRA.

Figure 2: Source/Receptor Areas

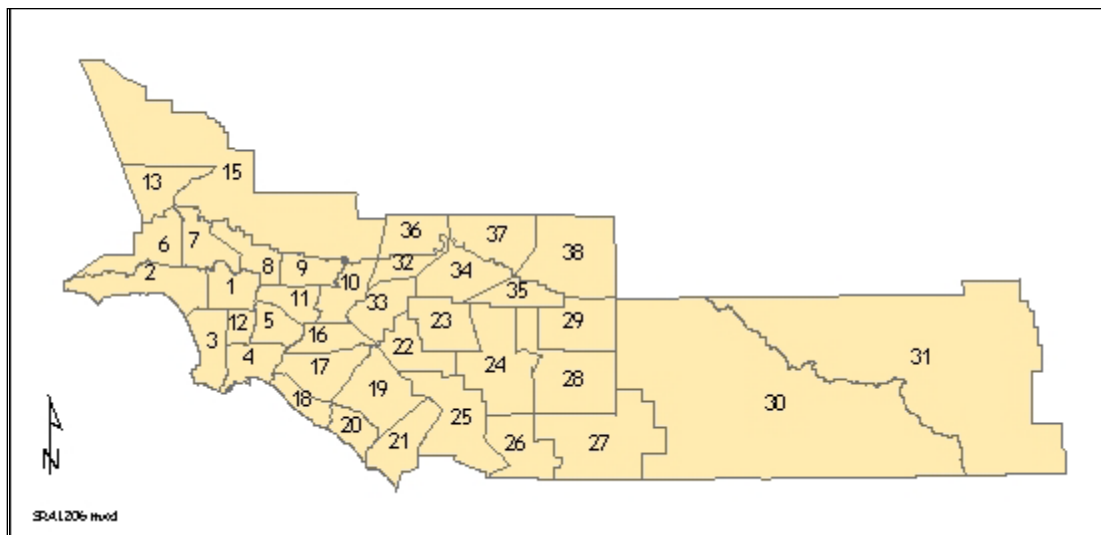


Table 3: Meteorological Stations for Each Source/Receptor Area.

Meteorological Station	Source/ Receptor Area	Meteorological Station	Source/ Receptor Area
Anaheim	17	Compton/Lynwood	12
Azusa	8, 9	Mission Viejo	19, 21
Banning	29	Perris	24, 28
Burbank	7	Palm Springs	30, 31
Central LA	1	Pico Rivera	5, 11
Crestline	37	Pomona	10
Costa Mesa	18, 20	Redlands	35, 38
Fontana	34	Reseda	6
Indio	30	Riverside	22, 23
La Habra	16	Santa Clarita	13, 15
Lake Elsinore	25, 26, 27	San Bernardino	34
LAX	3	Upland	32, 33, 36
Long Beach	4	West LA	2

The following tables have been numbered to match the tables within Permit Application Attachment “M” for the Risk Assessment Procedures for Rules 1401 & 212.

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.11
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 0 to 4.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
0 to 4.9	Anaheim	19.45	5.00	3.06	1.92	0.45	0.18	0.06	0.02
0 to 4.9	Azusa	14.24	4.45	2.79	1.77	0.42	0.16	0.06	0.01
0 to 4.9	Banning	14.79	4.63	3.05	2.06	0.57	0.23	0.08	0.02
0 to 4.9	Burbank	12.06	3.41	2.04	1.25	0.28	0.11	0.04	0.01
0 to 4.9	Central LA	15.37	3.93	2.37	1.48	0.35	0.14	0.05	0.01
0 to 4.9	Compton	13.44	3.82	2.34	1.46	0.35	0.13	0.05	0.01
0 to 4.9	Costa Mesa	11.23	3.89	2.46	1.54	0.36	0.14	0.05	0.01
0 to 4.9	Crestline	10.79	3.33	2.06	1.28	0.30	0.12	0.04	0.01
0 to 4.9	Fontana	16.80	4.91	3.15	2.04	0.51	0.20	0.07	0.02
0 to 4.9	Indio	8.84	2.98	1.88	1.19	0.29	0.12	0.04	0.01
0 to 4.9	La Habra	13.36	4.10	2.48	1.53	0.35	0.14	0.05	0.01
0 to 4.9	Lake Elsinore	9.25	3.24	2.08	1.32	0.31	0.12	0.04	0.01
0 to 4.9	LAX	22.89	5.92	3.76	2.46	0.63	0.25	0.08	0.02
0 to 4.9	Long Beach	10.78	3.04	1.83	1.13	0.27	0.10	0.04	0.01
0 to 4.9	Lynwood	14.10	4.20	2.61	1.65	0.39	0.15	0.05	0.01
0 to 4.9	Mission Viejo	10.10	3.21	2.03	1.27	0.30	0.12	0.04	0.01
0 to 4.9	Palm Springs	8.32	2.63	1.60	1.01	0.25	0.10	0.03	0.01
0 to 4.9	Perris	8.42	2.79	1.79	1.17	0.30	0.12	0.04	0.01
0 to 4.9	Pico Rivera	15.61	4.20	2.58	1.62	0.39	0.16	0.05	0.01
0 to 4.9	Pomona	13.12	3.99	2.41	1.48	0.34	0.13	0.05	0.01
0 to 4.9	Redlands	10.94	4.09	2.55	1.58	0.36	0.14	0.05	0.01
0 to 4.9	Reseda	5.99	2.45	1.45	0.87	0.19	0.08	0.03	0.01
0 to 4.9	Riverside	13.67	4.21	2.69	1.73	0.42	0.16	0.06	0.01
0 to 4.9	San Bernardino	12.15	3.79	2.34	1.48	0.36	0.14	0.05	0.01
0 to 4.9	Santa Clarita	12.15	3.44	2.18	1.43	0.37	0.15	0.06	0.01
0 to 4.9	Upland	15.43	4.68	2.99	1.92	0.47	0.18	0.06	0.02
0 to 4.9	West LA	15.74	4.37	2.64	1.62	0.37	0.15	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.12
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 5 to 9.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
5 to 9.9	Anaheim	12.35	3.51	2.29	1.56	0.41	0.16	0.06	0.02
5 to 9.9	Azusa	7.76	2.83	1.93	1.35	0.37	0.15	0.05	0.01
5 to 9.9	Banning	11.43	3.66	2.49	1.79	0.53	0.22	0.08	0.02
5 to 9.9	Burbank	7.12	2.34	1.51	1.00	0.25	0.10	0.04	0.01
5 to 9.9	Central LA	10.41	2.91	1.86	1.25	0.32	0.13	0.04	0.01
5 to 9.9	Compton	8.06	2.62	1.74	1.18	0.31	0.12	0.04	0.01
5 to 9.9	Costa Mesa	5.62	2.37	1.64	1.15	0.31	0.13	0.05	0.01
5 to 9.9	Crestline	5.95	2.13	1.43	0.98	0.26	0.11	0.04	0.01
5 to 9.9	Fontana	10.83	3.39	2.31	1.64	0.46	0.19	0.07	0.02
5 to 9.9	Indio	5.34	1.94	1.35	0.94	0.26	0.11	0.04	0.01
5 to 9.9	La Habra	7.11	2.58	1.71	1.16	0.30	0.12	0.05	0.01
5 to 9.9	Lake Elsinore	4.66	1.80	1.29	0.93	0.27	0.11	0.04	0.01
5 to 9.9	LAX	16.06	4.44	2.95	2.08	0.58	0.23	0.08	0.02
5 to 9.9	Long Beach	6.26	2.09	1.36	0.90	0.24	0.09	0.03	0.01
5 to 9.9	Lynwood	8.13	2.78	1.86	1.29	0.35	0.14	0.05	0.01
5 to 9.9	Mission Viejo	5.40	1.97	1.36	0.95	0.26	0.11	0.04	0.01
5 to 9.9	Palm Springs	5.74	1.84	1.22	0.83	0.22	0.09	0.03	0.01
5 to 9.9	Perris	5.71	1.94	1.32	0.94	0.27	0.11	0.04	0.01
5 to 9.9	Pico Rivera	10.07	2.99	1.94	1.32	0.35	0.14	0.05	0.01
5 to 9.9	Pomona	7.57	2.63	1.72	1.16	0.30	0.12	0.04	0.01
5 to 9.9	Redlands	5.08	2.31	1.62	1.14	0.31	0.13	0.05	0.01
5 to 9.9	Reseda	3.43	1.41	0.93	0.62	0.17	0.07	0.03	0.01
5 to 9.9	Riverside	7.93	2.75	1.91	1.35	0.37	0.15	0.06	0.01
5 to 9.9	San Bernardino	7.32	2.49	1.67	1.15	0.32	0.13	0.05	0.01
5 to 9.9	Santa Clarita	9.63	2.78	1.82	1.26	0.35	0.15	0.05	0.01
5 to 9.9	Upland	8.96	3.05	2.11	1.50	0.41	0.17	0.06	0.02
5 to 9.9	West LA	9.73	3.04	1.96	1.31	0.34	0.14	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.13
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 10 to 19.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
10 to 19.9	Anaheim	8.71	2.66	1.81	1.26	0.37	0.16	0.06	0.02
10 to 19.9	Azusa	4.89	1.96	1.40	1.01	0.32	0.14	0.05	0.01
10 to 19.9	Banning	9.24	3.07	2.12	1.53	0.49	0.20	0.07	0.02
10 to 19.9	Burbank	4.65	1.70	1.15	0.78	0.22	0.09	0.03	0.01
10 to 19.9	Central LA	7.74	2.31	1.53	1.05	0.29	0.12	0.04	0.01
10 to 19.9	Compton	5.65	2.00	1.38	0.95	0.28	0.12	0.04	0.01
10 to 19.9	Costa Mesa	3.20	1.52	1.13	0.82	0.27	0.12	0.04	0.01
10 to 19.9	Crestline	3.82	1.47	1.05	0.74	0.23	0.10	0.04	0.01
10 to 19.9	Fontana	7.85	2.57	1.80	1.30	0.41	0.18	0.07	0.02
10 to 19.9	Indio	3.69	1.41	1.01	0.74	0.23	0.10	0.04	0.01
10 to 19.9	La Habra	4.38	1.75	1.23	0.86	0.26	0.12	0.04	0.01
10 to 19.9	Lake Elsinore	2.90	1.18	0.89	0.67	0.23	0.10	0.04	0.01
10 to 19.9	LAX	12.32	3.62	2.45	1.74	0.53	0.22	0.08	0.02
10 to 19.9	Long Beach	3.94	1.51	1.03	0.71	0.21	0.09	0.03	0.01
10 to 19.9	Lynwood	5.47	2.06	1.43	1.02	0.31	0.13	0.05	0.01
10 to 19.9	Mission Viejo	3.18	1.30	0.96	0.69	0.22	0.10	0.04	0.01
10 to 19.9	Palm Springs	4.47	1.45	1.00	0.70	0.21	0.09	0.03	0.01
10 to 19.9	Perris	4.41	1.53	1.06	0.77	0.25	0.11	0.04	0.01
10 to 19.9	Pico Rivera	7.20	2.28	1.53	1.06	0.31	0.13	0.05	0.01
10 to 19.9	Pomona	5.03	1.91	1.30	0.90	0.27	0.12	0.04	0.01
10 to 19.9	Redlands	2.85	1.46	1.10	0.81	0.27	0.12	0.05	0.01
10 to 19.9	Reseda	2.56	1.10	0.75	0.52	0.15	0.07	0.03	0.01
10 to 19.9	Riverside	5.32	1.99	1.44	1.05	0.33	0.14	0.05	0.01
10 to 19.9	San Bernardino	5.08	1.82	1.27	0.91	0.28	0.12	0.05	0.01
10 to 19.9	Santa Clarita	7.96	2.39	1.59	1.11	0.33	0.14	0.05	0.01
10 to 19.9	Upland	5.96	2.19	1.58	1.15	0.36	0.16	0.06	0.02
10 to 19.9	West LA	6.64	2.28	1.53	1.04	0.30	0.13	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.14
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 20 to 29.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
20 to 29.9	Anaheim	4.70	1.65	1.26	0.92	0.31	0.14	0.05	0.01
20 to 29.9	Azusa	1.87	0.90	0.77	0.61	0.24	0.12	0.05	0.01
20 to 29.9	Banning	5.42	1.89	1.48	1.12	0.42	0.19	0.07	0.02
20 to 29.9	Burbank	2.06	0.91	0.71	0.53	0.18	0.08	0.03	0.01
20 to 29.9	Central LA	4.34	1.47	1.10	0.79	0.25	0.11	0.04	0.01
20 to 29.9	Compton	2.52	1.05	0.84	0.63	0.22	0.10	0.04	0.01
20 to 29.9	Costa Mesa	0.99	0.59	0.55	0.46	0.20	0.10	0.04	0.01
20 to 29.9	Crestline	1.76	0.78	0.65	0.50	0.19	0.09	0.04	0.01
20 to 29.9	Fontana	4.20	1.52	1.20	0.91	0.34	0.16	0.06	0.02
20 to 29.9	Indio	1.88	0.80	0.65	0.51	0.19	0.09	0.04	0.01
20 to 29.9	La Habra	1.84	0.87	0.72	0.56	0.21	0.10	0.04	0.01
20 to 29.9	Lake Elsinore	1.38	0.64	0.55	0.45	0.19	0.09	0.04	0.01
20 to 29.9	LAX	7.06	2.36	1.77	1.29	0.45	0.20	0.07	0.02
20 to 29.9	Long Beach	1.00	0.62	0.56	0.43	0.16	0.08	0.03	0.01
20 to 29.9	Lynwood	2.27	1.03	0.84	0.64	0.24	0.12	0.05	0.01
20 to 29.9	Mission Viejo	1.06	0.56	0.51	0.42	0.18	0.09	0.04	0.01
20 to 29.9	Palm Springs	2.79	0.98	0.74	0.54	0.18	0.08	0.03	0.01
20 to 29.9	Perris	2.60	0.99	0.76	0.57	0.21	0.10	0.04	0.01
20 to 29.9	Pico Rivera	3.62	1.32	1.01	0.75	0.26	0.12	0.05	0.01
20 to 29.9	Pomona	2.39	1.02	0.81	0.60	0.22	0.10	0.04	0.01
20 to 29.9	Redlands	0.90	0.60	0.57	0.47	0.21	0.11	0.04	0.01
20 to 29.9	Reseda	1.20	0.65	0.50	0.37	0.13	0.06	0.02	0.01
20 to 29.9	Riverside	2.25	0.96	0.82	0.65	0.26	0.13	0.05	0.01
20 to 29.9	San Bernardino	2.68	1.07	0.85	0.64	0.24	0.11	0.04	0.01
20 to 29.9	Santa Clarita	4.78	1.62	1.18	0.86	0.29	0.13	0.05	0.01
20 to 29.9	Upland	2.55	1.08	0.91	0.72	0.29	0.14	0.05	0.02
20 to 29.9	West LA	2.93	1.17	0.93	0.69	0.25	0.12	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 2.15
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 30 to 49.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
30 to 49.9	Anaheim	2.71	1.03	0.86	0.68	0.26	0.13	0.05	0.01
30 to 49.9	Azusa	0.83	0.50	0.49	0.43	0.20	0.11	0.04	0.01
30 to 49.9	Banning	4.09	1.42	1.14	0.90	0.36	0.17	0.07	0.02
30 to 49.9	Burbank	1.01	0.53	0.47	0.38	0.15	0.08	0.03	0.01
30 to 49.9	Central LA	2.88	1.03	0.83	0.63	0.22	0.10	0.04	0.01
30 to 49.9	Compton	1.42	0.66	0.59	0.47	0.19	0.09	0.04	0.01
30 to 49.9	Costa Mesa	0.35	0.31	0.34	0.32	0.17	0.09	0.04	0.01
30 to 49.9	Crestline	0.99	0.48	0.44	0.37	0.16	0.08	0.03	0.01
30 to 49.9	Fontana	2.67	1.00	0.85	0.69	0.29	0.14	0.06	0.02
30 to 49.9	Indio	1.11	0.50	0.44	0.37	0.16	0.08	0.03	0.01
30 to 49.9	La Habra	0.83	0.48	0.46	0.39	0.18	0.09	0.04	0.01
30 to 49.9	Lake Elsinore	0.70	0.38	0.36	0.31	0.15	0.08	0.03	0.01
30 to 49.9	LAX	4.60	1.61	1.29	1.00	0.38	0.18	0.07	0.02
30 to 49.9	Long Beach	0.39	0.36	0.37	0.32	0.14	0.07	0.03	0.01
30 to 49.9	Lynwood	1.07	0.59	0.54	0.45	0.20	0.10	0.04	0.01
30 to 49.9	Mission Viejo	0.40	0.30	0.31	0.29	0.15	0.08	0.03	0.01
30 to 49.9	Palm Springs	2.10	0.74	0.58	0.44	0.16	0.07	0.03	0.01
30 to 49.9	Perris	1.86	0.72	0.57	0.45	0.18	0.09	0.04	0.01
30 to 49.9	Pico Rivera	2.24	0.87	0.72	0.57	0.22	0.11	0.04	0.01
30 to 49.9	Pomona	1.35	0.63	0.55	0.44	0.18	0.09	0.04	0.01
30 to 49.9	Redlands	0.39	0.35	0.37	0.34	0.18	0.10	0.04	0.01
30 to 49.9	Reseda	0.76	0.46	0.38	0.29	0.11	0.06	0.02	0.01
30 to 49.9	Riverside	1.14	0.55	0.53	0.46	0.22	0.11	0.05	0.01
30 to 49.9	San Bernardino	1.61	0.68	0.58	0.47	0.20	0.10	0.04	0.01
30 to 49.9	Santa Clarita	3.66	1.28	0.97	0.73	0.25	0.12	0.05	0.01
30 to 49.9	Upland	1.24	0.59	0.57	0.50	0.23	0.12	0.05	0.01
30 to 49.9	West LA	1.50	0.68	0.61	0.49	0.21	0.11	0.04	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 2.16
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 50 to 149.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
50 to 149.9	Anaheim	0.03	0.11	0.19	0.24	0.18	0.11	0.05	0.01
50 to 149.9	Azusa	0.04	0.14	0.20	0.22	0.15	0.09	0.04	0.01
50 to 149.9	Banning	0.01	0.02	0.08	0.16	0.20	0.13	0.06	0.02
50 to 149.9	Burbank	0.03	0.13	0.18	0.19	0.12	0.07	0.03	0.01
50 to 149.9	Central LA	0.02	0.10	0.17	0.21	0.15	0.09	0.04	0.01
50 to 149.9	Compton	0.04	0.12	0.19	0.21	0.14	0.08	0.04	0.01
50 to 149.9	Costa Mesa	0.05	0.12	0.16	0.18	0.13	0.08	0.04	0.01
50 to 149.9	Crestline	0.04	0.10	0.16	0.17	0.12	0.07	0.03	0.01
50 to 149.9	Fontana	0.02	0.08	0.15	0.20	0.18	0.12	0.05	0.02
50 to 149.9	Indio	0.04	0.09	0.13	0.15	0.11	0.07	0.03	0.01
50 to 149.9	La Habra	0.06	0.14	0.19	0.20	0.14	0.08	0.04	0.01
50 to 149.9	Lake Elsinore	0.04	0.10	0.13	0.14	0.11	0.07	0.03	0.01
50 to 149.9	LAX	0.01	0.09	0.19	0.26	0.23	0.14	0.06	0.02
50 to 149.9	Long Beach	0.03	0.11	0.16	0.17	0.11	0.06	0.03	0.01
50 to 149.9	Lynwood	0.10	0.18	0.22	0.23	0.15	0.09	0.04	0.01
50 to 149.9	Mission Viejo	0.03	0.10	0.14	0.16	0.11	0.07	0.03	0.01
50 to 149.9	Palm Springs	0.07	0.12	0.16	0.17	0.11	0.06	0.03	0.01
50 to 149.9	Perris	0.06	0.10	0.12	0.14	0.11	0.07	0.03	0.01
50 to 149.9	Pico Rivera	0.02	0.11	0.18	0.21	0.15	0.09	0.04	0.01
50 to 149.9	Pomona	0.09	0.16	0.20	0.21	0.14	0.08	0.04	0.01
50 to 149.9	Redlands	0.07	0.14	0.18	0.20	0.14	0.08	0.04	0.01
50 to 149.9	Reseda	0.12	0.18	0.18	0.16	0.09	0.05	0.02	0.01
50 to 149.9	Riverside	0.04	0.10	0.16	0.20	0.16	0.10	0.04	0.01
50 to 149.9	San Bernardino	0.08	0.13	0.17	0.19	0.14	0.08	0.04	0.01
50 to 149.9	Santa Clarita	0.04	0.07	0.12	0.18	0.16	0.10	0.04	0.01
50 to 149.9	Upland	0.03	0.10	0.17	0.21	0.17	0.10	0.05	0.01
50 to 149.9	West LA	0.03	0.13	0.20	0.22	0.16	0.09	0.04	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.17
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating 12 Hours per Day or Less**

Natural Gas Boiler Rating 150 to 200 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
150 to 200	Anaheim	0.01	0.04	0.08	0.12	0.12	0.08	0.04	0.01
150 to 200	Azusa	0.02	0.07	0.10	0.12	0.10	0.07	0.03	0.01
150 to 200	Banning	0.00	0.01	0.03	0.06	0.12	0.10	0.05	0.02
150 to 200	Burbank	0.01	0.06	0.09	0.10	0.08	0.05	0.02	0.01
150 to 200	Central LA	0.01	0.05	0.08	0.10	0.10	0.07	0.03	0.01
150 to 200	Compton	0.02	0.05	0.08	0.10	0.10	0.06	0.03	0.01
150 to 200	Costa Mesa	0.02	0.05	0.08	0.09	0.09	0.06	0.03	0.01
150 to 200	Crestline	0.02	0.05	0.07	0.09	0.08	0.05	0.03	0.01
150 to 200	Fontana	0.01	0.04	0.07	0.09	0.12	0.08	0.04	0.01
150 to 200	Indio	0.02	0.04	0.06	0.08	0.07	0.05	0.03	0.01
150 to 200	La Habra	0.03	0.06	0.09	0.10	0.09	0.06	0.03	0.01
150 to 200	Lake Elsinore	0.02	0.05	0.07	0.08	0.07	0.05	0.02	0.01
150 to 200	LAX	0.01	0.04	0.09	0.13	0.15	0.11	0.05	0.02
150 to 200	Long Beach	0.01	0.05	0.08	0.09	0.07	0.05	0.02	0.01
150 to 200	Lynwood	0.04	0.08	0.11	0.12	0.10	0.07	0.03	0.01
150 to 200	Mission Viejo	0.01	0.04	0.07	0.08	0.07	0.05	0.02	0.01
150 to 200	Palm Springs	0.03	0.06	0.07	0.08	0.08	0.05	0.02	0.01
150 to 200	Perris	0.03	0.05	0.06	0.07	0.07	0.05	0.03	0.01
150 to 200	Pico Rivera	0.01	0.05	0.09	0.11	0.10	0.07	0.03	0.01
150 to 200	Pomona	0.04	0.08	0.10	0.11	0.09	0.06	0.03	0.01
150 to 200	Redlands	0.03	0.07	0.09	0.10	0.09	0.06	0.03	0.01
150 to 200	Reseda	0.05	0.09	0.10	0.09	0.06	0.04	0.02	0.01
150 to 200	Riverside	0.02	0.04	0.07	0.10	0.10	0.07	0.04	0.01
150 to 200	San Bernardino	0.03	0.06	0.08	0.09	0.09	0.06	0.03	0.01
150 to 200	Santa Clarita	0.02	0.04	0.05	0.07	0.11	0.08	0.04	0.01
150 to 200	Upland	0.01	0.04	0.07	0.10	0.11	0.08	0.04	0.01
150 to 200	West LA	0.01	0.06	0.10	0.12	0.11	0.07	0.03	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.11
Dispersion Factors (χ/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 0 to 4.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
0 to 4.9	Anaheim	12.59	3.18	2.09	1.49	0.59	0.35	0.18	0.07
0 to 4.9	Azusa	10.78	2.95	2.08	1.55	0.68	0.38	0.19	0.08
0 to 4.9	Banning	17.84	5.35	3.78	2.84	1.14	0.60	0.30	0.12
0 to 4.9	Burbank	12.48	3.00	2.05	1.52	0.66	0.36	0.18	0.07
0 to 4.9	Central LA	10.39	2.50	1.69	1.24	0.55	0.30	0.15	0.06
0 to 4.9	Compton	9.04	2.39	1.68	1.26	0.62	0.37	0.19	0.08
0 to 4.9	Costa Mesa	5.49	1.80	1.23	0.87	0.42	0.29	0.16	0.07
0 to 4.9	Crestline	8.01	2.23	1.46	1.03	0.44	0.27	0.16	0.06
0 to 4.9	Fontana	14.09	3.90	2.70	1.99	0.80	0.45	0.24	0.10
0 to 4.9	Indio	14.83	4.24	2.91	2.17	0.90	0.51	0.27	0.11
0 to 4.9	La Habra	7.07	2.04	1.32	0.91	0.43	0.28	0.15	0.06
0 to 4.9	Lake Elsinore	5.38	1.70	1.16	0.81	0.41	0.30	0.18	0.08
0 to 4.9	LAX	14.33	3.69	2.50	1.80	0.70	0.38	0.19	0.07
0 to 4.9	Long Beach	6.98	2.12	1.57	1.23	0.63	0.37	0.20	0.08
0 to 4.9	Lynwood	9.10	2.47	1.71	1.26	0.60	0.37	0.20	0.08
0 to 4.9	Mission Viejo	6.03	1.69	1.13	0.80	0.38	0.26	0.15	0.06
0 to 4.9	Palm Springs	14.03	3.59	2.41	1.77	0.75	0.44	0.23	0.09
0 to 4.9	Perris	7.08	2.14	1.46	1.07	0.48	0.31	0.18	0.07
0 to 4.9	Pico Rivera	12.15	3.07	2.02	1.45	0.57	0.33	0.17	0.07
0 to 4.9	Pomona	8.33	2.31	1.55	1.12	0.58	0.38	0.22	0.09
0 to 4.9	Redlands	6.18	2.14	1.47	1.05	0.48	0.41	0.28	0.12
0 to 4.9	Reseda	3.67	1.17	0.76	0.53	0.32	0.24	0.14	0.06
0 to 4.9	Riverside	9.01	2.53	1.76	1.28	0.56	0.34	0.19	0.07
0 to 4.9	San Bernardino	11.16	3.10	2.09	1.54	0.68	0.41	0.23	0.09
0 to 4.9	Santa Clarita	9.34	2.44	1.61	1.16	0.48	0.30	0.17	0.07
0 to 4.9	Upland	11.03	3.04	2.12	1.55	0.67	0.41	0.26	0.11
0 to 4.9	West LA	7.88	2.13	1.37	0.94	0.40	0.26	0.15	0.06

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.12
Dispersion Factors (X/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 5 to 9.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
5 to 9.9	Anaheim	6.90	1.85	1.19	0.86	0.28	0.15	0.11	0.06
5 to 9.9	Azusa	5.37	1.58	1.08	0.82	0.31	0.17	0.12	0.06
5 to 9.9	Banning	12.66	3.68	2.44	1.88	0.77	0.39	0.22	0.10
5 to 9.9	Burbank	6.60	1.63	1.04	0.78	0.31	0.17	0.12	0.06
5 to 9.9	Central LA	6.49	1.62	1.07	0.79	0.28	0.14	0.10	0.05
5 to 9.9	Compton	4.64	1.35	0.93	0.69	0.27	0.16	0.12	0.07
5 to 9.9	Costa Mesa	2.51	1.00	0.70	0.52	0.18	0.12	0.09	0.05
5 to 9.9	Crestline	4.46	1.31	0.83	0.61	0.22	0.12	0.09	0.05
5 to 9.9	Fontana	8.38	2.33	1.55	1.16	0.43	0.22	0.15	0.08
5 to 9.9	Indio	9.22	2.58	1.68	1.27	0.51	0.26	0.18	0.09
5 to 9.9	La Habra	3.52	1.17	0.77	0.55	0.19	0.12	0.09	0.04
5 to 9.9	Lake Elsinore	2.69	0.90	0.63	0.47	0.17	0.09	0.09	0.06
5 to 9.9	LAX	9.07	2.39	1.57	1.16	0.40	0.19	0.12	0.06
5 to 9.9	Long Beach	3.24	1.11	0.78	0.60	0.25	0.15	0.12	0.07
5 to 9.9	Lynwood	4.73	1.41	0.96	0.71	0.26	0.15	0.12	0.06
5 to 9.9	Mission Viejo	2.68	0.88	0.60	0.43	0.14	0.09	0.08	0.04
5 to 9.9	Palm Springs	9.03	2.25	1.46	1.09	0.42	0.22	0.15	0.07
5 to 9.9	Perris	4.26	1.30	0.85	0.63	0.23	0.13	0.10	0.05
5 to 9.9	Pico Rivera	6.98	1.83	1.15	0.84	0.29	0.15	0.11	0.05
5 to 9.9	Pomona	4.39	1.34	0.87	0.63	0.22	0.14	0.13	0.07
5 to 9.9	Redlands	2.71	1.10	0.78	0.58	0.21	0.13	0.14	0.09
5 to 9.9	Reseda	2.28	0.75	0.49	0.35	0.12	0.08	0.08	0.05
5 to 9.9	Riverside	4.70	1.43	0.99	0.74	0.26	0.14	0.11	0.06
5 to 9.9	San Bernardino	6.35	1.79	1.16	0.85	0.32	0.18	0.13	0.07
5 to 9.9	Santa Clarita	6.20	1.67	1.06	0.77	0.26	0.14	0.10	0.05
5 to 9.9	Upland	5.98	1.73	1.18	0.89	0.33	0.17	0.13	0.08
5 to 9.9	West LA	4.35	1.32	0.85	0.60	0.19	0.11	0.08	0.05

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**Table 3.13
Dispersion Factors (X/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 10 to 19.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
10 to 19.9	Anaheim	4.75	1.35	0.89	0.63	0.22	0.10	0.07	0.04
10 to 19.9	Azusa	3.20	1.04	0.73	0.54	0.21	0.10	0.07	0.05
10 to 19.9	Banning	9.68	2.87	1.86	1.35	0.58	0.29	0.17	0.09
10 to 19.9	Burbank	4.21	1.11	0.71	0.50	0.21	0.10	0.07	0.05
10 to 19.9	Central LA	4.63	1.23	0.83	0.59	0.22	0.11	0.06	0.04
10 to 19.9	Compton	3.00	0.96	0.67	0.49	0.18	0.10	0.07	0.05
10 to 19.9	Costa Mesa	1.38	0.63	0.47	0.35	0.13	0.08	0.06	0.04
10 to 19.9	Crestline	3.02	0.91	0.60	0.42	0.16	0.09	0.06	0.04
10 to 19.9	Fontana	5.92	1.69	1.12	0.82	0.31	0.15	0.10	0.06
10 to 19.9	Indio	6.91	1.94	1.22	0.88	0.37	0.19	0.12	0.07
10 to 19.9	La Habra	2.13	0.78	0.54	0.39	0.14	0.08	0.05	0.03
10 to 19.9	Lake Elsinore	1.70	0.60	0.43	0.33	0.13	0.06	0.05	0.04
10 to 19.9	LAX	6.65	1.83	1.21	0.87	0.31	0.14	0.08	0.05
10 to 19.9	Long Beach	1.93	0.77	0.56	0.41	0.16	0.09	0.07	0.05
10 to 19.9	Lynwood	2.97	0.99	0.69	0.50	0.19	0.10	0.07	0.05
10 to 19.9	Mission Viejo	1.50	0.56	0.40	0.29	0.10	0.06	0.05	0.03
10 to 19.9	Palm Springs	6.96	1.75	1.13	0.82	0.33	0.17	0.10	0.06
10 to 19.9	Perris	3.18	0.99	0.65	0.47	0.18	0.09	0.06	0.04
10 to 19.9	Pico Rivera	4.84	1.34	0.85	0.60	0.22	0.10	0.07	0.04
10 to 19.9	Pomona	2.82	0.94	0.63	0.45	0.16	0.08	0.07	0.05
10 to 19.9	Redlands	1.46	0.68	0.51	0.39	0.15	0.08	0.08	0.07
10 to 19.9	Reseda	1.67	0.57	0.38	0.27	0.10	0.05	0.04	0.03
10 to 19.9	Riverside	3.01	0.98	0.70	0.52	0.19	0.10	0.07	0.04
10 to 19.9	San Bernardino	4.51	1.30	0.85	0.61	0.23	0.12	0.08	0.06
10 to 19.9	Santa Clarita	4.81	1.34	0.85	0.60	0.21	0.10	0.06	0.04
10 to 19.9	Upland	3.81	1.18	0.82	0.61	0.23	0.12	0.08	0.06
10 to 19.9	West LA	2.86	0.95	0.64	0.44	0.15	0.08	0.05	0.04

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.14
Dispersion Factors (X/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 20 to 29.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
20 to 29.9	Anaheim	2.23	0.75	0.57	0.41	0.15	0.07	0.04	0.03
20 to 29.9	Azusa	1.18	0.42	0.36	0.28	0.12	0.07	0.04	0.03
20 to 29.9	Banning	4.86	1.49	1.07	0.79	0.35	0.19	0.11	0.07
20 to 29.9	Burbank	1.42	0.48	0.36	0.26	0.10	0.06	0.04	0.03
20 to 29.9	Central LA	2.24	0.70	0.53	0.39	0.15	0.08	0.04	0.03
20 to 29.9	Compton	1.15	0.45	0.37	0.28	0.11	0.06	0.04	0.03
20 to 29.9	Costa Mesa	0.39	0.24	0.22	0.19	0.09	0.06	0.04	0.02
20 to 29.9	Crestline	1.34	0.46	0.34	0.26	0.11	0.06	0.04	0.02
20 to 29.9	Fontana	2.87	0.91	0.67	0.50	0.20	0.10	0.06	0.04
20 to 29.9	Indio	3.61	1.09	0.73	0.52	0.22	0.12	0.07	0.05
20 to 29.9	La Habra	0.79	0.36	0.30	0.23	0.10	0.05	0.03	0.02
20 to 29.9	Lake Elsinore	0.72	0.30	0.25	0.20	0.09	0.05	0.02	0.03
20 to 29.9	LAX	3.46	1.09	0.80	0.59	0.22	0.10	0.05	0.03
20 to 29.9	Long Beach	0.48	0.29	0.26	0.21	0.10	0.06	0.04	0.04
20 to 29.9	Lynwood	1.06	0.45	0.37	0.29	0.12	0.06	0.04	0.03
20 to 29.9	Mission Viejo	0.43	0.22	0.20	0.17	0.07	0.04	0.02	0.02
20 to 29.9	Palm Springs	3.94	1.06	0.74	0.54	0.23	0.12	0.07	0.04
20 to 29.9	Perris	1.64	0.57	0.41	0.30	0.12	0.06	0.04	0.03
20 to 29.9	Pico Rivera	2.13	0.70	0.51	0.37	0.14	0.07	0.04	0.03
20 to 29.9	Pomona	1.23	0.48	0.37	0.28	0.11	0.06	0.04	0.03
20 to 29.9	Redlands	0.40	0.25	0.24	0.20	0.10	0.06	0.04	0.04
20 to 29.9	Reseda	0.71	0.31	0.23	0.17	0.07	0.04	0.03	0.02
20 to 29.9	Riverside	1.17	0.45	0.38	0.30	0.13	0.07	0.04	0.03
20 to 29.9	San Bernardino	2.13	0.70	0.51	0.37	0.15	0.08	0.05	0.04
20 to 29.9	Santa Clarita	2.50	0.80	0.57	0.41	0.15	0.08	0.04	0.03
20 to 29.9	Upland	1.43	0.54	0.44	0.34	0.15	0.08	0.05	0.04
20 to 29.9	West LA	1.18	0.47	0.37	0.28	0.11	0.06	0.03	0.02

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.15
Dispersion Factors (X/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 30 to 49.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
30 to 49.9	Anaheim	1.20	0.45	0.37	0.29	0.12	0.06	0.03	0.02
30 to 49.9	Azusa	0.63	0.22	0.21	0.19	0.09	0.05	0.03	0.02
30 to 49.9	Banning	3.39	1.04	0.77	0.58	0.25	0.14	0.09	0.05
30 to 49.9	Burbank	0.61	0.26	0.22	0.17	0.07	0.04	0.02	0.02
30 to 49.9	Central LA	1.40	0.47	0.38	0.29	0.12	0.06	0.03	0.02
30 to 49.9	Compton	0.62	0.28	0.25	0.20	0.09	0.05	0.03	0.02
30 to 49.9	Costa Mesa	0.16	0.13	0.14	0.13	0.07	0.05	0.03	0.02
30 to 49.9	Crestline	0.75	0.28	0.23	0.18	0.08	0.05	0.03	0.02
30 to 49.9	Fontana	1.74	0.58	0.46	0.36	0.15	0.08	0.04	0.03
30 to 49.9	Indio	2.48	0.76	0.52	0.38	0.15	0.09	0.05	0.04
30 to 49.9	La Habra	0.36	0.20	0.19	0.16	0.08	0.04	0.03	0.02
30 to 49.9	Lake Elsinore	0.34	0.17	0.15	0.13	0.07	0.04	0.02	0.02
30 to 49.9	LAX	2.12	0.71	0.56	0.43	0.17	0.08	0.04	0.02
30 to 49.9	Long Beach	0.20	0.16	0.17	0.15	0.08	0.04	0.03	0.02
30 to 49.9	Lynwood	0.47	0.25	0.23	0.19	0.09	0.05	0.03	0.02
30 to 49.9	Mission Viejo	0.16	0.12	0.13	0.11	0.06	0.03	0.02	0.01
30 to 49.9	Palm Springs	2.89	0.79	0.57	0.43	0.18	0.10	0.05	0.03
30 to 49.9	Perris	1.11	0.40	0.30	0.23	0.09	0.05	0.03	0.02
30 to 49.9	Pico Rivera	1.21	0.43	0.34	0.27	0.10	0.05	0.03	0.02
30 to 49.9	Pomona	0.66	0.29	0.24	0.20	0.08	0.05	0.03	0.02
30 to 49.9	Redlands	0.17	0.15	0.15	0.14	0.08	0.05	0.03	0.03
30 to 49.9	Reseda	0.44	0.21	0.17	0.13	0.06	0.03	0.02	0.01
30 to 49.9	Riverside	0.59	0.25	0.24	0.21	0.10	0.06	0.03	0.02
30 to 49.9	San Bernardino	1.28	0.44	0.34	0.27	0.11	0.06	0.03	0.03
30 to 49.9	Santa Clarita	1.80	0.60	0.45	0.33	0.12	0.06	0.03	0.02
30 to 49.9	Upland	0.67	0.28	0.26	0.23	0.11	0.06	0.03	0.02
30 to 49.9	West LA	0.58	0.27	0.24	0.20	0.09	0.05	0.02	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.16
Dispersion Factors (X/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 50 to 149.9 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
50 to 149.9	Anaheim	0.01	0.05	0.08	0.10	0.07	0.05	0.02	0.01
50 to 149.9	Azusa	0.02	0.06	0.08	0.09	0.07	0.04	0.02	0.01
50 to 149.9	Banning	0.00	0.01	0.04	0.07	0.10	0.08	0.05	0.03
50 to 149.9	Burbank	0.02	0.05	0.07	0.08	0.05	0.03	0.02	0.01
50 to 149.9	Central LA	0.01	0.04	0.07	0.08	0.07	0.04	0.02	0.01
50 to 149.9	Compton	0.02	0.05	0.08	0.09	0.06	0.04	0.02	0.01
50 to 149.9	Costa Mesa	0.03	0.05	0.07	0.07	0.06	0.04	0.02	0.01
50 to 149.9	Crestline	0.02	0.05	0.07	0.07	0.05	0.03	0.02	0.01
50 to 149.9	Fontana	0.01	0.04	0.06	0.08	0.08	0.05	0.03	0.02
50 to 149.9	Indio	0.02	0.04	0.06	0.07	0.06	0.05	0.03	0.02
50 to 149.9	La Habra	0.03	0.06	0.07	0.08	0.06	0.04	0.02	0.01
50 to 149.9	Lake Elsinore	0.02	0.04	0.05	0.06	0.04	0.03	0.02	0.01
50 to 149.9	LAX	0.01	0.04	0.08	0.10	0.09	0.06	0.03	0.01
50 to 149.9	Long Beach	0.01	0.05	0.06	0.07	0.05	0.03	0.02	0.01
50 to 149.9	Lynwood	0.04	0.07	0.09	0.09	0.07	0.04	0.02	0.01
50 to 149.9	Mission Viejo	0.01	0.04	0.06	0.06	0.05	0.03	0.01	0.01
50 to 149.9	Palm Springs	0.03	0.05	0.08	0.09	0.09	0.06	0.04	0.02
50 to 149.9	Perris	0.03	0.05	0.05	0.06	0.05	0.04	0.02	0.01
50 to 149.9	Pico Rivera	0.01	0.05	0.07	0.08	0.06	0.04	0.02	0.01
50 to 149.9	Pomona	0.04	0.07	0.08	0.09	0.06	0.04	0.02	0.01
50 to 149.9	Redlands	0.04	0.06	0.08	0.08	0.06	0.04	0.02	0.02
50 to 149.9	Reseda	0.05	0.08	0.07	0.07	0.04	0.03	0.01	0.01
50 to 149.9	Riverside	0.02	0.04	0.07	0.08	0.07	0.04	0.02	0.01
50 to 149.9	San Bernardino	0.04	0.06	0.07	0.08	0.06	0.04	0.02	0.02
50 to 149.9	Santa Clarita	0.02	0.04	0.05	0.07	0.07	0.05	0.02	0.01
50 to 149.9	Upland	0.02	0.04	0.07	0.08	0.07	0.05	0.03	0.01
50 to 149.9	West LA	0.02	0.05	0.08	0.09	0.06	0.04	0.02	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.17
Dispersion Factors (X/Q)
for Natural Gas Boilers
Operating More than 12 Hours per Day**

Natural Gas Boiler Rating 150 to 200 MMBTU/hr

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (MMBTU/hr)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
150 to 200	Anaheim	0.01	0.02	0.03	0.05	0.05	0.03	0.02	0.01
150 to 200	Azusa	0.01	0.03	0.04	0.05	0.04	0.03	0.02	0.01
150 to 200	Banning	0.00	0.01	0.02	0.03	0.06	0.05	0.03	0.02
150 to 200	Burbank	0.01	0.03	0.04	0.04	0.03	0.02	0.01	0.01
150 to 200	Central LA	0.00	0.02	0.03	0.04	0.04	0.03	0.02	0.01
150 to 200	Compton	0.01	0.02	0.03	0.04	0.04	0.03	0.02	0.01
150 to 200	Costa Mesa	0.01	0.02	0.03	0.04	0.04	0.03	0.02	0.01
150 to 200	Crestline	0.01	0.02	0.03	0.04	0.03	0.02	0.01	0.01
150 to 200	Fontana	0.01	0.02	0.03	0.04	0.05	0.04	0.02	0.01
150 to 200	Indio	0.01	0.02	0.03	0.03	0.03	0.03	0.02	0.01
150 to 200	La Habra	0.01	0.03	0.04	0.04	0.04	0.03	0.01	0.01
150 to 200	Lake Elsinore	0.01	0.02	0.03	0.03	0.03	0.02	0.01	0.01
150 to 200	LAX	0.00	0.02	0.04	0.05	0.06	0.04	0.02	0.01
150 to 200	Long Beach	0.00	0.02	0.03	0.04	0.03	0.02	0.01	0.01
150 to 200	Lynwood	0.02	0.03	0.04	0.05	0.04	0.03	0.02	0.01
150 to 200	Mission Viejo	0.01	0.02	0.03	0.03	0.03	0.02	0.01	0.01
150 to 200	Palm Springs	0.01	0.02	0.03	0.04	0.05	0.04	0.03	0.02
150 to 200	Perris	0.01	0.02	0.03	0.03	0.03	0.03	0.01	0.01
150 to 200	Pico Rivera	0.00	0.02	0.04	0.04	0.04	0.03	0.01	0.01
150 to 200	Pomona	0.02	0.03	0.04	0.05	0.04	0.03	0.01	0.01
150 to 200	Redlands	0.01	0.03	0.04	0.04	0.04	0.03	0.02	0.01
150 to 200	Reseda	0.02	0.04	0.04	0.04	0.03	0.02	0.01	0.01
150 to 200	Riverside	0.01	0.02	0.03	0.04	0.04	0.03	0.02	0.01
150 to 200	San Bernardino	0.02	0.03	0.03	0.04	0.04	0.03	0.02	0.01
150 to 200	Santa Clarita	0.01	0.02	0.02	0.03	0.04	0.03	0.02	0.01
150 to 200	Upland	0.01	0.02	0.03	0.04	0.05	0.03	0.02	0.01
150 to 200	West LA	0.01	0.03	0.04	0.05	0.04	0.03	0.02	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 6.11
Dispersion Factors (χ/Q)
for Natural Gas Boilers
for Acute Hazard Index**

All Operating Conditions χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{lb}/\text{hr}]$)

Rating (MMBTU/hr)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1,000
0 to 4.9	292.13	83.85	69.00	59.08	29.68	16.23	9.32	4.81
5 to 9.9	181.53	51.33	38.71	33.11	15.95	6.38	4.81	3.57
10 to 19.9	146.73	42.57	31.10	25.08	11.87	5.48	2.87	2.61
20 to 29.9	100.18	30.81	23.71	18.54	8.86	4.30	2.36	1.55
30 to 49.9	85.19	26.20	20.19	15.95	6.78	3.73	2.08	1.02
50 to 149.9	6.08	3.84	4.68	4.64	3.31	2.37	1.50	0.76
150 to 200	3.18	2.13	3.08	3.07	2.44	1.80	1.10	0.56

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 2.21
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating 12 Hours per Day or Less**

Natural Gas ICE Rating 50 to 74.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
50 to 74.9	Anaheim	40.29	9.05	4.79	2.80	0.57	0.20	0.06	0.02
50 to 74.9	Azusa	33.21	8.18	4.39	2.57	0.52	0.18	0.06	0.01
50 to 74.9	Banning	38.67	9.35	5.03	3.02	0.70	0.26	0.08	0.02
50 to 74.9	Burbank	27.20	6.15	3.14	1.78	0.34	0.12	0.04	0.01
50 to 74.9	Central LA	33.50	7.40	3.78	2.17	0.44	0.15	0.05	0.01
50 to 74.9	Compton	31.40	7.16	3.76	2.19	0.45	0.15	0.05	0.01
50 to 74.9	Costa Mesa	26.76	7.11	3.80	2.19	0.43	0.15	0.05	0.01
50 to 74.9	Crestline	25.75	6.27	3.25	1.84	0.36	0.13	0.04	0.01
50 to 74.9	Fontana	37.28	9.07	4.93	2.94	0.63	0.23	0.07	0.02
50 to 74.9	Indio	20.15	5.36	2.82	1.63	0.34	0.13	0.04	0.01
50 to 74.9	La Habra	29.75	7.44	3.87	2.20	0.42	0.15	0.05	0.01
50 to 74.9	Lake Elsinore	21.82	6.07	3.27	1.90	0.38	0.14	0.04	0.01
50 to 74.9	LAX	49.81	10.82	5.88	3.56	0.79	0.28	0.09	0.02
50 to 74.9	Long Beach	24.49	5.57	2.92	1.68	0.34	0.11	0.04	0.01
50 to 74.9	Lynwood	32.66	7.76	4.13	2.43	0.50	0.17	0.06	0.01
50 to 74.9	Mission Viejo	24.81	6.12	3.22	1.83	0.35	0.13	0.04	0.01
50 to 74.9	Palm Springs	18.86	4.72	2.44	1.43	0.30	0.11	0.03	0.01
50 to 74.9	Perris	19.26	5.17	2.76	1.63	0.36	0.13	0.04	0.01
50 to 74.9	Pico Rivera	35.00	7.70	4.05	2.33	0.47	0.17	0.06	0.01
50 to 74.9	Pomona	28.90	7.21	3.74	2.13	0.41	0.15	0.05	0.01
50 to 74.9	Redlands	27.45	7.62	4.00	2.26	0.44	0.16	0.05	0.01
50 to 74.9	Reseda	15.93	4.68	2.33	1.28	0.23	0.08	0.03	0.01
50 to 74.9	Riverside	32.21	7.77	4.22	2.50	0.52	0.18	0.06	0.02
50 to 74.9	San Bernardino	27.02	6.86	3.62	2.10	0.43	0.15	0.05	0.01
50 to 74.9	Santa Clarita	29.54	6.80	3.58	2.13	0.45	0.17	0.06	0.01
50 to 74.9	Upland	35.80	8.71	4.71	2.78	0.58	0.20	0.07	0.02
50 to 74.9	West LA	35.98	8.00	4.12	2.32	0.45	0.16	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 2.22
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating 12 Hours per Day or Less**

Natural Gas ICE Rating 75 to 149.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
75 to 149.9	Anaheim	27.31	7.08	4.11	2.51	0.54	0.19	0.06	0.02
75 to 149.9	Azusa	20.63	6.03	3.64	2.25	0.48	0.17	0.06	0.01
75 to 149.9	Banning	28.58	7.64	4.42	2.77	0.67	0.25	0.08	0.02
75 to 149.9	Burbank	18.08	4.75	2.68	1.59	0.32	0.11	0.04	0.01
75 to 149.9	Central LA	23.51	5.92	3.31	1.97	0.41	0.14	0.05	0.01
75 to 149.9	Compton	20.66	5.49	3.19	1.94	0.42	0.14	0.05	0.01
75 to 149.9	Costa Mesa	15.84	5.11	3.12	1.91	0.40	0.14	0.05	0.01
75 to 149.9	Crestline	16.22	4.65	2.68	1.60	0.33	0.12	0.04	0.01
75 to 149.9	Fontana	25.22	6.93	4.16	2.61	0.59	0.22	0.07	0.02
75 to 149.9	Indio	12.86	3.98	2.34	1.43	0.32	0.12	0.04	0.01
75 to 149.9	La Habra	18.26	5.47	3.19	1.91	0.39	0.14	0.05	0.01
75 to 149.9	Lake Elsinore	12.79	4.20	2.56	1.58	0.35	0.13	0.04	0.01
75 to 149.9	LAX	35.20	8.58	5.08	3.21	0.75	0.27	0.09	0.02
75 to 149.9	Long Beach	16.07	4.27	2.43	1.47	0.32	0.11	0.04	0.01
75 to 149.9	Lynwood	20.44	5.70	3.40	2.11	0.46	0.16	0.05	0.01
75 to 149.9	Mission Viejo	15.37	4.47	2.64	1.59	0.33	0.12	0.04	0.01
75 to 149.9	Palm Springs	12.73	3.63	2.04	1.25	0.28	0.10	0.03	0.01
75 to 149.9	Perris	13.18	3.92	2.30	1.43	0.34	0.13	0.04	0.01
75 to 149.9	Pico Rivera	24.04	6.03	3.47	2.09	0.44	0.16	0.05	0.01
75 to 149.9	Pomona	18.46	5.39	3.12	1.87	0.38	0.14	0.05	0.01
75 to 149.9	Redlands	15.53	5.31	3.20	1.94	0.40	0.15	0.05	0.01
75 to 149.9	Reseda	8.79	3.06	1.73	1.01	0.21	0.08	0.03	0.01
75 to 149.9	Riverside	20.30	5.74	3.49	2.19	0.49	0.18	0.06	0.02
75 to 149.9	San Bernardino	17.20	5.06	2.97	1.82	0.40	0.15	0.05	0.01
75 to 149.9	Santa Clarita	22.35	5.61	3.15	1.95	0.44	0.16	0.06	0.01
75 to 149.9	Upland	22.84	6.42	3.91	2.44	0.54	0.19	0.07	0.02
75 to 149.9	West LA	24.12	6.19	3.51	2.08	0.42	0.16	0.05	0.01

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**Table 2.23
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating 12 Hours per Day or Less**

Natural Gas ICE Rating 150 to 249.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
150 to 249.9	Anaheim	15.44	4.56	2.82	1.92	0.47	0.17	0.06	0.02
150 to 249.9	Azusa	10.29	3.48	2.27	1.59	0.41	0.15	0.05	0.01
150 to 249.9	Banning	19.58	5.46	3.27	2.24	0.61	0.23	0.08	0.02
150 to 249.9	Burbank	9.61	3.01	1.81	1.19	0.27	0.10	0.03	0.01
150 to 249.9	Central LA	14.53	4.06	2.40	1.57	0.37	0.13	0.04	0.01
150 to 249.9	Compton	11.56	3.48	2.17	1.46	0.36	0.13	0.04	0.01
150 to 249.9	Costa Mesa	7.21	2.81	1.88	1.32	0.33	0.13	0.05	0.01
150 to 249.9	Crestline	8.01	2.74	1.70	1.14	0.28	0.11	0.04	0.01
150 to 249.9	Fontana	14.98	4.42	2.79	1.96	0.51	0.19	0.07	0.02
150 to 249.9	Indio	6.91	2.39	1.52	1.05	0.27	0.11	0.04	0.01
150 to 249.9	La Habra	8.86	3.16	1.99	1.35	0.32	0.12	0.04	0.01
150 to 249.9	Lake Elsinore	5.83	2.13	1.43	1.02	0.28	0.11	0.04	0.01
150 to 249.9	LAX	22.40	5.91	3.65	2.54	0.67	0.24	0.08	0.02
150 to 249.9	Long Beach	8.47	2.75	1.67	1.09	0.27	0.10	0.03	0.01
150 to 249.9	Lynwood	10.64	3.41	2.20	1.53	0.39	0.14	0.05	0.01
150 to 249.9	Mission Viejo	7.36	2.52	1.61	1.10	0.27	0.11	0.04	0.01
150 to 249.9	Palm Springs	7.92	2.38	1.44	0.96	0.24	0.09	0.03	0.01
150 to 249.9	Perris	8.11	2.54	1.57	1.08	0.29	0.12	0.04	0.01
150 to 249.9	Pico Rivera	14.02	4.00	2.41	1.60	0.38	0.14	0.05	0.01
150 to 249.9	Pomona	9.57	3.26	2.03	1.36	0.32	0.12	0.04	0.01
150 to 249.9	Redlands	6.64	2.72	1.82	1.29	0.33	0.13	0.05	0.01
150 to 249.9	Reseda	5.01	1.71	1.04	0.69	0.17	0.07	0.02	0.01
150 to 249.9	Riverside	10.68	3.40	2.24	1.59	0.42	0.16	0.06	0.01
150 to 249.9	San Bernardino	9.41	3.07	1.93	1.33	0.34	0.13	0.05	0.01
150 to 249.9	Santa Clarita	15.90	4.23	2.45	1.62	0.40	0.15	0.05	0.01
150 to 249.9	Upland	12.09	3.82	2.49	1.77	0.46	0.17	0.06	0.02
150 to 249.9	West LA	13.12	3.98	2.40	1.58	0.36	0.14	0.05	0.01

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**Table 2.24
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating 12 Hours per Day or Less**

Natural Gas ICE Rating 250 to 999.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
250 to 999.9	Anaheim	8.73	2.83	1.91	1.30	0.38	0.15	0.05	0.01
250 to 999.9	Azusa	5.03	1.99	1.43	1.00	0.31	0.13	0.05	0.01
250 to 999.9	Banning	12.24	3.70	2.37	1.62	0.52	0.20	0.07	0.02
250 to 999.9	Burbank	5.01	1.77	1.18	0.78	0.21	0.08	0.03	0.01
250 to 999.9	Central LA	8.67	2.62	1.69	1.12	0.31	0.11	0.04	0.01
250 to 999.9	Compton	6.25	2.15	1.47	1.00	0.29	0.11	0.04	0.01
250 to 999.9	Costa Mesa	3.20	1.50	1.12	0.80	0.26	0.11	0.04	0.01
250 to 999.9	Crestline	4.03	1.54	1.05	0.72	0.22	0.09	0.03	0.01
250 to 999.9	Fontana	8.73	2.77	1.88	1.31	0.42	0.17	0.06	0.02
250 to 999.9	Indio	3.81	1.41	0.98	0.69	0.22	0.09	0.03	0.01
250 to 999.9	La Habra	4.32	1.75	1.22	0.84	0.25	0.11	0.04	0.01
250 to 999.9	Lake Elsinore	2.93	1.15	0.85	0.62	0.22	0.09	0.04	0.01
250 to 999.9	LAX	13.74	3.96	2.62	1.81	0.56	0.22	0.08	0.02
250 to 999.9	Long Beach	4.22	1.62	1.09	0.72	0.22	0.08	0.03	0.01
250 to 999.9	Lynwood	5.58	2.08	1.46	1.02	0.31	0.12	0.05	0.01
250 to 999.9	Mission Viejo	3.49	1.35	0.96	0.67	0.21	0.09	0.04	0.01
250 to 999.9	Palm Springs	5.01	1.56	1.02	0.69	0.20	0.08	0.03	0.01
250 to 999.9	Perris	5.04	1.65	1.09	0.76	0.24	0.10	0.04	0.01
250 to 999.9	Pico Rivera	8.05	2.52	1.64	1.09	0.31	0.13	0.05	0.01
250 to 999.9	Pomona	5.07	1.95	1.33	0.90	0.26	0.10	0.04	0.01
250 to 999.9	Redlands	2.86	1.41	1.07	0.77	0.25	0.11	0.04	0.01
250 to 999.9	Reseda	2.95	1.10	0.72	0.49	0.14	0.06	0.02	0.01
250 to 999.9	Riverside	5.58	2.02	1.45	1.03	0.33	0.14	0.05	0.01
250 to 999.9	San Bernardino	5.29	1.85	1.27	0.88	0.27	0.11	0.04	0.01
250 to 999.9	Santa Clarita	10.48	3.01	1.85	1.23	0.34	0.14	0.05	0.01
250 to 999.9	Upland	6.27	2.24	1.61	1.14	0.36	0.15	0.05	0.01
250 to 999.9	West LA	7.08	2.45	1.61	1.06	0.29	0.12	0.05	0.01

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**Table 2.25
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating 12 Hours per Day or Less**

Natural Gas ICE Rating > 1,000 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
> 1,000	Anaheim	1.18	0.51	0.47	0.41	0.18	0.10	0.04	0.01
> 1,000	Azusa	0.42	0.29	0.29	0.27	0.14	0.08	0.04	0.01
> 1,000	Banning	3.47	1.14	0.90	0.73	0.29	0.14	0.06	0.02
> 1,000	Burbank	0.43	0.27	0.26	0.22	0.11	0.06	0.02	0.01
> 1,000	Central LA	1.82	0.68	0.57	0.46	0.17	0.08	0.03	0.01
> 1,000	Compton	0.95	0.43	0.40	0.33	0.14	0.07	0.03	0.01
> 1,000	Costa Mesa	0.22	0.19	0.21	0.20	0.12	0.07	0.03	0.01
> 1,000	Crestline	0.53	0.28	0.26	0.23	0.11	0.06	0.03	0.01
> 1,000	Fontana	1.71	0.64	0.55	0.47	0.21	0.11	0.05	0.01
> 1,000	Indio	0.65	0.29	0.26	0.23	0.11	0.06	0.03	0.01
> 1,000	La Habra	0.39	0.25	0.25	0.23	0.12	0.07	0.03	0.01
> 1,000	Lake Elsinore	0.37	0.21	0.21	0.19	0.10	0.06	0.03	0.01
> 1,000	LAX	2.90	1.02	0.87	0.72	0.29	0.15	0.06	0.02
> 1,000	Long Beach	0.35	0.25	0.25	0.22	0.10	0.06	0.02	0.01
> 1,000	Lynwood	0.58	0.34	0.32	0.28	0.14	0.08	0.04	0.01
> 1,000	Mission Viejo	0.21	0.17	0.19	0.17	0.10	0.06	0.03	0.01
> 1,000	Palm Springs	1.49	0.52	0.41	0.32	0.12	0.06	0.02	0.01
> 1,000	Perris	1.27	0.48	0.39	0.31	0.13	0.07	0.03	0.01
> 1,000	Pico Rivera	1.37	0.56	0.48	0.39	0.16	0.09	0.04	0.01
> 1,000	Pomona	0.65	0.34	0.32	0.27	0.13	0.07	0.03	0.01
> 1,000	Redlands	0.22	0.21	0.22	0.21	0.12	0.07	0.03	0.01
> 1,000	Reseda	0.65	0.32	0.26	0.21	0.08	0.04	0.02	0.01
> 1,000	Riverside	0.65	0.32	0.32	0.29	0.16	0.09	0.04	0.01
> 1,000	San Bernardino	0.93	0.40	0.36	0.30	0.14	0.08	0.03	0.01
> 1,000	Santa Clarita	3.40	1.14	0.83	0.63	0.21	0.10	0.04	0.01
> 1,000	Upland	0.67	0.34	0.34	0.31	0.17	0.09	0.04	0.01
> 1,000	West LA	0.71	0.37	0.35	0.31	0.15	0.08	0.04	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 3.21
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating More Than 12 Hours per Day**

Natural Gas ICE Rating 50 to 74.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
50 to 74.9	Anaheim	27.98	8.27	5.36	3.96	1.41	0.57	0.21	0.07
50 to 74.9	Azusa	26.00	8.04	5.60	4.27	1.61	0.62	0.21	0.07
50 to 74.9	Banning	44.67	13.52	8.61	6.07	2.18	0.94	0.36	0.12
50 to 74.9	Burbank	26.88	8.25	5.56	4.19	1.48	0.54	0.18	0.06
50 to 74.9	Central LA	24.03	7.22	4.84	3.64	1.26	0.45	0.15	0.05
50 to 74.9	Compton	23.38	6.91	5.09	4.10	1.64	0.61	0.20	0.07
50 to 74.9	Costa Mesa	14.34	4.42	3.08	2.40	1.02	0.48	0.20	0.07
50 to 74.9	Crestline	18.37	5.54	3.58	2.63	1.00	0.46	0.19	0.07
50 to 74.9	Fontana	31.64	9.78	6.48	4.78	1.80	0.77	0.29	0.10
50 to 74.9	Indio	32.25	10.57	6.96	5.11	1.95	0.84	0.33	0.11
50 to 74.9	La Habra	16.70	4.85	3.23	2.48	0.99	0.46	0.19	0.07
50 to 74.9	Lake Elsinore	13.01	4.88	3.59	2.90	1.29	0.58	0.24	0.08
50 to 74.9	LAX	31.62	8.62	5.60	4.10	1.49	0.62	0.23	0.08
50 to 74.9	Long Beach	20.14	6.90	5.22	4.28	1.74	0.62	0.20	0.07
50 to 74.9	Lynwood	22.12	6.49	4.63	3.63	1.47	0.60	0.22	0.08
50 to 74.9	Mission Viejo	17.44	5.23	3.54	2.71	1.14	0.50	0.20	0.07
50 to 74.9	Palm Springs	30.66	9.41	6.13	4.52	1.60	0.64	0.24	0.08
50 to 74.9	Perris	16.92	5.55	3.76	2.87	1.19	0.56	0.24	0.08
50 to 74.9	Pico Rivera	27.98	7.89	5.11	3.70	1.29	0.52	0.20	0.07
50 to 74.9	Pomona	19.82	6.02	4.41	3.58	1.57	0.63	0.23	0.08
50 to 74.9	Redlands	16.34	5.28	3.61	2.89	1.67	0.78	0.32	0.12
50 to 74.9	Reseda	9.73	3.27	2.55	2.17	0.97	0.43	0.17	0.06
50 to 74.9	Riverside	22.31	6.53	4.47	3.41	1.36	0.59	0.23	0.08
50 to 74.9	San Bernardino	24.70	8.03	5.34	4.01	1.57	0.69	0.28	0.10
50 to 74.9	Santa Clarita	23.23	6.39	4.16	3.08	1.30	0.55	0.21	0.07
50 to 74.9	Upland	26.12	7.72	5.25	4.22	1.77	0.74	0.31	0.11
50 to 74.9	West LA	18.92	5.02	3.22	2.39	1.03	0.45	0.18	0.06

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.22
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating More Than 12 Hours per Day**

Natural Gas ICE Rating 75 to 149.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
75 to 149.9	Anaheim	17.43	5.01	3.21	2.27	0.85	0.41	0.19	0.07
75 to 149.9	Azusa	15.57	4.59	3.19	2.39	0.99	0.46	0.20	0.08
75 to 149.9	Banning	32.03	9.58	6.26	4.49	1.72	0.80	0.34	0.12
75 to 149.9	Burbank	16.98	4.93	3.33	2.47	0.99	0.43	0.18	0.07
75 to 149.9	Central LA	16.20	4.24	2.90	2.21	0.88	0.37	0.15	0.06
75 to 149.9	Compton	13.93	3.83	2.65	2.00	0.90	0.43	0.19	0.08
75 to 149.9	Costa Mesa	7.82	2.52	1.68	1.19	0.53	0.31	0.16	0.06
75 to 149.9	Crestline	11.63	3.54	2.24	1.56	0.60	0.31	0.16	0.07
75 to 149.9	Fontana	20.70	6.23	4.16	3.02	1.18	0.57	0.26	0.10
75 to 149.9	Indio	21.58	7.01	4.68	3.42	1.36	0.65	0.29	0.11
75 to 149.9	La Habra	9.74	2.91	1.85	1.29	0.53	0.30	0.15	0.06
75 to 149.9	Lake Elsinore	7.50	2.40	1.59	1.20	0.60	0.35	0.19	0.08
75 to 149.9	LAX	21.36	5.76	3.73	2.65	0.99	0.46	0.20	0.08
75 to 149.9	Long Beach	11.43	3.54	2.55	2.01	0.96	0.45	0.20	0.08
75 to 149.9	Lynwood	13.15	3.70	2.52	1.86	0.81	0.41	0.20	0.08
75 to 149.9	Mission Viejo	9.49	2.77	1.79	1.27	0.54	0.31	0.16	0.06
75 to 149.9	Palm Springs	20.50	6.07	3.92	2.83	1.06	0.49	0.22	0.09
75 to 149.9	Perris	10.68	3.37	2.20	1.58	0.67	0.37	0.19	0.07
75 to 149.9	Pico Rivera	18.22	4.97	3.19	2.26	0.84	0.40	0.18	0.07
75 to 149.9	Pomona	11.86	3.45	2.29	1.69	0.83	0.44	0.22	0.09
75 to 149.9	Redlands	9.00	3.01	2.03	1.46	0.63	0.43	0.28	0.12
75 to 149.9	Reseda	5.90	1.78	1.11	0.77	0.40	0.26	0.14	0.06
75 to 149.9	Riverside	13.30	3.81	2.58	1.88	0.77	0.40	0.19	0.07
75 to 149.9	San Bernardino	15.60	4.88	3.20	2.34	0.96	0.48	0.23	0.09
75 to 149.9	Santa Clarita	16.08	4.29	2.63	1.85	0.71	0.37	0.18	0.07
75 to 149.9	Upland	16.23	4.63	3.13	2.29	0.99	0.49	0.27	0.11
75 to 149.9	West LA	11.88	3.20	1.97	1.31	0.50	0.27	0.15	0.06

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 3.23
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating More Than 12 Hours per Day**

Natural Gas ICE Rating 150 to 249.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
150 to 249.9	Anaheim	8.91	2.64	1.59	1.16	0.40	0.18	0.11	0.05
150 to 249.9	Azusa	7.03	2.10	1.37	1.04	0.40	0.19	0.12	0.06
150 to 249.9	Banning	20.47	5.78	3.45	2.56	1.05	0.52	0.25	0.10
150 to 249.9	Burbank	8.41	2.41	1.43	1.07	0.44	0.20	0.11	0.06
150 to 249.9	Central LA	9.23	2.39	1.47	1.07	0.40	0.18	0.10	0.05
150 to 249.9	Compton	6.68	1.89	1.22	0.91	0.35	0.17	0.11	0.06
150 to 249.9	Costa Mesa	3.26	1.21	0.81	0.60	0.21	0.11	0.08	0.04
150 to 249.9	Crestline	5.97	1.88	1.12	0.81	0.29	0.14	0.08	0.04
150 to 249.9	Fontana	11.47	3.34	2.05	1.52	0.56	0.26	0.15	0.08
150 to 249.9	Indio	12.59	3.92	2.36	1.77	0.70	0.33	0.18	0.09
150 to 249.9	La Habra	4.50	1.49	0.93	0.66	0.21	0.11	0.08	0.04
150 to 249.9	Lake Elsinore	3.44	1.13	0.74	0.55	0.20	0.11	0.08	0.05
150 to 249.9	LAX	12.44	3.32	2.03	1.48	0.50	0.23	0.12	0.06
150 to 249.9	Long Beach	4.96	1.57	1.03	0.79	0.34	0.17	0.12	0.06
150 to 249.9	Lynwood	6.16	1.83	1.18	0.88	0.32	0.16	0.11	0.06
150 to 249.9	Mission Viejo	3.88	1.21	0.75	0.54	0.18	0.10	0.07	0.04
150 to 249.9	Palm Springs	12.51	3.53	2.10	1.55	0.58	0.25	0.14	0.07
150 to 249.9	Perris	6.07	1.88	1.14	0.83	0.30	0.15	0.10	0.05
150 to 249.9	Pico Rivera	9.74	2.69	1.57	1.14	0.40	0.18	0.11	0.05
150 to 249.9	Pomona	5.58	1.75	1.08	0.78	0.26	0.15	0.11	0.07
150 to 249.9	Redlands	3.59	1.34	0.90	0.68	0.24	0.13	0.12	0.08
150 to 249.9	Reseda	3.34	1.01	0.61	0.43	0.14	0.07	0.07	0.04
150 to 249.9	Riverside	6.33	1.87	1.22	0.91	0.32	0.16	0.10	0.05
150 to 249.9	San Bernardino	8.40	2.53	1.52	1.13	0.44	0.21	0.13	0.07
150 to 249.9	Santa Clarita	9.98	2.65	1.51	1.06	0.34	0.16	0.10	0.05
150 to 249.9	Upland	7.96	2.29	1.46	1.11	0.41	0.20	0.13	0.08
150 to 249.9	West LA	5.94	1.77	1.07	0.74	0.22	0.11	0.07	0.04

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 3.24
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating More Than 12 Hours per Day**

Natural Gas ICE Rating 250 to 999.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
250 to 999.9	Anaheim	4.77	1.49	0.96	0.65	0.22	0.10	0.05	0.03
250 to 999.9	Azusa	3.36	1.10	0.77	0.54	0.21	0.10	0.05	0.04
250 to 999.9	Banning	12.33	3.53	2.13	1.43	0.62	0.32	0.17	0.08
250 to 999.9	Burbank	4.34	1.27	0.78	0.52	0.21	0.10	0.05	0.04
250 to 999.9	Central LA	5.18	1.41	0.93	0.64	0.23	0.10	0.05	0.03
250 to 999.9	Compton	3.28	1.05	0.72	0.51	0.19	0.09	0.05	0.04
250 to 999.9	Costa Mesa	1.41	0.63	0.47	0.34	0.13	0.06	0.04	0.03
250 to 999.9	Crestline	3.21	1.03	0.65	0.44	0.16	0.08	0.04	0.03
250 to 999.9	Fontana	6.56	1.93	1.23	0.84	0.32	0.15	0.08	0.05
250 to 999.9	Indio	7.67	2.32	1.39	0.93	0.39	0.19	0.10	0.06
250 to 999.9	La Habra	2.15	0.79	0.54	0.37	0.13	0.06	0.04	0.03
250 to 999.9	Lake Elsinore	1.74	0.60	0.42	0.31	0.12	0.06	0.03	0.03
250 to 999.9	LAX	7.32	2.05	1.31	0.90	0.32	0.13	0.07	0.04
250 to 999.9	Long Beach	2.20	0.82	0.59	0.42	0.17	0.08	0.05	0.04
250 to 999.9	Lynwood	3.06	1.03	0.72	0.51	0.18	0.08	0.05	0.04
250 to 999.9	Mission Viejo	1.68	0.59	0.41	0.29	0.10	0.05	0.03	0.02
250 to 999.9	Palm Springs	7.89	2.15	1.31	0.90	0.36	0.16	0.08	0.05
250 to 999.9	Perris	3.57	1.12	0.70	0.47	0.17	0.08	0.05	0.03
250 to 999.9	Pico Rivera	5.30	1.53	0.93	0.62	0.22	0.09	0.05	0.03
250 to 999.9	Pomona	2.88	0.99	0.66	0.45	0.15	0.07	0.05	0.04
250 to 999.9	Redlands	1.51	0.67	0.50	0.37	0.14	0.07	0.05	0.05
250 to 999.9	Reseda	1.94	0.61	0.39	0.26	0.09	0.05	0.03	0.02
250 to 999.9	Riverside	3.20	1.03	0.72	0.52	0.19	0.09	0.05	0.03
250 to 999.9	San Bernardino	4.75	1.44	0.90	0.61	0.23	0.11	0.06	0.04
250 to 999.9	Santa Clarita	6.15	1.70	1.01	0.67	0.22	0.10	0.05	0.03
250 to 999.9	Upland	4.02	1.25	0.86	0.61	0.23	0.11	0.06	0.04
250 to 999.9	West LA	3.03	1.02	0.67	0.45	0.14	0.06	0.03	0.03

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 3.25
Dispersion Factors (χ/Q)
for Natural Gas ICEs
Operating More Than 12 Hours per Day**

Natural Gas ICE Rating > 1,000 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
> 1,000	Anaheim	0.48	0.21	0.19	0.17	0.08	0.04	0.02	0.01
> 1,000	Azusa	0.34	0.12	0.12	0.11	0.06	0.04	0.02	0.01
> 1,000	Banning	2.80	0.83	0.59	0.45	0.18	0.11	0.06	0.03
> 1,000	Burbank	0.25	0.13	0.12	0.10	0.05	0.03	0.02	0.01
> 1,000	Central LA	0.90	0.31	0.26	0.21	0.09	0.05	0.02	0.01
> 1,000	Compton	0.41	0.18	0.17	0.14	0.07	0.04	0.02	0.01
> 1,000	Costa Mesa	0.11	0.08	0.08	0.08	0.05	0.03	0.02	0.01
> 1,000	Crestline	0.41	0.16	0.13	0.11	0.05	0.03	0.02	0.01
> 1,000	Fontana	1.09	0.36	0.29	0.24	0.11	0.06	0.03	0.02
> 1,000	Indio	1.67	0.52	0.35	0.26	0.10	0.06	0.04	0.02
> 1,000	La Habra	0.17	0.11	0.10	0.09	0.05	0.03	0.02	0.01
> 1,000	Lake Elsinore	0.17	0.09	0.09	0.08	0.04	0.03	0.01	0.01
> 1,000	LAX	1.29	0.43	0.36	0.30	0.13	0.06	0.03	0.01
> 1,000	Long Beach	0.18	0.12	0.12	0.10	0.05	0.03	0.02	0.01
> 1,000	Lynwood	0.25	0.14	0.13	0.12	0.06	0.04	0.02	0.01
> 1,000	Mission Viejo	0.09	0.07	0.07	0.07	0.04	0.03	0.01	0.01
> 1,000	Palm Springs	2.03	0.57	0.41	0.31	0.13	0.07	0.04	0.02
> 1,000	Perris	0.72	0.26	0.19	0.15	0.06	0.04	0.02	0.01
> 1,000	Pico Rivera	0.67	0.26	0.21	0.17	0.07	0.04	0.02	0.01
> 1,000	Pomona	0.30	0.15	0.14	0.12	0.06	0.03	0.02	0.01
> 1,000	Redlands	0.10	0.09	0.09	0.09	0.05	0.03	0.02	0.02
> 1,000	Reseda	0.37	0.15	0.12	0.09	0.04	0.02	0.01	0.01
> 1,000	Riverside	0.33	0.15	0.14	0.13	0.07	0.04	0.02	0.01
> 1,000	San Bernardino	0.71	0.25	0.21	0.17	0.08	0.04	0.02	0.01
> 1,000	Santa Clarita	1.60	0.52	0.37	0.28	0.10	0.05	0.03	0.01
> 1,000	Upland	0.35	0.15	0.15	0.14	0.07	0.04	0.02	0.01
> 1,000	West LA	0.27	0.14	0.13	0.12	0.06	0.03	0.02	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 6.21
Dispersion Factors (χ/Q)
for Natural Gas ICEs
for Acute Hazard Index**

All Operating Conditions χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{lb}/\text{hr}]$)

Rating (BHP)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1,000
50 to 74.9	558.90	228.36	182.22	152.76	73.10	30.68	12.54	5.35
75 to 149.9	392.20	153.94	125.57	105.40	50.44	22.35	9.71	4.80
150 to 249.9	281.14	85.26	60.25	51.99	25.47	9.27	4.74	3.36
250 to 999.9	193.22	54.00	37.73	27.66	11.86	6.43	3.13	1.91
> 1,000	80.72	25.42	18.44	14.10	5.27	3.36	1.92	0.87

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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**Table 2.31
Dispersion Factors (X/Q)
for Diesel ICEs
Operating 12 Hours per Day or Less**

Diesel ICE Rating 50 to 174.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
50 to 174.9	Anaheim	25.17	8.13	4.84	2.99	0.61	0.19	0.06	0.02
50 to 174.9	Azusa	18.42	6.32	3.96	2.49	0.52	0.17	0.05	0.01
50 to 174.9	Banning	27.44	7.84	4.66	2.96	0.71	0.25	0.08	0.02
50 to 174.9	Burbank	17.44	5.47	3.13	1.86	0.35	0.11	0.03	0.01
50 to 174.9	Central LA	22.15	7.03	4.00	2.40	0.48	0.14	0.04	0.01
50 to 174.9	Compton	18.88	6.34	3.80	2.35	0.49	0.15	0.04	0.01
50 to 174.9	Costa Mesa	14.14	5.24	3.33	2.06	0.42	0.14	0.05	0.01
50 to 174.9	Crestline	15.35	5.07	2.97	1.78	0.35	0.12	0.04	0.01
50 to 174.9	Fontana	23.51	7.09	4.38	2.78	0.62	0.22	0.07	0.02
50 to 174.9	Indio	11.98	3.98	2.40	1.49	0.33	0.12	0.04	0.01
50 to 174.9	La Habra	16.66	6.11	3.66	2.21	0.42	0.14	0.04	0.01
50 to 174.9	Lake Elsinore	11.80	4.15	2.61	1.64	0.35	0.13	0.04	0.01
50 to 174.9	LAX	32.85	8.89	5.41	3.46	0.80	0.27	0.09	0.02
50 to 174.9	Long Beach	15.30	4.84	2.80	1.70	0.35	0.11	0.03	0.01
50 to 174.9	Lynwood	18.12	6.16	3.82	2.41	0.51	0.16	0.05	0.01
50 to 174.9	Mission Viejo	14.38	4.59	2.78	1.68	0.33	0.12	0.04	0.01
50 to 174.9	Palm Springs	11.59	3.79	2.20	1.36	0.30	0.10	0.03	0.01
50 to 174.9	Perris	12.40	3.93	2.36	1.49	0.34	0.13	0.04	0.01
50 to 174.9	Pico Rivera	22.72	6.57	3.85	2.32	0.47	0.16	0.05	0.01
50 to 174.9	Pomona	16.77	6.00	3.57	2.16	0.42	0.13	0.04	0.01
50 to 174.9	Redlands	13.68	5.29	3.33	2.05	0.42	0.14	0.05	0.01
50 to 174.9	Reseda	7.82	3.13	1.84	1.08	0.21	0.07	0.03	0.01
50 to 174.9	Riverside	18.25	5.88	3.72	2.37	0.52	0.18	0.06	0.02
50 to 174.9	San Bernardino	15.83	5.21	3.15	1.96	0.42	0.15	0.05	0.01
50 to 174.9	Santa Clarita	21.69	5.97	3.41	2.12	0.46	0.16	0.06	0.01
50 to 174.9	Upland	20.72	6.73	4.24	2.68	0.57	0.19	0.06	0.02
50 to 174.9	West LA	22.63	6.93	4.02	2.38	0.45	0.15	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.32
Dispersion Factors (X/Q)
for Diesel ICEs
Operating 12 Hours per Day or Less**

Diesel ICE Rating 175 to 299.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
175 to 299.9	Anaheim	20.49	6.83	4.25	2.73	0.58	0.18	0.06	0.02
175 to 299.9	Azusa	14.27	5.02	3.31	2.19	0.49	0.16	0.05	0.01
175 to 299.9	Banning	23.38	6.77	4.15	2.73	0.68	0.24	0.08	0.02
175 to 299.9	Burbank	13.67	4.56	2.73	1.69	0.33	0.10	0.03	0.01
175 to 299.9	Central LA	18.49	6.03	3.56	2.21	0.45	0.14	0.04	0.01
175 to 299.9	Compton	15.03	5.21	3.26	2.08	0.45	0.14	0.04	0.01
175 to 299.9	Costa Mesa	10.56	4.08	2.74	1.79	0.38	0.13	0.05	0.01
175 to 299.9	Crestline	11.60	4.06	2.50	1.58	0.33	0.11	0.04	0.01
175 to 299.9	Fontana	19.05	5.86	3.77	2.51	0.59	0.21	0.07	0.02
175 to 299.9	Indio	9.24	3.18	2.03	1.32	0.31	0.11	0.04	0.01
175 to 299.9	La Habra	13.01	4.93	3.11	1.98	0.40	0.13	0.04	0.01
175 to 299.9	Lake Elsinore	8.71	3.13	2.11	1.42	0.33	0.12	0.04	0.01
175 to 299.9	LAX	27.11	7.55	4.75	3.16	0.76	0.26	0.09	0.02
175 to 299.9	Long Beach	11.85	4.00	2.41	1.49	0.32	0.10	0.03	0.01
175 to 299.9	Lynwood	14.39	5.00	3.26	2.15	0.48	0.15	0.05	0.01
175 to 299.9	Mission Viejo	10.68	3.55	2.25	1.43	0.30	0.11	0.04	0.01
175 to 299.9	Palm Springs	9.74	3.20	1.93	1.24	0.28	0.10	0.03	0.01
175 to 299.9	Perris	10.08	3.25	2.02	1.33	0.33	0.12	0.04	0.01
175 to 299.9	Pico Rivera	18.31	5.50	3.33	2.09	0.44	0.15	0.05	0.01
175 to 299.9	Pomona	13.26	4.90	3.05	1.93	0.39	0.12	0.04	0.01
175 to 299.9	Redlands	10.07	3.97	2.65	1.73	0.38	0.13	0.05	0.01
175 to 299.9	Reseda	6.27	2.26	1.43	0.89	0.19	0.07	0.02	0.01
175 to 299.9	Riverside	14.32	4.68	3.12	2.09	0.49	0.17	0.06	0.02
175 to 299.9	San Bernardino	12.55	4.25	2.70	1.76	0.39	0.14	0.05	0.01
175 to 299.9	Santa Clarita	18.94	5.30	3.09	1.97	0.44	0.16	0.06	0.01
175 to 299.9	Upland	16.22	5.39	3.57	2.37	0.54	0.18	0.06	0.02
175 to 299.9	West LA	17.69	5.69	3.44	2.13	0.42	0.14	0.05	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.33
Dispersion Factors (X/Q)
for Diesel ICEs
Operating 12 Hours per Day or Less**

Diesel ICE Rating 300 to 399.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
300 to 399.9	Anaheim	14.25	5.23	3.24	2.21	0.51	0.16	0.05	0.01
300 to 399.9	Azusa	9.36	3.72	2.43	1.72	0.42	0.14	0.05	0.01
300 to 399.9	Banning	17.29	5.41	3.29	2.30	0.63	0.23	0.08	0.02
300 to 399.9	Burbank	9.31	3.47	2.06	1.35	0.28	0.09	0.03	0.01
300 to 399.9	Central LA	13.43	4.80	2.83	1.86	0.41	0.12	0.04	0.01
300 to 399.9	Compton	10.52	3.99	2.50	1.71	0.41	0.12	0.04	0.01
300 to 399.9	Costa Mesa	6.71	2.96	1.97	1.39	0.34	0.12	0.04	0.01
300 to 399.9	Crestline	7.60	2.95	1.80	1.20	0.28	0.10	0.03	0.01
300 to 399.9	Fontana	13.50	4.48	2.84	2.01	0.53	0.19	0.06	0.02
300 to 399.9	Indio	6.33	2.33	1.49	1.04	0.27	0.10	0.04	0.01
300 to 399.9	La Habra	8.29	3.53	2.22	1.50	0.33	0.11	0.04	0.01
300 to 399.9	Lake Elsinore	5.39	2.08	1.39	1.01	0.28	0.10	0.04	0.01
300 to 399.9	LAX	19.98	6.01	3.75	2.64	0.70	0.24	0.08	0.02
300 to 399.9	Long Beach	8.11	3.10	1.87	1.22	0.29	0.09	0.03	0.01
300 to 399.9	Lynwood	9.59	3.72	2.41	1.70	0.42	0.13	0.05	0.01
300 to 399.9	Mission Viejo	6.92	2.55	1.62	1.11	0.26	0.10	0.04	0.01
300 to 399.9	Palm Springs	7.03	2.45	1.49	1.00	0.25	0.09	0.03	0.01
300 to 399.9	Perris	7.31	2.48	1.54	1.07	0.29	0.11	0.04	0.01
300 to 399.9	Pico Rivera	13.01	4.30	2.58	1.71	0.39	0.13	0.05	0.01
300 to 399.9	Pomona	8.82	3.64	2.26	1.52	0.34	0.11	0.04	0.01
300 to 399.9	Redlands	6.06	2.78	1.87	1.33	0.33	0.12	0.04	0.01
300 to 399.9	Reseda	4.33	1.65	1.01	0.68	0.16	0.06	0.02	0.01
300 to 399.9	Riverside	9.56	3.49	2.31	1.66	0.43	0.15	0.05	0.01
300 to 399.9	San Bernardino	8.58	3.13	1.98	1.37	0.34	0.12	0.04	0.01
300 to 399.9	Santa Clarita	14.36	4.36	2.55	1.71	0.41	0.15	0.05	0.01
300 to 399.9	Upland	10.94	4.02	2.64	1.89	0.47	0.16	0.06	0.02
300 to 399.9	West LA	12.30	4.41	2.65	1.74	0.37	0.13	0.04	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 2.34
Dispersion Factors (X/Q)
for Diesel ICEs
Operating 12 Hours per Day or Less**

Diesel ICE Rating 400 to 599.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
400 to 599.9	Anaheim	9.93	3.83	2.50	1.68	0.44	0.14	0.05	0.01
400 to 599.9	Azusa	5.89	2.49	1.74	1.21	0.35	0.12	0.04	0.01
400 to 599.9	Banning	13.42	4.36	2.77	1.89	0.58	0.21	0.07	0.02
400 to 599.9	Burbank	6.12	2.40	1.52	0.98	0.23	0.07	0.03	0.01
400 to 599.9	Central LA	9.84	3.70	2.31	1.51	0.37	0.11	0.03	0.01
400 to 599.9	Compton	7.25	2.95	1.96	1.32	0.35	0.11	0.04	0.01
400 to 599.9	Costa Mesa	3.91	1.83	1.32	0.92	0.27	0.10	0.04	0.01
400 to 599.9	Crestline	4.78	1.94	1.25	0.82	0.22	0.08	0.03	0.01
400 to 599.9	Fontana	9.70	3.34	2.22	1.54	0.46	0.17	0.06	0.02
400 to 599.9	Indio	4.33	1.65	1.11	0.77	0.23	0.09	0.03	0.01
400 to 599.9	La Habra	5.13	2.26	1.51	1.01	0.26	0.09	0.03	0.01
400 to 599.9	Lake Elsinore	3.38	1.32	0.94	0.68	0.23	0.09	0.04	0.01
400 to 599.9	LAX	14.98	4.77	3.11	2.14	0.63	0.22	0.08	0.02
400 to 599.9	Long Beach	5.21	2.18	1.40	0.91	0.25	0.08	0.03	0.01
400 to 599.9	Lynwood	6.46	2.67	1.84	1.27	0.36	0.12	0.04	0.01
400 to 599.9	Mission Viejo	4.24	1.65	1.11	0.76	0.21	0.09	0.03	0.01
400 to 599.9	Palm Springs	5.33	1.92	1.20	0.81	0.22	0.08	0.03	0.01
400 to 599.9	Perris	5.50	1.92	1.23	0.85	0.26	0.10	0.04	0.01
400 to 599.9	Pico Rivera	9.29	3.22	2.02	1.31	0.33	0.12	0.04	0.01
400 to 599.9	Pomona	5.87	2.53	1.67	1.10	0.28	0.09	0.03	0.01
400 to 599.9	Redlands	3.42	1.66	1.21	0.86	0.26	0.10	0.04	0.01
400 to 599.9	Reseda	3.19	1.27	0.81	0.54	0.14	0.05	0.02	0.01
400 to 599.9	Riverside	6.40	2.46	1.73	1.22	0.37	0.13	0.05	0.01
400 to 599.9	San Bernardino	5.91	2.22	1.48	1.01	0.29	0.11	0.04	0.01
400 to 599.9	Santa Clarita	11.43	3.67	2.22	1.46	0.38	0.14	0.05	0.01
400 to 599.9	Upland	7.24	2.81	1.96	1.37	0.40	0.14	0.05	0.01
400 to 599.9	West LA	8.40	3.23	2.04	1.31	0.31	0.11	0.04	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 4.35
Dispersion Factors (X/Q)
for Diesel ICEs
Operating 12 Hours per Day or Less**

Diesel ICE Rating 600 to 1,149 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
600 to 1,149	Anaheim	3.17	1.21	0.95	0.73	0.25	0.11	0.04	0.01
600 to 1,149	Azusa	1.29	0.61	0.53	0.43	0.18	0.09	0.04	0.01
600 to 1,149	Banning	5.76	1.92	1.41	1.08	0.39	0.17	0.06	0.02
600 to 1,149	Burbank	1.23	0.57	0.46	0.35	0.13	0.06	0.02	0.01
600 to 1,149	Central LA	3.56	1.28	0.97	0.72	0.22	0.09	0.03	0.01
600 to 1,149	Compton	2.14	0.85	0.68	0.52	0.18	0.08	0.03	0.01
600 to 1,149	Costa Mesa	0.57	0.35	0.33	0.28	0.14	0.08	0.03	0.01
600 to 1,149	Crestline	1.22	0.54	0.43	0.34	0.13	0.07	0.03	0.01
600 to 1,149	Fontana	3.41	1.22	0.95	0.75	0.28	0.13	0.05	0.01
600 to 1,149	Indio	1.24	0.53	0.43	0.35	0.14	0.07	0.03	0.01
600 to 1,149	La Habra	1.05	0.50	0.43	0.34	0.14	0.07	0.03	0.01
600 to 1,149	Lake Elsinore	0.91	0.41	0.35	0.29	0.13	0.07	0.03	0.01
600 to 1,149	LAX	5.83	1.98	1.50	1.15	0.40	0.17	0.07	0.02
600 to 1,149	Long Beach	0.96	0.52	0.45	0.36	0.13	0.06	0.02	0.01
600 to 1,149	Lynwood	1.58	0.70	0.58	0.47	0.19	0.09	0.04	0.01
600 to 1,149	Mission Viejo	0.69	0.35	0.31	0.26	0.12	0.06	0.03	0.01
600 to 1,149	Palm Springs	2.36	0.83	0.60	0.45	0.15	0.06	0.03	0.01
600 to 1,149	Perris	2.19	0.82	0.60	0.46	0.17	0.08	0.03	0.01
600 to 1,149	Pico Rivera	2.90	1.08	0.80	0.61	0.21	0.09	0.04	0.01
600 to 1,149	Pomona	1.55	0.68	0.55	0.43	0.16	0.08	0.03	0.01
600 to 1,149	Redlands	0.63	0.37	0.35	0.30	0.14	0.08	0.04	0.01
600 to 1,149	Reseda	1.19	0.52	0.38	0.28	0.09	0.04	0.02	0.01
600 to 1,149	Riverside	1.68	0.68	0.58	0.48	0.20	0.10	0.04	0.01
600 to 1,149	San Bernardino	1.93	0.76	0.60	0.47	0.18	0.09	0.04	0.01
600 to 1,149	Santa Clarita	5.31	1.81	1.23	0.89	0.27	0.11	0.04	0.01
600 to 1,149	Upland	1.87	0.76	0.65	0.53	0.22	0.11	0.04	0.01
600 to 1,149	West LA	1.98	0.82	0.65	0.50	0.18	0.09	0.04	0.01

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 3.31
Dispersion Factors (X/Q)
for Diesel ICEs
Operating More Than 12 Hours per Day**

Diesel ICE Rating 50 to 174.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
50 to 174.9	Anaheim	16.34	5.76	3.73	2.64	0.88	0.38	0.17	0.07
50 to 174.9	Azusa	14.25	4.87	3.45	2.60	1.03	0.44	0.19	0.08
50 to 174.9	Banning	30.23	9.60	6.37	4.62	1.77	0.80	0.33	0.12
50 to 174.9	Burbank	15.86	5.66	3.84	2.86	1.07	0.42	0.17	0.07
50 to 174.9	Central LA	15.17	4.87	3.33	2.55	0.98	0.38	0.14	0.06
50 to 174.9	Compton	12.91	4.34	3.05	2.30	0.95	0.41	0.18	0.07
50 to 174.9	Costa Mesa	7.14	2.57	1.76	1.25	0.50	0.27	0.15	0.06
50 to 174.9	Crestline	11.03	3.90	2.50	1.74	0.61	0.29	0.14	0.06
50 to 174.9	Fontana	19.46	6.43	4.36	3.18	1.20	0.54	0.24	0.10
50 to 174.9	Indio	20.40	7.24	4.89	3.60	1.39	0.63	0.28	0.11
50 to 174.9	La Habra	9.02	3.24	2.09	1.43	0.52	0.27	0.14	0.06
50 to 174.9	Lake Elsinore	6.95	2.40	1.62	1.23	0.55	0.31	0.17	0.08
50 to 174.9	LAX	19.93	5.92	3.91	2.80	1.00	0.44	0.19	0.07
50 to 174.9	Long Beach	10.74	3.86	2.84	2.24	1.01	0.43	0.18	0.08
50 to 174.9	Lynwood	11.90	4.02	2.80	2.07	0.82	0.39	0.18	0.08
50 to 174.9	Mission Viejo	9.09	2.87	1.87	1.32	0.50	0.27	0.14	0.06
50 to 174.9	Palm Springs	19.45	6.90	4.51	3.27	1.14	0.47	0.20	0.08
50 to 174.9	Perris	10.07	3.45	2.28	1.64	0.64	0.33	0.17	0.07
50 to 174.9	Pico Rivera	17.36	5.40	3.50	2.47	0.86	0.38	0.17	0.07
50 to 174.9	Pomona	10.95	3.82	2.57	1.86	0.84	0.41	0.20	0.09
50 to 174.9	Redlands	8.13	3.03	2.11	1.52	0.61	0.36	0.25	0.12
50 to 174.9	Reseda	5.46	1.85	1.18	0.82	0.35	0.22	0.13	0.06
50 to 174.9	Riverside	12.27	3.96	2.74	2.00	0.77	0.37	0.18	0.07
50 to 174.9	San Bernardino	14.65	5.16	3.44	2.52	0.97	0.45	0.22	0.09
50 to 174.9	Santa Clarita	15.56	4.54	2.80	1.96	0.69	0.34	0.17	0.07
50 to 174.9	Upland	14.90	4.85	3.35	2.47	0.99	0.46	0.24	0.11
50 to 174.9	West LA	11.21	3.54	2.21	1.46	0.48	0.24	0.14	0.06

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 3.32
Dispersion Factors (X/Q)
for Diesel ICEs
Operating More Than 12 Hours per Day**

Diesel ICE Rating 175 to 299.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
175 to 299.9	Anaheim	13.01	4.47	2.87	2.06	0.68	0.28	0.14	0.06
175 to 299.9	Azusa	10.80	3.57	2.49	1.90	0.76	0.33	0.15	0.07
175 to 299.9	Banning	25.23	7.71	5.01	3.68	1.46	0.68	0.30	0.11
175 to 299.9	Burbank	12.36	4.26	2.79	2.10	0.82	0.32	0.14	0.06
175 to 299.9	Central LA	12.15	3.84	2.48	1.83	0.74	0.29	0.12	0.05
175 to 299.9	Compton	9.77	3.23	2.22	1.67	0.67	0.29	0.14	0.07
175 to 299.9	Costa Mesa	5.24	1.90	1.32	0.94	0.33	0.18	0.11	0.05
175 to 299.9	Crestline	8.54	3.01	1.91	1.36	0.46	0.21	0.11	0.05
175 to 299.9	Fontana	15.68	5.01	3.33	2.47	0.93	0.41	0.20	0.09
175 to 299.9	Indio	16.79	5.75	3.79	2.84	1.11	0.50	0.23	0.10
175 to 299.9	La Habra	6.96	2.50	1.63	1.13	0.37	0.18	0.10	0.05
175 to 299.9	Lake Elsinore	5.29	1.78	1.22	0.89	0.38	0.20	0.12	0.06
175 to 299.9	LAX	16.18	4.72	3.08	2.23	0.79	0.34	0.16	0.07
175 to 299.9	Long Beach	7.86	2.74	1.95	1.53	0.70	0.31	0.15	0.07
175 to 299.9	Lynwood	9.15	3.03	2.09	1.56	0.60	0.27	0.14	0.07
175 to 299.9	Mission Viejo	6.47	1.98	1.26	0.90	0.34	0.17	0.10	0.05
175 to 299.9	Palm Springs	16.25	5.52	3.54	2.60	0.92	0.36	0.17	0.08
175 to 299.9	Perris	8.17	2.72	1.77	1.29	0.48	0.24	0.13	0.06
175 to 299.9	Pico Rivera	13.67	4.18	2.64	1.91	0.65	0.28	0.14	0.06
175 to 299.9	Pomona	8.32	2.92	1.92	1.37	0.51	0.26	0.15	0.08
175 to 299.9	Redlands	5.91	2.17	1.51	1.11	0.42	0.21	0.18	0.10
175 to 299.9	Reseda	4.37	1.45	0.91	0.63	0.21	0.13	0.10	0.05
175 to 299.9	Riverside	9.43	2.97	2.04	1.51	0.57	0.26	0.14	0.06
175 to 299.9	San Bernardino	11.72	3.97	2.59	1.93	0.73	0.33	0.17	0.08
175 to 299.9	Santa Clarita	12.97	3.70	2.22	1.56	0.53	0.24	0.13	0.06
175 to 299.9	Upland	11.46	3.63	2.48	1.85	0.70	0.33	0.17	0.09
175 to 299.9	West LA	8.55	2.75	1.72	1.17	0.35	0.16	0.10	0.05

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 3.33
Dispersion Factors (X/Q)
for Diesel ICEs
Operating More Than 12 Hours per Day**

Diesel ICE Rating 300 to 399.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
300 to 399.9	Anaheim	8.09	2.98	1.79	1.27	0.38	0.15	0.08	0.05
300 to 399.9	Azusa	6.60	2.36	1.51	1.15	0.42	0.17	0.09	0.05
300 to 399.9	Banning	18.55	5.84	3.46	2.56	1.06	0.50	0.24	0.10
300 to 399.9	Burbank	7.87	2.86	1.68	1.23	0.46	0.18	0.09	0.05
300 to 399.9	Central LA	8.60	2.85	1.74	1.25	0.41	0.16	0.08	0.04
300 to 399.9	Compton	6.20	2.23	1.42	1.06	0.38	0.15	0.08	0.05
300 to 399.9	Costa Mesa	3.09	1.29	0.86	0.64	0.20	0.10	0.06	0.04
300 to 399.9	Crestline	5.64	2.08	1.22	0.86	0.29	0.12	0.07	0.04
300 to 399.9	Fontana	10.53	3.52	2.14	1.58	0.57	0.24	0.13	0.07
300 to 399.9	Indio	11.59	4.08	2.43	1.80	0.71	0.31	0.16	0.08
300 to 399.9	La Habra	4.21	1.67	1.04	0.73	0.22	0.10	0.06	0.04
300 to 399.9	Lake Elsinore	3.18	1.13	0.73	0.55	0.19	0.08	0.06	0.04
300 to 399.9	LAX	11.30	3.47	2.11	1.54	0.52	0.21	0.11	0.05
300 to 399.9	Long Beach	4.71	1.80	1.17	0.90	0.37	0.15	0.09	0.06
300 to 399.9	Lynwood	5.71	2.06	1.33	0.99	0.34	0.14	0.08	0.05
300 to 399.9	Mission Viejo	3.67	1.26	0.76	0.54	0.15	0.07	0.06	0.04
300 to 399.9	Palm Springs	11.37	3.96	2.36	1.73	0.62	0.23	0.11	0.06
300 to 399.9	Perris	5.46	1.88	1.12	0.82	0.28	0.13	0.08	0.05
300 to 399.9	Pico Rivera	9.15	2.93	1.69	1.20	0.39	0.16	0.09	0.05
300 to 399.9	Pomona	5.23	1.99	1.23	0.87	0.26	0.12	0.09	0.06
300 to 399.9	Redlands	3.40	1.42	0.95	0.71	0.24	0.11	0.09	0.07
300 to 399.9	Reseda	2.99	1.05	0.63	0.45	0.13	0.06	0.05	0.04
300 to 399.9	Riverside	5.83	2.00	1.29	0.97	0.33	0.14	0.08	0.05
300 to 399.9	San Bernardino	7.65	2.67	1.59	1.16	0.41	0.18	0.11	0.06
300 to 399.9	Santa Clarita	9.06	2.76	1.57	1.09	0.34	0.15	0.08	0.04
300 to 399.9	Upland	7.44	2.52	1.59	1.19	0.42	0.18	0.10	0.07
300 to 399.9	West LA	5.55	1.96	1.18	0.80	0.21	0.09	0.05	0.04

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**Table 3.34
Dispersion Factors (X/Q)
for Diesel ICEs
Operating More Than 12 Hours per Day**

Diesel ICE Rating 400 to 599.9 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
400 to 599.9	Anaheim	5.70	2.18	1.36	0.91	0.29	0.10	0.05	0.03
400 to 599.9	Azusa	4.20	1.55	1.05	0.74	0.28	0.11	0.06	0.04
400 to 599.9	Banning	13.98	4.43	2.67	1.79	0.78	0.38	0.19	0.08
400 to 599.9	Burbank	5.48	2.03	1.21	0.80	0.31	0.12	0.06	0.04
400 to 599.9	Central LA	6.15	2.13	1.36	0.92	0.31	0.11	0.05	0.03
400 to 599.9	Compton	3.99	1.53	1.02	0.71	0.25	0.10	0.05	0.04
400 to 599.9	Costa Mesa	1.78	0.79	0.56	0.40	0.14	0.06	0.04	0.03
400 to 599.9	Crestline	3.86	1.45	0.87	0.58	0.21	0.09	0.05	0.03
400 to 599.9	Fontana	7.64	2.58	1.61	1.10	0.42	0.17	0.08	0.05
400 to 599.9	Indio	8.80	3.09	1.84	1.23	0.51	0.23	0.11	0.06
400 to 599.9	La Habra	2.65	1.08	0.71	0.47	0.15	0.06	0.04	0.03
400 to 599.9	Lake Elsinore	2.10	0.75	0.51	0.36	0.14	0.06	0.03	0.03
400 to 599.9	LAX	8.33	2.64	1.67	1.14	0.40	0.16	0.07	0.04
400 to 599.9	Long Beach	2.89	1.19	0.82	0.58	0.23	0.09	0.05	0.04
400 to 599.9	Lynwood	3.74	1.43	0.97	0.68	0.24	0.09	0.05	0.04
400 to 599.9	Mission Viejo	2.14	0.75	0.49	0.33	0.11	0.05	0.03	0.02
400 to 599.9	Palm Springs	8.82	3.11	1.87	1.27	0.48	0.19	0.08	0.05
400 to 599.9	Perris	4.07	1.44	0.88	0.59	0.21	0.09	0.05	0.03
400 to 599.9	Pico Rivera	6.42	2.16	1.28	0.84	0.28	0.11	0.05	0.03
400 to 599.9	Pomona	3.48	1.38	0.89	0.60	0.19	0.07	0.05	0.04
400 to 599.9	Redlands	1.91	0.83	0.60	0.43	0.15	0.07	0.05	0.05
400 to 599.9	Reseda	2.19	0.78	0.48	0.32	0.10	0.04	0.03	0.02
400 to 599.9	Riverside	3.87	1.37	0.93	0.66	0.24	0.10	0.05	0.03
400 to 599.9	San Bernardino	5.56	1.96	1.20	0.80	0.30	0.12	0.07	0.04
400 to 599.9	Santa Clarita	6.95	2.19	1.27	0.83	0.26	0.11	0.06	0.03
400 to 599.9	Upland	4.87	1.71	1.14	0.80	0.29	0.12	0.06	0.04
400 to 599.9	West LA	3.68	1.39	0.87	0.56	0.16	0.06	0.03	0.03

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**Table 3.35
Dispersion Factors (X/Q)
for Diesel ICEs
Operating More Than 12 Hours per Day**

Diesel ICE Rating 600 to 1,149 BHP

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Rating (BHP)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
600 to 1,149	Anaheim	1.40	0.53	0.41	0.31	0.11	0.05	0.03	0.02
600 to 1,149	Azusa	0.76	0.29	0.24	0.20	0.09	0.05	0.02	0.02
600 to 1,149	Banning	5.22	1.62	1.06	0.77	0.32	0.19	0.10	0.05
600 to 1,149	Burbank	0.77	0.30	0.23	0.17	0.07	0.04	0.02	0.02
600 to 1,149	Central LA	1.90	0.64	0.49	0.37	0.13	0.06	0.03	0.01
600 to 1,149	Compton	0.98	0.37	0.30	0.24	0.09	0.05	0.03	0.02
600 to 1,149	Costa Mesa	0.27	0.15	0.14	0.12	0.06	0.04	0.02	0.01
600 to 1,149	Crestline	0.90	0.34	0.24	0.18	0.08	0.04	0.02	0.01
600 to 1,149	Fontana	2.20	0.75	0.54	0.41	0.16	0.08	0.04	0.02
600 to 1,149	Indio	2.88	1.00	0.63	0.45	0.17	0.10	0.06	0.03
600 to 1,149	La Habra	0.47	0.22	0.18	0.14	0.06	0.04	0.02	0.01
600 to 1,149	Lake Elsinore	0.46	0.19	0.16	0.13	0.06	0.03	0.02	0.01
600 to 1,149	LAX	2.73	0.90	0.67	0.51	0.18	0.08	0.04	0.02
600 to 1,149	Long Beach	0.55	0.26	0.23	0.18	0.08	0.04	0.02	0.02
600 to 1,149	Lynwood	0.73	0.31	0.26	0.21	0.09	0.05	0.02	0.02
600 to 1,149	Mission Viejo	0.28	0.14	0.12	0.10	0.05	0.03	0.02	0.01
600 to 1,149	Palm Springs	3.28	1.02	0.69	0.51	0.20	0.10	0.05	0.03
600 to 1,149	Perris	1.29	0.46	0.32	0.24	0.09	0.05	0.02	0.02
600 to 1,149	Pico Rivera	1.55	0.55	0.39	0.29	0.10	0.05	0.02	0.01
600 to 1,149	Pomona	0.76	0.31	0.25	0.19	0.07	0.04	0.02	0.02
600 to 1,149	Redlands	0.28	0.16	0.15	0.13	0.07	0.04	0.02	0.02
600 to 1,149	Reseda	0.72	0.27	0.19	0.14	0.05	0.03	0.02	0.01
600 to 1,149	Riverside	0.86	0.33	0.27	0.22	0.10	0.05	0.03	0.02
600 to 1,149	San Bernardino	1.50	0.53	0.38	0.29	0.11	0.06	0.03	0.02
600 to 1,149	Santa Clarita	2.69	0.89	0.59	0.42	0.14	0.07	0.03	0.02
600 to 1,149	Upland	1.03	0.39	0.32	0.26	0.11	0.06	0.03	0.02
600 to 1,149	West LA	0.76	0.32	0.25	0.20	0.07	0.04	0.02	0.01

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**Table 6.31
Dispersion Factors (χ/Q)
for Diesel ICEs
for Acute Hazard Index**

All Operating Conditions χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{lb}/\text{hr}]$)

Rating (BHP)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1,000
50 to 174.9	318.31	132.73	103.23	88.20	41.49	16.33	6.95	4.09
175 to 299.9	249.82	100.51	66.01	55.34	27.05	9.36	4.17	2.96
300 to 399.9	208.60	72.20	48.27	35.75	18.22	7.63	3.58	2.01
400 to 599.9	370.47	168.04	134.78	113.29	53.36	22.07	8.91	4.63
600 to 1,149	110.56	35.42	25.31	19.18	7.78	4.82	2.54	1.13

APPENDIX VIII

**TIER 2 SCREENING TABLES
FOR CREMATORIUMS
FOR USE IN RULE 1401**

Introduction

The purpose of this report is to document the methods used by SCAQMD staff to estimate cancer risks from the industry-wide source category of crematoriums. The methods are consistent with SCAQMD's risk assessment procedures for Rule 1401 and were used to update the Rule 1401 Tier 2 screening tables using AERMOD for crematoriums ONLY.

Emission Inventory Methods

For emission rates associated with crematoriums, please contact the appropriate SCAQMD Engineering staff (<http://www.aqmd.gov/contact/permitting-staff>).

Exposure Modeling Methods

Air quality modeling was performed using AERMOD (American Meteorological Society/U.S. EPA Regulatory Model). As of December 9, 2006, U.S. EPA promulgated AERMOD as a replacement for ISCST3 (Industrial Source Complex – Short Term, Version 3) as the recommended dispersion model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

AERMOD (version 14134) was executed using the urban option, which is SCAQMD policy for all permitting in its jurisdiction. The U.S. EPA regulatory default options, with the exception of the FLAT terrain option, were implemented and the SCAQMD AERMOD-ready meteorological data was used. The County populations used are based on the 2008 estimates from the U.S. Census Bureau. The Los Angeles County population was 9,862,049; Orange County population was 3,010,759; Riverside County population was 2,100,516; and San Bernardino County population was 2,015,355. SCAQMD's meteorological data is updated on a tri-annual basis and the population estimates will also be updated at that time.

For screening purposes, flat terrain was assumed. Although this is appropriate for most projects within the South Coast Air Basin, it is important to note that if complex terrain is present, the screening tables are not appropriate to be used and project-specific modeling using the elevated terrain option is recommended.

Based on information from SCAQMD Engineering staff, the stack was modeled as a point source with the following stack parameters – 19-ft stack height, 5.8 m/s exit velocity, 1300°F exit temperature, and 13-ft building height. Due to the sensitivity to building downwash effects, there are three different building sizes analyzed.

Modeling was performed at 27 SCAQMD meteorological stations shown in Figure 1. The locations of each of the sites are given in Table 1. The data are available on the SCAQMD website (<http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data->

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for-aermod). A polar receptor grid is assumed at ten degree azimuth increments at the following downwind distances: 25, 50, 75, 100, 200, 300, 500, and 1000 meters.

The peak model-predicted impacts at each downwind distance over the 36 azimuth angles for each meteorological station were used to develop the attached tables.

A sample AERMOD model input file is provided in Exhibit 1.

Figure 1: Meteorological Monitoring Stations in the South Coast Air Basin



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Table 1: Locations of Meteorological Stations and Elevations

Station name	UTM Coordinates (km)		<u>Lat./Long. Coordinates</u>		<u>Elevation</u>
	Easting	Northing	Latitude	Longitude	(m)
Anaheim	413.14	3743.57	33:49:50	117:56:19	41
Azusa	414.81	3777.47	34:08:11	117:55:26	182
Banning	513.10	3753.19	33:55:15	116:51:30	660
Burbank	378.62	3782.24	34:10:33	118:19:01	175
Central LA	386.79	3770.00	34:03:59	118:13:36	87
Compton	388.59	3751.88	33:54:05	118:12:18	22
Costa Mesa	414.16	3726.19	33:40:26	117:55:33	20
Crestline	474.62	3788.76	34:14:29	117:16:32	1387
Fontana	454.62	3773.19	34:06:01	117:29:31	367
Indio	572.67	3729.90	33:42:30	116:12:57	-4
La Habra	411.98	3754.08	33:55:31	117:57:08	82
Lake Elsinore	469.33	3726.13	33:40:35	117:19:51	406
LAX	367.83	3757.80	33:57:15	118:25:49	42
Long Beach	389.99	3743.04	33:49:25	118:11:19	30
Lynwood	388.07	3754.73	33:55:44	118:12:39	29
Mission Viejo	437.39	3721.17	33:37:49	117:40:30	170
Palm Springs	542.46	3745.73	33:51:10	116:32:28	171
Perris	478.91	3738.58	33:47:20	117:13:40	442
Pico Rivera	401.31	3763.61	34:00:37	118:04:07	58
Pomona	430.78	3769.61	34:04:00	117:45:00	270
Redlands	486.36	3768.50	34:03:32	117:08:52	481
Reseda	358.76	3785.11	34:11:57	118:31:58	228
Riverside	461.64	3762.10	34:00:02	117:24:55	250
San Bernardino	474.76	3773.82	34:06:24	117:16:25	305
Santa Clarita	359.48	3805.52	34:23:00	118:31:42	375
Upland	441.96	3773.66	34:06:14	117:37:45	379
West LA	365.54	3768.52	34:03:02	118:27:24	97

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Exhibit 1: Sample AERMOD Model Input File for Crematoriums

CO STARTING
 TITLEONE Modeling for R1401 Risk Assessment Procedures - Crematoriums
 TITLETWO Continuous Operation
 MODELOPT CONC FLAT
 AVERTIME 1 PERIOD
 POLLUTID Any
 RUNORNOT RUN
 URBANOPT 3010759 ORC

CO FINISHED

SO STARTING
 LOCATION P1 POINT 0.0 0.0 0.0
 LOCATION P2 POINT 0.0 0.0 0.0
 LOCATION P3 POINT 0.0 0.0 0.0

** Point Source	Q	RelHgt	Temp	Vel	Dia
SRCPARAM P1	0.0865	5.791	977.59	5.8	0.508
SRCPARAM P2	0.0865	5.791	977.59	5.8	0.508
SRCPARAM P3	0.0865	5.791	977.59	5.8	0.508

SO BUILDHGT P1	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P1	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P1	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P1	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P1	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P1	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDWID P1	24.97	27.62	29.44	30.36	30.36	29.44
SO BUILDWID P1	27.62	24.97	21.55	24.97	27.62	29.44
SO BUILDWID P1	30.36	30.36	29.44	27.62	24.97	21.55
SO BUILDWID P1	24.97	27.62	29.44	30.36	30.36	29.44
SO BUILDWID P1	27.62	24.97	21.55	24.97	27.62	29.44
SO BUILDWID P1	30.36	30.36	29.44	27.62	24.97	21.55
SO BUILDLLEN P1	24.97	27.62	29.44	30.36	30.36	29.44
SO BUILDLLEN P1	27.62	24.97	21.55	24.97	27.62	29.44
SO BUILDLLEN P1	30.36	30.36	29.44	27.62	24.97	21.55
SO BUILDLLEN P1	24.97	27.62	29.44	30.36	30.36	29.44
SO BUILDLLEN P1	27.62	24.97	21.55	24.97	27.62	29.44
SO BUILDLLEN P1	30.36	30.36	29.44	27.62	24.97	21.55
SO XBADJ P1	-12.48	-13.81	-14.72	-15.18	-15.18	-14.72
SO XBADJ P1	-13.81	-12.48	-10.78	-12.48	-13.81	-14.72
SO XBADJ P1	-15.18	-15.18	-14.72	-13.81	-12.48	-10.78
SO XBADJ P1	-12.48	-13.81	-14.72	-15.18	-15.18	-14.72
SO XBADJ P1	-13.81	-12.48	-10.78	-12.48	-13.81	-14.72
SO XBADJ P1	-15.18	-15.18	-14.72	-13.81	-12.48	-10.78
SO YBADJ P1	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ P1	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ P1	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ P1	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ P1	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ P1	0.00	0.00	0.00	0.00	0.00	0.00

SO BUILDHGT P2	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P2	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P2	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P2	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P2	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT P2	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDWID P2	35.31	39.07	41.64	42.94	42.94	41.64
SO BUILDWID P2	39.07	35.31	30.48	35.31	39.07	41.64
SO BUILDWID P2	42.94	42.94	41.64	39.07	35.31	30.48
SO BUILDWID P2	35.31	39.07	41.64	42.94	42.94	41.64
SO BUILDWID P2	39.07	35.31	30.48	35.31	39.07	41.64
SO BUILDWID P2	42.94	42.94	41.64	39.07	35.31	30.48
SO BUILDLLEN P2	35.31	39.07	41.64	42.94	42.94	41.64
SO BUILDLLEN P2	39.07	35.31	30.48	35.31	39.07	41.64
SO BUILDLLEN P2	42.94	42.94	41.64	39.07	35.31	30.48
SO BUILDLLEN P2	35.31	39.07	41.64	42.94	42.94	41.64
SO BUILDLLEN P2	39.07	35.31	30.48	35.31	39.07	41.64
SO BUILDLLEN P2	42.94	42.94	41.64	39.07	35.31	30.48
SO XBADJ P2	-17.65	-19.53	-20.82	-21.47	-21.47	-20.82
SO XBADJ P2	-19.53	-17.65	-15.24	-17.65	-19.53	-20.82
SO XBADJ P2	-21.47	-21.47	-20.82	-19.53	-17.65	-15.24
SO XBADJ P2	-17.65	-19.53	-20.82	-21.47	-21.47	-20.82
SO XBADJ P2	-19.53	-17.65	-15.24	-17.65	-19.53	-20.82
SO XBADJ P2	-21.47	-21.47	-20.82	-19.53	-17.65	-15.24

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

SO YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	P3	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT	P3	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT	P3	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT	P3	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT	P3	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDHGT	P3	3.96	3.96	3.96	3.96	3.96	3.96
SO BUILDWID	P3	43.25	47.85	50.99	52.59	52.59	50.99
SO BUILDWID	P3	47.85	43.25	37.33	43.25	47.85	50.99
SO BUILDWID	P3	52.59	52.59	50.99	47.85	43.25	37.33
SO BUILDWID	P3	43.25	47.85	50.99	52.59	52.59	50.99
SO BUILDWID	P3	47.85	43.25	37.33	43.25	47.85	50.99
SO BUILDWID	P3	52.59	52.59	50.99	47.85	43.25	37.33
SO BUILDLEN	P3	43.25	47.85	50.99	52.59	52.59	50.99
SO BUILDLEN	P3	47.85	43.25	37.33	43.25	47.85	50.99
SO BUILDLEN	P3	52.59	52.59	50.99	47.85	43.25	37.33
SO BUILDLEN	P3	43.25	47.85	50.99	52.59	52.59	50.99
SO BUILDLEN	P3	47.85	43.25	37.33	43.25	47.85	50.99
SO BUILDLEN	P3	52.59	52.59	50.99	47.85	43.25	37.33
SO XBADJ	P3	-21.62	-23.92	-25.50	-26.30	-26.30	-25.50
SO XBADJ	P3	-23.92	-21.62	-18.67	-21.62	-23.92	-25.50
SO XBADJ	P3	-26.30	-26.30	-25.50	-23.92	-21.62	-18.67
SO XBADJ	P3	-21.62	-23.92	-25.50	-26.30	-26.30	-25.50
SO XBADJ	P3	-23.92	-21.62	-18.67	-21.62	-23.92	-25.50
SO XBADJ	P3	-26.30	-26.30	-25.50	-23.92	-21.62	-18.67
SO YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00

URBANSRC P1
URBANSRC P2
URBANSRC P3

SRCGROUP P1 P1
SRCGROUP P2 P2
SRCGROUP P3 P3

SO SRCGROUP ALL

SO FINISHED

RE STARTING
GRIDPOLR POL1 STA
ORIG 0.0 0.0
DIST 25 50 75 100 200 300 500 1000
GDIR 36 10.0 10.0

GRIDPOLR POL1 END
RE FINISHED

ME STARTING
SURFFILE ANAH8.SFC
PROFFILE ANAH8.PFL
SURFDATA 0 2006
UAIRDATA 3190 2006
PROFBASE 0 METERS
ME FINISHED

OU STARTING
RECTABLE 1 FIRST
RECTABLE ALLAVE FIRST
PLOTFILE 1 P1 FIRST BM1T1P1.TXT
PLOTFILE PERIOD P1 BM1T2P1.TXT
PLOTFILE 1 P2 FIRST BM1T1P2.TXT
PLOTFILE PERIOD P2 BM1T2P2.TXT
PLOTFILE 1 P3 FIRST BM1T1P3.TXT
PLOTFILE PERIOD P3 BM1T2P3.TXT
OU FINISHED

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

Results

Figure 2 shows the source receptor areas (SRA) within the South Coast Air Basin and Table 2 lists the appropriate meteorological station to use for each SRA.

Figure 2: Source/Receptor Areas

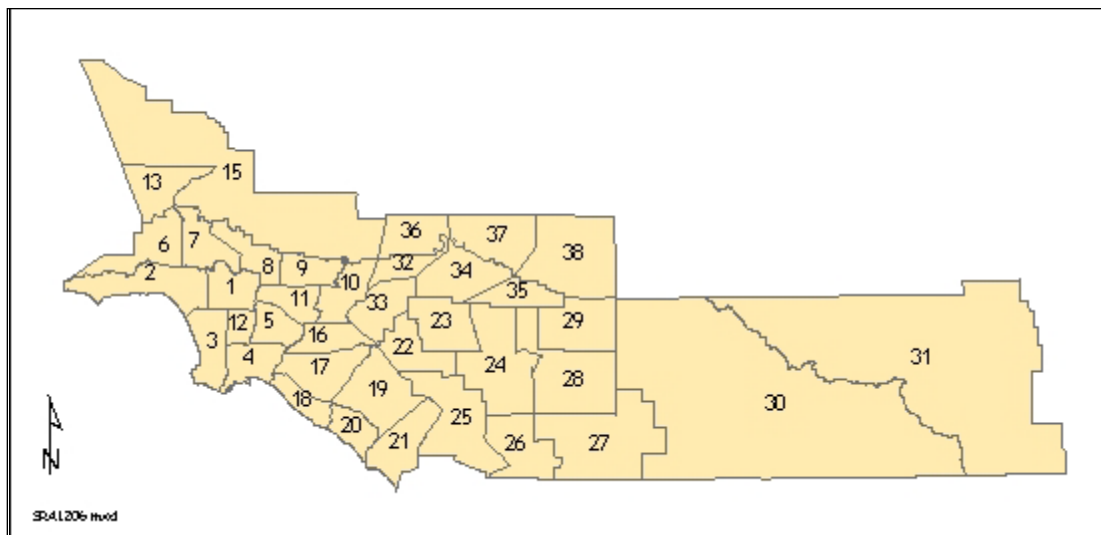


Table 2: Meteorological Stations for Each Source/Receptor Area.

Meteorological Station	Source/ Receptor Area	Meteorological Station	Source/ Receptor Area
Anaheim	17	Compton/Lynwood	12
Azusa	8, 9	Mission Viejo	19, 21
Banning	29	Perris	24, 28
Burbank	7	Palm Springs	30, 31
Central LA	1	Pico Rivera	5, 11
Crestline	37	Pomona	10
Costa Mesa	18, 20	Redlands	35, 38
Fontana	34	Reseda	6
Indio	30	Riverside	22, 23
La Habra	16	Santa Clarita	13, 15
Lake Elsinore	25, 26, 27	San Bernardino	34
LAX	3	Upland	32, 33, 36
Long Beach	4	West LA	2

The following tables have been numbered to be consistent with the tables within Permit Application Attachment “M” for the Risk Assessment Procedures for Rules 1401 & 212.

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 4.41
Dispersion Factors (χ/Q)
for Crematoriums
Operating 12 Hours per Day or Less**

Building Area $\geq 5,000$ to $10,000$ ft², Stack Height ≤ 19 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
$\geq 5,000$ to $10,000$	19	Anaheim	10.50	3.45	2.22	1.49	0.40	0.16	0.06	0.01
$\geq 5,000$ to $10,000$	19	Azusa	6.74	2.71	1.79	1.23	0.34	0.13	0.05	0.01
$\geq 5,000$ to $10,000$	19	Banning	17.63	4.78	2.77	1.84	0.51	0.21	0.08	0.02
$\geq 5,000$ to $10,000$	19	Burbank	5.85	2.29	1.44	0.93	0.23	0.09	0.03	0.01
$\geq 5,000$ to $10,000$	19	Central LA	11.56	3.19	1.92	1.23	0.31	0.12	0.04	0.01
$\geq 5,000$ to $10,000$	19	Compton	8.55	2.77	1.73	1.14	0.29	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Costa Mesa	4.30	2.18	1.49	1.01	0.28	0.12	0.04	0.01
$\geq 5,000$ to $10,000$	19	Crestline	4.86	2.08	1.37	0.91	0.25	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	Fontana	11.50	3.49	2.25	1.54	0.44	0.18	0.06	0.02
$\geq 5,000$ to $10,000$	19	Indio	4.64	1.79	1.21	0.85	0.24	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	La Habra	5.59	2.42	1.58	1.05	0.28	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Lake Elsinore	3.70	1.60	1.13	0.81	0.25	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	LAX	17.61	4.71	2.96	2.02	0.57	0.22	0.08	0.02
$\geq 5,000$ to $10,000$	19	Long Beach	4.63	2.00	1.30	0.85	0.21	0.09	0.03	0.01
$\geq 5,000$ to $10,000$	19	Lynwood	7.19	2.68	1.75	1.19	0.32	0.13	0.05	0.01
$\geq 5,000$ to $10,000$	19	Mission Viejo	3.54	1.79	1.24	0.85	0.24	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	Palm Springs	6.80	1.93	1.20	0.80	0.21	0.09	0.03	0.01
$\geq 5,000$ to $10,000$	19	Perris	6.54	2.00	1.28	0.89	0.26	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Pico Rivera	9.12	3.02	1.91	1.28	0.34	0.13	0.05	0.01
$\geq 5,000$ to $10,000$	19	Pomona	6.51	2.52	1.61	1.06	0.28	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Redlands	4.14	2.14	1.46	1.00	0.28	0.12	0.05	0.01
$\geq 5,000$ to $10,000$	19	Reseda	3.16	1.38	0.87	0.58	0.16	0.06	0.02	0.01
$\geq 5,000$ to $10,000$	19	Riverside	7.30	2.67	1.79	1.24	0.35	0.14	0.05	0.01
$\geq 5,000$ to $10,000$	19	San Bernardino	6.78	2.38	1.55	1.06	0.30	0.12	0.05	0.01
$\geq 5,000$ to $10,000$	19	Santa Clarita	13.56	3.61	2.10	1.37	0.36	0.14	0.05	0.01
$\geq 5,000$ to $10,000$	19	Upland	8.17	2.97	1.98	1.37	0.38	0.15	0.06	0.02
$\geq 5,000$ to $10,000$	19	West LA	7.54	2.94	1.89	1.25	0.32	0.13	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 4.42
Dispersion Factors (χ/Q)
for Crematoriums
Operating 12 Hours per Day or Less**

Building Area > 10,000 to 15,000 ft², Stack Height ≤ 19 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 10,000 to 15,000	19	Anaheim	13.48	3.86	2.42	1.61	0.42	0.16	0.06	0.01
> 10,000 to 15,000	19	Azusa	9.33	3.05	1.98	1.35	0.36	0.14	0.05	0.01
> 10,000 to 15,000	19	Banning	20.22	5.06	2.93	1.92	0.54	0.21	0.08	0.02
> 10,000 to 15,000	19	Burbank	8.10	2.49	1.57	1.02	0.25	0.09	0.03	0.01
> 10,000 to 15,000	19	Central LA	13.51	3.43	2.06	1.33	0.33	0.12	0.04	0.01
> 10,000 to 15,000	19	Compton	11.03	2.97	1.85	1.23	0.32	0.12	0.04	0.01
> 10,000 to 15,000	19	Costa Mesa	6.95	2.47	1.65	1.12	0.30	0.12	0.04	0.01
> 10,000 to 15,000	19	Crestline	7.03	2.28	1.49	0.99	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	Fontana	13.42	3.88	2.43	1.66	0.46	0.18	0.06	0.02
> 10,000 to 15,000	19	Indio	6.01	2.01	1.32	0.91	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	La Habra	7.96	2.69	1.73	1.15	0.30	0.12	0.04	0.01
> 10,000 to 15,000	19	Lake Elsinore	5.02	1.81	1.23	0.87	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	LAX	19.42	5.18	3.18	2.15	0.60	0.23	0.08	0.02
> 10,000 to 15,000	19	Long Beach	7.57	2.19	1.42	0.94	0.24	0.09	0.03	0.01
> 10,000 to 15,000	19	Lynwood	9.58	2.95	1.90	1.29	0.35	0.13	0.05	0.01
> 10,000 to 15,000	19	Mission Viejo	5.84	2.04	1.38	0.95	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	Palm Springs	7.10	2.01	1.25	0.83	0.22	0.09	0.03	0.01
> 10,000 to 15,000	19	Perris	7.43	2.19	1.37	0.94	0.27	0.11	0.04	0.01
> 10,000 to 15,000	19	Pico Rivera	12.06	3.38	2.09	1.40	0.37	0.14	0.05	0.01
> 10,000 to 15,000	19	Pomona	8.87	2.80	1.76	1.16	0.30	0.11	0.04	0.01
> 10,000 to 15,000	19	Redlands	6.41	2.40	1.61	1.11	0.30	0.12	0.05	0.01
> 10,000 to 15,000	19	Reseda	4.64	1.43	0.91	0.61	0.17	0.07	0.02	0.01
> 10,000 to 15,000	19	Riverside	9.55	2.96	1.94	1.34	0.37	0.14	0.05	0.01
> 10,000 to 15,000	19	San Bernardino	8.39	2.63	1.68	1.13	0.31	0.12	0.05	0.01
> 10,000 to 15,000	19	Santa Clarita	15.32	3.73	2.20	1.44	0.39	0.15	0.05	0.01
> 10,000 to 15,000	19	Upland	10.99	3.34	2.17	1.49	0.41	0.16	0.06	0.02
> 10,000 to 15,000	19	West LA	10.77	3.30	2.08	1.38	0.35	0.13	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 4.43
Dispersion Factors (χ/Q)
for Crematoriums
Operating 12 Hours per Day or Less**

Building Area > 15,000 ft², Stack Height ≤ 19 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 15,000	19	Anaheim	14.87	4.07	2.53	1.68	0.43	0.16	0.06	0.01
> 15,000	19	Azusa	10.86	3.31	2.08	1.41	0.37	0.14	0.05	0.01
> 15,000	19	Banning	19.64	5.16	2.99	1.97	0.55	0.21	0.08	0.02
> 15,000	19	Burbank	9.91	2.67	1.65	1.07	0.26	0.09	0.03	0.01
> 15,000	19	Central LA	14.61	3.59	2.13	1.38	0.33	0.12	0.04	0.01
> 15,000	19	Compton	12.16	3.15	1.92	1.27	0.33	0.12	0.04	0.01
> 15,000	19	Costa Mesa	8.67	2.75	1.74	1.19	0.31	0.12	0.04	0.01
> 15,000	19	Crestline	8.49	2.43	1.55	1.03	0.27	0.10	0.04	0.01
> 15,000	19	Fontana	14.08	4.06	2.52	1.71	0.47	0.18	0.06	0.02
> 15,000	19	Indio	6.74	2.12	1.38	0.94	0.26	0.10	0.04	0.01
> 15,000	19	La Habra	9.51	2.88	1.82	1.21	0.30	0.12	0.04	0.01
> 15,000	19	Lake Elsinore	5.83	1.93	1.29	0.90	0.26	0.10	0.04	0.01
> 15,000	19	LAX	19.46	5.36	3.26	2.20	0.61	0.23	0.08	0.02
> 15,000	19	Long Beach	8.79	2.42	1.49	0.99	0.25	0.09	0.03	0.01
> 15,000	19	Lynwood	10.86	3.16	1.98	1.34	0.36	0.13	0.05	0.01
> 15,000	19	Mission Viejo	7.38	2.28	1.45	1.00	0.27	0.10	0.04	0.01
> 15,000	19	Palm Springs	7.28	2.04	1.26	0.84	0.22	0.09	0.03	0.01
> 15,000	19	Perris	7.77	2.27	1.41	0.96	0.27	0.11	0.04	0.01
> 15,000	19	Pico Rivera	13.57	3.65	2.19	1.46	0.38	0.14	0.05	0.01
> 15,000	19	Pomona	10.19	3.04	1.85	1.22	0.30	0.12	0.04	0.01
> 15,000	19	Redlands	7.82	2.66	1.70	1.16	0.31	0.12	0.05	0.01
> 15,000	19	Reseda	4.99	1.48	0.93	0.62	0.17	0.07	0.02	0.01
> 15,000	19	Riverside	10.70	3.17	2.02	1.39	0.38	0.15	0.05	0.01
> 15,000	19	San Bernardino	9.23	2.77	1.75	1.17	0.32	0.12	0.05	0.01
> 15,000	19	Santa Clarita	14.93	3.77	2.22	1.46	0.39	0.15	0.05	0.01
> 15,000	19	Upland	12.30	3.63	2.28	1.56	0.42	0.16	0.06	0.02
> 15,000	19	West LA	12.48	3.60	2.19	1.45	0.36	0.14	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DRAFT RISK ASSESSMENT PROCEDURES FOR RULES 1401, 1401.1 & 212**

**Table 5.41
Dispersion Factors (χ/Q)
for Crematoriums
Operating More Than 12 Hours per Day**

Building Area $\geq 5,000$ to $10,000$ ft², Stack Height ≤ 19 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
$\geq 5,000$ to $10,000$	19	Anaheim	10.50	3.45	2.22	1.49	0.40	0.16	0.06	0.01
$\geq 5,000$ to $10,000$	19	Azusa	6.74	2.71	1.79	1.23	0.34	0.13	0.05	0.01
$\geq 5,000$ to $10,000$	19	Banning	17.63	4.78	2.77	1.84	0.51	0.21	0.08	0.02
$\geq 5,000$ to $10,000$	19	Burbank	5.85	2.29	1.44	0.93	0.23	0.09	0.03	0.01
$\geq 5,000$ to $10,000$	19	Central LA	11.56	3.19	1.92	1.23	0.31	0.12	0.04	0.01
$\geq 5,000$ to $10,000$	19	Compton	8.55	2.77	1.73	1.14	0.29	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Costa Mesa	4.30	2.18	1.49	1.01	0.28	0.12	0.04	0.01
$\geq 5,000$ to $10,000$	19	Crestline	4.86	2.08	1.37	0.91	0.25	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	Fontana	11.50	3.49	2.25	1.54	0.44	0.18	0.06	0.02
$\geq 5,000$ to $10,000$	19	Indio	4.64	1.79	1.21	0.85	0.24	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	La Habra	5.59	2.42	1.58	1.05	0.28	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Lake Elsinore	3.70	1.60	1.13	0.81	0.25	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	LAX	17.61	4.71	2.96	2.02	0.57	0.22	0.08	0.02
$\geq 5,000$ to $10,000$	19	Long Beach	4.63	2.00	1.30	0.85	0.21	0.09	0.03	0.01
$\geq 5,000$ to $10,000$	19	Lynwood	7.19	2.68	1.75	1.19	0.32	0.13	0.05	0.01
$\geq 5,000$ to $10,000$	19	Mission Viejo	3.54	1.79	1.24	0.85	0.24	0.10	0.04	0.01
$\geq 5,000$ to $10,000$	19	Palm Springs	6.80	1.93	1.20	0.80	0.21	0.09	0.03	0.01
$\geq 5,000$ to $10,000$	19	Perris	6.54	2.00	1.28	0.89	0.26	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Pico Rivera	9.12	3.02	1.91	1.28	0.34	0.13	0.05	0.01
$\geq 5,000$ to $10,000$	19	Pomona	6.51	2.52	1.61	1.06	0.28	0.11	0.04	0.01
$\geq 5,000$ to $10,000$	19	Redlands	4.14	2.14	1.46	1.00	0.28	0.12	0.05	0.01
$\geq 5,000$ to $10,000$	19	Reseda	3.16	1.38	0.87	0.58	0.16	0.06	0.02	0.01
$\geq 5,000$ to $10,000$	19	Riverside	7.30	2.67	1.79	1.24	0.35	0.14	0.05	0.01
$\geq 5,000$ to $10,000$	19	San Bernardino	6.78	2.38	1.55	1.06	0.30	0.12	0.05	0.01
$\geq 5,000$ to $10,000$	19	Santa Clarita	13.56	3.61	2.10	1.37	0.36	0.14	0.05	0.01
$\geq 5,000$ to $10,000$	19	Upland	8.17	2.97	1.98	1.37	0.38	0.15	0.06	0.02
$\geq 5,000$ to $10,000$	19	West LA	7.54	2.94	1.89	1.25	0.32	0.13	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

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**Table 5.42
Dispersion Factors (χ/Q)
for Crematoriums
Operating More Than 12 Hours per Day**

Building Area > 10,000 to 15,000 ft², Stack Height ≤ 19 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 10,000 to 15,000	19	Anaheim	13.48	3.86	2.42	1.61	0.42	0.16	0.06	0.01
> 10,000 to 15,000	19	Azusa	9.33	3.05	1.98	1.35	0.36	0.14	0.05	0.01
> 10,000 to 15,000	19	Banning	20.22	5.06	2.93	1.92	0.54	0.21	0.08	0.02
> 10,000 to 15,000	19	Burbank	8.10	2.49	1.57	1.02	0.25	0.09	0.03	0.01
> 10,000 to 15,000	19	Central LA	13.51	3.43	2.06	1.33	0.33	0.12	0.04	0.01
> 10,000 to 15,000	19	Compton	11.03	2.97	1.85	1.23	0.32	0.12	0.04	0.01
> 10,000 to 15,000	19	Costa Mesa	6.95	2.47	1.65	1.12	0.30	0.12	0.04	0.01
> 10,000 to 15,000	19	Crestline	7.03	2.28	1.49	0.99	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	Fontana	13.42	3.88	2.43	1.66	0.46	0.18	0.06	0.02
> 10,000 to 15,000	19	Indio	6.01	2.01	1.32	0.91	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	La Habra	7.96	2.69	1.73	1.15	0.30	0.12	0.04	0.01
> 10,000 to 15,000	19	Lake Elsinore	5.02	1.81	1.23	0.87	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	LAX	19.42	5.18	3.18	2.15	0.60	0.23	0.08	0.02
> 10,000 to 15,000	19	Long Beach	7.57	2.19	1.42	0.94	0.24	0.09	0.03	0.01
> 10,000 to 15,000	19	Lynwood	9.58	2.95	1.90	1.29	0.35	0.13	0.05	0.01
> 10,000 to 15,000	19	Mission Viejo	5.84	2.04	1.38	0.95	0.26	0.10	0.04	0.01
> 10,000 to 15,000	19	Palm Springs	7.10	2.01	1.25	0.83	0.22	0.09	0.03	0.01
> 10,000 to 15,000	19	Perris	7.43	2.19	1.37	0.94	0.27	0.11	0.04	0.01
> 10,000 to 15,000	19	Pico Rivera	12.06	3.38	2.09	1.40	0.37	0.14	0.05	0.01
> 10,000 to 15,000	19	Pomona	8.87	2.80	1.76	1.16	0.30	0.11	0.04	0.01
> 10,000 to 15,000	19	Redlands	6.41	2.40	1.61	1.11	0.30	0.12	0.05	0.01
> 10,000 to 15,000	19	Reseda	4.64	1.43	0.91	0.61	0.17	0.07	0.02	0.01
> 10,000 to 15,000	19	Riverside	9.55	2.96	1.94	1.34	0.37	0.14	0.05	0.01
> 10,000 to 15,000	19	San Bernardino	8.39	2.63	1.68	1.13	0.31	0.12	0.05	0.01
> 10,000 to 15,000	19	Santa Clarita	15.32	3.73	2.20	1.44	0.39	0.15	0.05	0.01
> 10,000 to 15,000	19	Upland	10.99	3.34	2.17	1.49	0.41	0.16	0.06	0.02
> 10,000 to 15,000	19	West LA	10.77	3.30	2.08	1.38	0.35	0.13	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

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**Table 5.43
Dispersion Factors (χ/Q)
for Crematoriums
Operating More Than 12 Hours per Day
Building Area > 15,000 ft², Stack Height ≤ 19 ft***

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 15,000	19	Anaheim	14.87	4.07	2.53	1.68	0.43	0.16	0.06	0.01
> 15,000	19	Azusa	10.86	3.31	2.08	1.41	0.37	0.14	0.05	0.01
> 15,000	19	Banning	19.64	5.16	2.99	1.97	0.55	0.21	0.08	0.02
> 15,000	19	Burbank	9.91	2.67	1.65	1.07	0.26	0.09	0.03	0.01
> 15,000	19	Central LA	14.61	3.59	2.13	1.38	0.33	0.12	0.04	0.01
> 15,000	19	Compton	12.16	3.15	1.92	1.27	0.33	0.12	0.04	0.01
> 15,000	19	Costa Mesa	8.67	2.75	1.74	1.19	0.31	0.12	0.04	0.01
> 15,000	19	Crestline	8.49	2.43	1.55	1.03	0.27	0.10	0.04	0.01
> 15,000	19	Fontana	14.08	4.06	2.52	1.71	0.47	0.18	0.06	0.02
> 15,000	19	Indio	6.74	2.12	1.38	0.94	0.26	0.10	0.04	0.01
> 15,000	19	La Habra	9.51	2.88	1.82	1.21	0.30	0.12	0.04	0.01
> 15,000	19	Lake Elsinore	5.83	1.93	1.29	0.90	0.26	0.10	0.04	0.01
> 15,000	19	LAX	19.46	5.36	3.26	2.20	0.61	0.23	0.08	0.02
> 15,000	19	Long Beach	8.79	2.42	1.49	0.99	0.25	0.09	0.03	0.01
> 15,000	19	Lynwood	10.86	3.16	1.98	1.34	0.36	0.13	0.05	0.01
> 15,000	19	Mission Viejo	7.38	2.28	1.45	1.00	0.27	0.10	0.04	0.01
> 15,000	19	Palm Springs	7.28	2.04	1.26	0.84	0.22	0.09	0.03	0.01
> 15,000	19	Perris	7.77	2.27	1.41	0.96	0.27	0.11	0.04	0.01
> 15,000	19	Pico Rivera	13.57	3.65	2.19	1.46	0.38	0.14	0.05	0.01
> 15,000	19	Pomona	10.19	3.04	1.85	1.22	0.30	0.12	0.04	0.01
> 15,000	19	Redlands	7.82	2.66	1.70	1.16	0.31	0.12	0.05	0.01
> 15,000	19	Reseda	4.99	1.48	0.93	0.62	0.17	0.07	0.02	0.01
> 15,000	19	Riverside	10.70	3.17	2.02	1.39	0.38	0.15	0.05	0.01
> 15,000	19	San Bernardino	9.23	2.77	1.75	1.17	0.32	0.12	0.05	0.01
> 15,000	19	Santa Clarita	14.93	3.77	2.22	1.46	0.39	0.15	0.05	0.01
> 15,000	19	Upland	12.30	3.63	2.28	1.56	0.42	0.16	0.06	0.02
> 15,000	19	West LA	12.48	3.60	2.19	1.45	0.36	0.14	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

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**Table 6.41
Dispersion Factors (χ/Q)
For Crematoriums
for Acute Hazard Index**

All Operating Conditions χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{lb}/\text{hr}]$)

Building Area (ft)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1,000
$\geq 5,000$ to 10,000	815.20	207.53	136.57	99.22	39.06	18.35	9.23	4.96
$> 10,000$ to 15,000	777.72	201.21	133.26	99.04	41.36	18.92	9.24	4.96
$> 15,000$	687.14	193.36	131.64	99.25	41.15	19.00	9.24	4.96

*Note: Facilities with building dimensions outside these ranges must perform Tier 3 or 4 dispersion modeling

APPENDIX IX

**TIER 2 SCREENING TABLES
FOR SHORT-TERM PROJECTS
FOR USE IN RULE 1401**

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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Introduction

When performing a Tier 2 analysis for short-term projects (such as portable equipment, air pollution control equipment used for soil remediation projects, etc), the combined exposure factor and appropriate multi-pathway factor needs to be determined based on the duration of the project. The instructions on how to conduct a Tier 2 analysis are included in “Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0”.

When conducting a Tier 2 analysis for short-term projects, you may also use the following equation using a **default exposure value (CEF)**:

$$\text{MICR}_{(R,ST)} = \text{CP} \times \text{Q}_{\text{tpy}} \times \chi/Q \times \text{CEF}_{(R,ST)} \times \text{MP}_{(R,ST)} \times 10^{-6} \times \text{MWF}$$

$$\text{MICR}_{(W,ST)} = \text{CP} \times \text{Q}_{\text{tpy}} \times \chi/Q \times \text{CEF}_{(W,ST)} \times \text{MP}_{(W,ST)} \times \text{WAF} \times 10^{-6} \times \text{MWF}$$

Term	Description	Where to Find
Q_{tpy}	Maximum emission rate (tons/yr)	Emission estimate specific to permit unit
χ/Q	Concentration at a receptor distance / Emission Rate [[$\mu\text{g}/\text{m}^3$]/(tons/yr)]	Tables 2.1 thru 5.6
MWAF	Molecular Weight Adjustment Factor	Table 8.1
CP	Cancer Potency ($\text{mg}/\text{kg}\text{-day}$) ⁻¹	Table 8.1
MP	Multipathway Factor (if applicable)	Table 8.11
CEF	Combined Exposure Factor	Tables 9.11 thru 9.32
WAF	Worker Adjustment Factor	Table 10.1
10^{-6}	Micrograms to milligrams conversion, liters to cubic meters conversion	not applicable

Please note that SCAQMD Engineering staff (<http://www.aqmd.gov/contact/permitting-staff>) should be consulted prior to the use of these exposure factors to determine if these factors are appropriate for the air quality permit application. Permit conditions limiting the duration of the use of equipment consistent with the analysis will be imposed, and information regarding the project duration will need to be well documented for the short-term projects.

Since these short-term calculations are only meant for projects with limits on the operating duration, these short-term cancer risk assessments can be thought of as being the equivalent to a 30-year cancer risk estimate and the appropriate thresholds would still apply (i.e. for a 5-year project, the maximum emissions during the 5-year period would be assessed on the more

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sensitive population, from the third trimester to age 5, after which the project’s emissions would drop to 0 for the remaining 25 years to get the 30-year equivalent cancer risk estimate).

Table 8.11 - Multi-Pathway Factors for Short-Term Projects

POLID	POLABBREV	9 Year		5 Year		2 Year	
		Residential	Worker	Residential	Worker	Residential	Worker
		MP Ratio	MP Ratio	MP Ratio	MP Ratio	MP Ratio	MP Ratio
42397648	1,6-DiNPylene	28.21	6.34	33.72	6.34	35.81	6.34
42397659	1,8-DiNPylene	28.21	6.34	33.72	6.34	35.81	6.34
57653857	1-3,6-8HxCDD	16.00	7.27	39.91	7.27	46.38	7.27
57117449	1-3,6-8HxCDF	16.00	7.27	26.80	7.27	29.99	7.27
40321764	1-3,7,8PeCDD	16.00	7.27	39.91	7.27	46.38	7.27
57117416	1-3,7,8PeCDF	16.00	7.27	26.80	7.27	29.99	7.27
19408743	1-3,7-9HxCDD	16.00	7.27	39.91	7.27	46.38	7.27
72918219	1-3,7-9HxCDF	16.00	7.27	26.80	7.27	29.99	7.27
35822469	1-4,6-8HpCDD	16.00	7.27	39.91	7.27	46.38	7.27
67562394	1-4,6-8HpCDF	16.00	7.27	26.80	7.27	29.99	7.27
39227286	1-4,7,8HxCDD	16.00	7.27	39.91	7.27	46.38	7.27
70648269	1-4,7,8HxCDF	16.00	7.27	26.80	7.27	29.99	7.27
55673897	1-4,7-9HpCDF	16.00	7.27	26.80	7.27	29.99	7.27
3268879	1-8OctaCDD	16.00	7.27	39.91	7.27	46.38	7.27
39001020	1-8OctaCDF	16.00	7.27	26.80	7.27	29.99	7.27
5522430	1-Nitropyrene	28.21	6.34	33.72	6.34	35.81	6.34
1746016	2,3,7,8-TCDD	16.00	7.27	39.91	7.27	46.38	7.27
51207319	2,3,7,8-TCDF	16.00	7.27	26.80	7.27	29.99	7.27
60851345	2-4,6-8HxCDF	16.00	7.27	26.80	7.27	29.99	7.27
57117314	2-4,7,8PeCDF	16.00	7.27	26.80	7.27	29.99	7.27
607578	2-Nitrofluorene	28.21	6.34	33.72	6.34	35.81	6.34
56495	3-MeCholanthren	9.64	2.42	11.40	2.42	12.04	2.42
101779	4,4'-MeDianilin	9.79	2.41	9.52	2.41	9.20	2.41
57835924	4-Nitropyrene	28.21	6.34	33.72	6.34	35.81	6.34
3697243	5-MeChrysene	28.21	6.34	33.72	6.34	35.81	6.34
602879	5-NitroaceNapht	9.64	2.42	11.40	2.42	12.04	2.42
7496028	6-Nitrochrysene	28.21	6.34	33.72	6.34	35.81	6.34
57976	7,12-DB[a]anthr	9.64	2.42	11.40	2.42	12.04	2.42
194592	7H-D[c,g]carb	28.21	6.34	33.72	6.34	35.81	6.34
319846	alphaHexClCycHx	7.33	1.24	7.11	1.24	6.85	1.24

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Table 8.11 - Multi-Pathway Factors for Short-Term Projects (continued)

POLID	POLABBREV	9 Year		5 Year		2 Year	
		Residential MP Ratio	Worker MP Ratio	Residential MP Ratio	Worker MP Ratio	Residential MP Ratio	Worker MP Ratio
7440382	Arsenic	12.68	4.33	12.52	4.33	12.33	4.33
1016	As cmpd(inorg)	12.68	4.33	12.52	4.33	12.33	4.33
56553	B[a]anthracene	28.21	6.34	33.72	6.34	35.81	6.34
50328	B[a]P	28.21	6.34	33.72	6.34	35.81	6.34
205992	B[b]fluoranthen	28.21	6.34	33.72	6.34	35.81	6.34
205823	B[j]fluoranthen	28.21	6.34	33.72	6.34	35.81	6.34
207089	B[k]fluoranthen	28.21	6.34	33.72	6.34	35.81	6.34
10294403	Barium Chromate	1.78	1.02	1.75	1.02	1.73	1.02
319857	betaHexClCycHx	7.33	1.24	7.11	1.24	6.85	1.24
13765190	CalciumChromate	1.78	1.02	1.75	1.02	1.73	1.02
1333820	ChromiumTriOxid	1.78	1.02	1.75	1.02	1.73	1.02
218019	Chrysene	28.21	6.34	33.72	6.34	35.81	6.34
18540299	Cr(VI)	1.78	1.02	1.75	1.02	1.73	1.02
192654	D[a,e]pyrene	28.21	6.34	33.72	6.34	35.81	6.34
226368	D[a,h]acridine	28.21	6.34	33.72	6.34	35.81	6.34
53703	D[a,h]anthracen	9.64	2.42	11.40	2.42	12.04	2.42
189640	D[a,h]pyrene	28.21	6.34	33.72	6.34	35.81	6.34
189559	D[a,i]pyrene	28.21	6.34	33.72	6.34	35.81	6.34
224420	D[a,j]acridine	28.21	6.34	33.72	6.34	35.81	6.34
191300	D[a,l]pyrene	28.21	6.34	33.72	6.34	35.81	6.34
117817	Di2-EthHxPhthal	7.12	1.05	6.88	1.05	6.59	1.05
1080	DiBenFurans(Cl)	16.00	7.27	26.80	7.27	29.99	7.27
1086	Dioxins-w/o	16.00	7.27	39.91	7.27	46.38	7.27
608731	HexClCycHexanes	7.33	1.24	7.11	1.24	6.85	1.24
193395	In[1,2,3-cd]pyr	28.21	6.34	33.72	6.34	35.81	6.34
7439921	Lead	14.81	5.62	15.11	5.62	15.22	5.63
301042	Lead Acetate	14.81	5.62	15.11	5.62	15.22	5.63
7758976	Lead Chromate	1.78	1.02	1.75	1.02	1.73	1.02
1128	Lead cmp(inorg)	14.81	5.62	15.11	5.62	15.22	5.63
7446277	Lead Phosphate	14.81	5.62	15.12	5.62	15.22	5.62
1335326	Lead Subacetate	14.81	5.62	15.11	5.62	15.22	5.62
58899	Lindane	7.33	1.24	7.11	1.24	6.85	1.24
1151	PAHs-w/o	28.21	6.34	33.72	6.34	35.81	6.34

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Table 8.11 - Multi-Pathway Factors for Short-Term Projects (continued)

POLID	POLABBREV	9 Year		5 Year		2 Year	
		Residential	Worker	Residential	Worker	Residential	Worker
		MP Ratio	MP Ratio	MP Ratio	MP Ratio	MP Ratio	MP Ratio
32598144	PCB 105	24.80	12.57	40.63	12.57	45.53	12.57
74472370	PCB 114	24.80	12.57	40.63	12.57	45.53	12.57
31508006	PCB 118	24.80	12.57	40.63	12.57	45.53	12.57
65510443	PCB 123	24.80	12.57	40.63	12.57	45.53	12.57
57465288	PCB 126	24.80	12.57	40.63	12.57	45.53	12.57
38380084	PCB 156	24.80	12.57	40.63	12.57	45.53	12.57
69782907	PCB 157	24.80	12.57	40.63	12.57	45.53	12.57
52663726	PCB 167	24.80	12.57	40.63	12.57	45.53	12.57
32774166	PCB 169	24.80	12.57	40.63	12.57	45.53	12.57
39635319	PCB 189	24.80	12.57	40.63	12.57	45.53	12.57
32598133	PCB 77	24.80	12.57	40.63	12.57	45.53	12.57
70362504	PCB 81	24.80	12.57	40.63	12.57	45.53	12.57
1336363	PCBs	24.80	12.57	24.55	12.57	24.25	12.57
10588019	SodiumDichromat	1.78	1.02	1.75	1.02	1.73	1.02
7789062	StrontiumChrom	1.78	1.02	1.75	1.02	1.73	1.02

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Short-Term Projects – 2 years or Less in Duration

**Table 9.11
Residential Short-Term (2-year) Combined Exposure Factor (CEF)**

Age	Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (350 days/year)	CEF _{R,ST2}
-0.25 to 0	361	10	0.25	1	0.96	310.99
0 to 2	1,090	10	2	1	0.96	

**Table 9.12
Worker Short-Term (2-year) Combined Exposure Factor (CEF)**

Age	Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (250 days/year)	CEF _{W,ST2}
16 - 41	230	1	2	0.68	4.50

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Short-Term Projects – 5 years or Less in Duration

**Table 9.21
Residential Short-Term (5-year) Combined Exposure Factor (CEF)**

Age	Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (350 days/year)	CEF _{R,ST5}
-0.25 to 0	361	10	0.25	1	0.96	440.65
0 to 2	1,090	10	2	1	0.96	
2 to 5	631	3	5	1	0.96	

**Table 9.22
Worker Short-Term (5-year) Combined Exposure Factor (CEF)**

Age	Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (250 days/year)	CEF _{W,ST5}
16 - 41	230	1	5	0.68	11.25

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Short-Term Projects – 9 years or Less in Duration

**Table 9.31
Residential Short-Term (9-year) Combined Exposure Factor (CEF)**

Age	Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (350 days/year)	CEF _{R,ST9}
-0.25 to 0	361	10	0.25	1	0.96	492.51
0 to 2	1,090	10	2	1	0.96	
2 to 9	631	3	7	1	0.96	

**Table 9.32
Worker Short-Term (9-year) Combined Exposure Factor (CEF)**

Age	Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (250 days/year)	CEF _{W,ST9}
16 - 41	230	1	9	0.68	20.25

APPENDIX X

**TIER 2 SCREENING TABLES
FOR GASOLINE TRANSFER AND DISPENSING FACILITIES
FOR USE IN RULE 1401**

Note: This Appendix is currently in development and Gasoline Transfer and Dispensing Facilities should continue to use Risk Assessment Procedures for Rules 1401 and 212 and Attachment L, Version 7.0 (July 1, 2005) to evaluate the health risk impacts

Introduction

The purpose of this appendix is to document the methods used by SCAQMD staff to estimate cancer risks from the industry-wide source category of retail gasoline dispensing facilities. The methods are consistent with (1) SCAQMD's risk assessment procedures for Rule 1401 and (2) California Air Pollution Control Officer Association (CAPCOA) risk assessment guidance for gasoline service stations. The methods used to estimate emissions, pollutant concentrations, and cancer risks are covered here. Tables of maximum cancer risks at various locations in the South Coast Air Basin and at various residential and occupational distances are provided. The appendix concludes with an example calculation using the cancer risk tables.

Emission Inventory Methods

Rule 461 currently has annual throughput reporting requirements. It is designed to regulate gasoline vapor emissions from gasoline transfer and dispensing processes which contain volatile organic compounds (VOCs) and TACs such as benzene, ethylbenzene, toluene, xylenes, and naphthalene. The rule was initially adopted in 1976 and has been amended a number of times, most recently on March 7, 2008. Therefore, risk from these facilities can be calculated from the available information.

Emissions from gasoline transfer and dispensing mainly occur during loading, breathing, refueling, and spillage as described below:

Loading – Emissions occur when a fuel tanker truck unloads gasoline to the storage tanks. The storage tank vapors, displaced during loading, are emitted through its vent pipe. A pressure/vacuum valve installed on the tank vent pipe significantly reduces these emissions.

Breathing – Emissions occur through the storage tank vent pipe as a result of temperature and pressure changes in the tank vapor space.

Refueling – Emissions occur during motor vehicle refueling when gasoline vapors escape through the vehicle/nozzle interface.

Spillage – Emissions occur from evaporating gasoline that spills during vehicle refueling.

All retail service stations under SCAQMD jurisdiction have Phase I and II vapor recovery systems to control gasoline emissions. Phase I vapor recovery refers to the collection of gasoline vapors displaced from storage tanks when cargo tank trucks make gasoline deliveries. Phase II vapor recovery systems control the vapors displaced from the vehicle fuel tanks during refueling. In addition, all gasoline is stored underground with valves installed on the tank vent pipes to further control gasoline emissions. Out of the toxic compounds emitted from the gasoline stations, benzene, ethylbenzene, and naphthalene have cancer toxicity values.

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The control efficiencies and emission factors for each of the four processes are summarized in Table X-1. The factors given in the table follow the CAPCOA recommended guidelines except that 95 percent control is assumed for Phase II vapor recovery, whereas CAPCOA assumes 90 percent control due to incomplete compliance.

Table X-1. Gasoline and Benzene Emission Factors for Retail Service Stations

Process		Loading	Breathing	Refueling	Spillage
Controlled Gasoline EF (lbs/1,000 gal)		0.42	0.025	0.32	0.24
Control Efficiency		95%	75%	96%	N/A
Benzene	Weight Percent	0.30%	0.30%	0.30%	1.00%
	Emission Factor (lbs/1,000 gal)	0.00126	0.000075	0.00096	0.0024
Ethyl benzene	Weight Percent	0.118%	0.118%	0.118%	1.640%
	Emission Factor (lbs/1,000 gal)	0.0004956	0.0000295	0.0003776	0.003936
Naphthalene	Weight Percent	0.0%	0.0%	0.0%	0.14%
	Emission Factor (lbs/1,000 gal)	0.0	0.0	0.0	0.0003288

Note: Although the gasoline speciation profile is 0.36 wt% for benzene, a value of 0.30 wt% was used to be consistent with CAPCOA

Exposure Modeling Methods

Air quality modeling was performed using an air quality dispersion model, called AERMOD (American Meteorological Society/U.S. EPA Regulatory Model). As of December 9, 2006, U.S. EPA promulgated AERMOD as a replacement for ISCST3 (Industrial Source Complex – Short Term, Version 3) as the recommended dispersion model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

AERMOD was executed using the urban option, which is SCAQMD policy for all permitting in its jurisdiction. The U.S. EPA regulatory defaults options are implemented and the SCAQMD AERMOD-ready meteorological data was used. The County populations used are based on the 2008 estimates from the U.S. Census Bureau. The Los Angeles County population was

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9,862,049; Orange County population was 3,010,759; Riverside County population was 2,100,516; and San Bernardino County population was 2,015,355.

Emissions from gasoline service stations are non-buoyant and ground-based (or nearly ground-based). In addition, the peak impacts from this type of facility occur in close proximity to the source. Under these circumstances the local terrain is relatively unimportant; therefore flat terrain is assumed in the dispersion modeling.

As mentioned earlier, CAPCOA has developed industry-wide risk assessment guidelines for gasoline service stations (CAPCOA, 1997). These guidelines were developed to promote consistency throughout the State. However, CAPCOA recognized that many of the districts in the State have developed modeling methods and procedures unique to their situations. To address these differences among districts, CAPCOA allows for a district to deviate from the published guidelines as evidenced by the following statement in the industry-wide risk assessment guidelines for gas stations (CAPCOA, 1997):

This effort was initiated to provide a cost effective and uniform method for calculating gasoline station emission inventories and risk assessment for the thousands of gasoline stations throughout the State. However, districts may use other emission information and modeling procedures appropriate in their district.

The modeling performed here followed CAPCOA guidelines unless otherwise noted.

Modeling was performed using AERMOD, which is the U.S. EPA recommended model for dispersion modeling, instead of ISCST3.

Loading and breathing emissions exit the underground storage tank vent pipe and are thus treated as a point source. The height and diameter of the vent are assumed to be 3.66 meters (12 feet) and 0.05 meters (2 inches), respectively.

Refueling and spillage emissions are modeled as volume sources with horizontal dimensions of 13 meters by 13 meters to correspond to the dimensions of the pump islands and a vertical dimension of 5 meters to correspond to the height of the canopy. For refueling, the release height is assumed to be 1 meter to approximate the height of a vehicle fuel tank inlet, whereas spillage emissions are assumed to be released at ground level since nearly all the gasoline from spillage reaches the ground. These dimensions match CAPCOA's recommendations except for the vertical dimension of the volume source; CAPCOA recommends 4 meters. The SCAQMD has been requiring gas station risk assessments for permitting since early 1990s using a vertical dimension of the volume source corresponding to the pump island canopy top. Assuming a 5-meter vertical dimension continues this modeling practice.

According to the CAPCOA guidelines, the effects of building downwash on the calculated cancer risk were determined by using three different scenarios with a 10 meter long by 5 meter

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wide, by 4 meter high building. The building downwash algorithms only affect point sources and do not affect volume or area sources. Results of the modeling indicated that the placement of the buildings and their subsequent potential to create downwash have very little effect on the resultant risks from the vent pipes. Thus, it was concluded that it is not necessary to include building downwash when determining the dispersion from the vent pipes. In order to determine the effects of building downwash using AERMOD, a similar analysis was conducted with the same building dimensions using the BPIP computer program. The modeling results showed that building downwash caused the maximum ground level concentrations to more than double. Therefore, building downwash has a significant effect on the maximum concentrations and subsequent cancer risk and cannot be ignored.

The vent pipe, volume sources, and building are assumed to be located at the center of the service station property. Ideally, the locations of the vent pipes, pump islands, and buildings would be determined on a site by site basis. Unfortunately, that level of detail is not feasible for the industry-wide risk assessment presented here due to the large number of facilities.

It is assumed that the gas station described above operates continuously throughout the year. Further, it is assumed that 80 percent of the daily emissions occur equally each hour from 6 a.m. to 8 p.m. and the remaining 20 percent of the daily emissions occur equally each hour from 8 p.m. to 6 a.m.

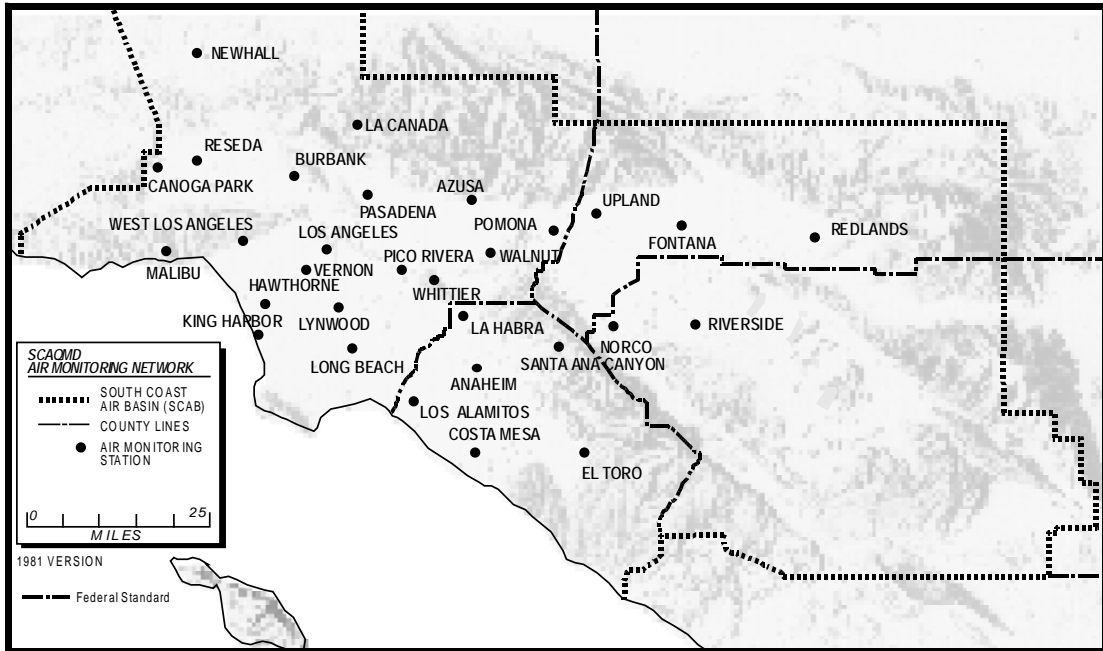
A sample AERMOD model input file for the generic retail service station described above is given in Exhibit X-1.

Modeling was performed at 26 SCAQMD meteorological stations shown in Figure X-1. The locations of each of the sites are given in Table X-2. The data are available on the SCAQMD website (<http://aqmd.gov/smog/metdata/AERMOD.html>). A polar receptor grid is assumed at ten degree azimuth increments at the following downwind distances: 20, 25, 30, 40, 50, 60, 70, 80, 90, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, and 1000 meters.

The peak model-predicted impacts at each downwind distance over the 36 azimuth angles are used to develop the screening risk tables for gasoline service stations (see Tables X-4 to X-9).

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Figure X-1: Meteorological Monitoring Stations in the South Coast Air Basin



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Table X-2: Locations of Meteorological Stations and Elevations

Station name	UTM Coordinates (km)		Lat./Long. Coordinates		Elevation (m)
	Easting	Northing	Latitude	Longitude	
Anaheim	413.14	3743.57	33:49:50	117:56:19	41
Azusa	414.81	3777.47	34:08:11	117:55:26	182
Banning	513.10	3753.19	33:55:15	116:51:30	660
Burbank	378.62	3782.24	34:10:33	118:19:01	175
Central LA	386.79	3770.00	34:03:59	118:13:36	87
Costa Mesa	414.16	3726.19	33:40:26	117:55:33	20
Crestline	474.62	3788.76	34:14:29	117:16:32	1387
Fontana	454.62	3773.19	34:06:01	117:29:31	367
Indio	572.67	3729.90	33:42:30	116:12:57	-4
La Habra	411.98	3754.08	33:55:31	117:57:08	82
Lake Elsinore	469.33	3726.13	33:40:35	117:19:51	406
LAX	367.83	3757.80	33:57:15	118:25:49	42
Long Beach	389.99	3743.04	33:49:25	118:11:19	30
Lynwood	388.07	3754.73	33:55:44	118:12:39	29
Mission Viejo	437.39	3721.17	33:37:49	117:40:30	170
Palm Springs	542.46	3745.73	33:51:10	116:32:28	171
Perris	478.91	3738.58	33:47:20	117:13:40	442
Pico Rivera	401.31	3763.61	34:00:37	118:04:07	58
Pomona	430.78	3769.61	34:04:00	117:45:00	270
Redlands	486.36	3768.50	34:03:32	117:08:52	481
Reseda	358.76	3785.11	34:11:57	118:31:58	228
Riverside	461.64	3762.10	34:00:02	117:24:55	250
San Bernardino	474.76	3773.82	34:06:24	117:16:25	305
Santa Clarita	359.48	3805.52	34:23:00	118:31:42	375
Upland	441.96	3773.66	34:06:14	117:37:45	379
West LA	365.54	3768.52	34:03:02	118:27:24	97

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Exhibit X-1: AERMOD Model Input File for a Generic Gasoline Service Station

```

CO STARTING
TITLEONE SCAQMD R461 SCREEN TABLE PREPARATION
TITLETWO Template - Underground, 10mX5mX4m building in middle
MODELOPT CONC
AVERTIME ANNUAL
POLLUTID Any
RUNORNOT RUN
ERRORFIL ERRORS.OUT
CO URBANOPT 9862049 LAC
CO FINISHED

SO STARTING
LOCATION P1 POINT      0.0    0.0    0.0
LOCATION P2 POINT      0.0    0.0    0.0
LOCATION P3 POINT      0.0    0.0    0.0
LOCATION P4 POINT      0.0    0.0    0.0

LOCATION V1 VOLUME     0.0    0.0    0.0
LOCATION V2 VOLUME     0.0    0.0    0.0
LOCATION V3 VOLUME     0.0    0.0    0.0
LOCATION V4 VOLUME     0.0    0.0    0.0
LOCATION V5 VOLUME     0.0    0.0    0.0

** Point Source      Q          RelHgt   Temp     Vel      Dia
**
SRCPARAM P1  1.8123E-05  3.660   291.0   0.00035  0.051
SRCPARAM P2  1.0787E-06  3.660   289.0   0.00011  0.051
SRCPARAM P3  7.1283E-06   3.660   291.0   0.00035  0.051
SRCPARAM P4  4.2431E-07   3.660   289.0   0.00011  0.051

** Volume Source      Q          RelHgt   Syinit   Szinit
**
SRCPARAM V1  1.3808E-05   1.00    3.02    2.33
SRCPARAM V2  3.4520E-05   0.00    3.02    2.33
SRCPARAM V3  5.4311E-06   1.00    3.02    2.33
SRCPARAM V4  5.6613E-05   0.00    3.02    2.33
SRCPARAM V5  4.7292E-06   0.00    3.02    2.33

BUILDHGT P1      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P1      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P1      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P1      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P1      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P1      4.00    4.00    4.00    4.00    4.00    4.00

BUILDHGT P2      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P2      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P2      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P2      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P2      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P2      4.00    4.00    4.00    4.00    4.00    4.00

BUILDHGT P3      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P3      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P3      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P3      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P3      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P3      4.00    4.00    4.00    4.00    4.00    4.00

BUILDHGT P4      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P4      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P4      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P4      4.00    4.00    4.00    4.00    4.00    4.00
BUILDHGT P4      4.00    4.00    4.00    4.00    4.00    4.00

```

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BUILDHGT	P4	4.00	4.00	4.00	4.00	4.00	4.00
BUILDWID	P1	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P1	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P1	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P1	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P1	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P1	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P2	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P2	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P2	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P2	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P2	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P2	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P3	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P3	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P3	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P3	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P3	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P3	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P4	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P4	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P4	10.87	10.26	9.33	8.12	6.66	5.00
BUILDWID	P4	6.66	8.12	9.33	10.26	10.87	11.16
BUILDWID	P4	11.11	10.72	10.00	10.72	11.11	11.16
BUILDWID	P4	10.87	10.26	9.33	8.12	6.66	5.00
BUILDLEN	P1	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P1	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P1	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P1	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P1	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P1	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P2	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P2	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P2	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P2	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P2	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P2	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P3	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P3	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P3	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P3	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P3	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P3	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P4	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P4	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P4	10.26	10.87	11.16	11.11	10.72	10.00
BUILDLEN	P4	10.72	11.11	11.16	10.87	10.26	9.33
BUILDLEN	P4	8.12	6.66	5.00	6.66	8.12	9.33
BUILDLEN	P4	10.26	10.87	11.16	11.11	10.72	10.00
XBADJ	P1	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P1	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P1	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P1	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P1	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P1	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P2	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P2	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P2	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P2	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67

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XBADJ	P2	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P2	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P3	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P3	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P3	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P3	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P3	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P3	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P4	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P4	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P4	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
XBADJ	P4	-5.36	-5.55	-5.58	-5.44	-5.13	-4.67
XBADJ	P4	-4.06	-3.33	-2.50	-3.33	-4.06	-4.67
XBADJ	P4	-5.13	-5.44	-5.58	-5.55	-5.36	-5.00
YBADJ	P1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P1	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P2	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P3	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P4	0.00	0.00	0.00	0.00	0.00	0.00
YBADJ	P4	0.00	0.00	0.00	0.00	0.00	0.00
URBANSRC	P1						
URBANSRC	P2						
URBANSRC	P3						
URBANSRC	P4						
URBANSRC	V1						
URBANSRC	V2						
URBANSRC	V3						
URBANSRC	V4						
URBANSRC	V5						
EMISFACT	P1	HROFDY	0.48	0.48	0.48	0.48	0.48
EMISFACT	P1	HROFDY	1.371	1.371	1.371	1.371	1.371
EMISFACT	P1	HROFDY	1.371	1.371	1.371	1.371	1.371
EMISFACT	P1	HROFDY	1.371	1.371	0.48	0.48	0.48
EMISFACT	P2	HROFDY	0.48	0.48	0.48	0.48	0.48
EMISFACT	P2	HROFDY	1.371	1.371	1.371	1.371	1.371
EMISFACT	P2	HROFDY	1.371	1.371	1.371	1.371	1.371
EMISFACT	P2	HROFDY	1.371	1.371	0.48	0.48	0.48
EMISFACT	V1	HROFDY	0.48	0.48	0.48	0.48	0.48
EMISFACT	V1	HROFDY	1.371	1.371	1.371	1.371	1.371
EMISFACT	V1	HROFDY	1.371	1.371	1.371	1.371	1.371
EMISFACT	V1	HROFDY	1.371	1.371	0.48	0.48	0.48
EMISFACT	V2	HROFDY	0.48	0.48	0.48	0.48	0.48
EMISFACT	V2	HROFDY	1.371	1.371	1.371	1.371	1.371

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EMISFACT V2 HROFDY 1.371 1.371 1.371 1.371 1.371 1.371 1.371
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 EMISFACT V5 HROFDY 0.48 0.48 0.48 0.48 0.48 0.48
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 EMISFACT V5 HROFDY 1.371 1.371 1.371 1.371 1.371 1.371
 EMISFACT V5 HROFDY 1.371 1.371 0.48 0.48 0.48 0.48

SRCGROUP P1 P1
 SRCGROUP P2 P2
 SRCGROUP P3 P3
 SRCGROUP P4 P4
 SRCGROUP V1 V1
 SRCGROUP V2 V2
 SRCGROUP V3 V3
 SRCGROUP V4 V4
 SRCGROUP V5 V5

SO FINISHED

RE STARTING

GRIDPOLR POL1 STA
 ORIG 0.0 0.0
 DIST 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200 250
 DIST 300 350 400 450 500 600 700 800 900 1000
 GDIR 36 10.0 10.0

GRIDPOLR POL1 END

RE FINISHED

ME STARTING

SURFFILE WSLA.SFC
 PROFFILE WSLA.PFL
 SURFDATA 0 2005
 UAIRDATA 3190 2005
 PROFBASE 0 METERS

ME FINISHED

OU STARTING

RECTABLE ALLAVE FIRST
 PLOTFILE ANNUAL P1 UM1P1.TXT
 PLOTFILE ANNUAL P2 UM1P2.TXT
 PLOTFILE ANNUAL P3 UM1P3.TXT
 PLOTFILE ANNUAL P4 UM1P4.TXT
 PLOTFILE ANNUAL V1 UM1V1.TXT
 PLOTFILE ANNUAL V2 UM1V2.TXT
 PLOTFILE ANNUAL V3 UM1V3.TXT
 PLOTFILE ANNUAL V4 UM1V4.TXT
 PLOTFILE ANNUAL V5 UM1V5.TXT

OU FINISHED

Risk Assessment Methods

The risk assessment methods used in the SCAQMD's *Risk Assessment Procedures for Rule 1401 and 212 (Version 7.0)* are used to calculate the cancer risks from retail gasoline service stations. The cancer risk (CR) is calculated as follows:

$$CR = \text{Cancer Potency (CP)} \cdot \text{Dose-Inhalation (DI)} \cdot \text{Multipathway Factor (MP)}$$

where,

$$DI = C_{\text{air}} \cdot \text{DBR} \cdot \text{EVF} \cdot 10^{-6} \cdot \text{MP}$$

$$C_{\text{air}} = C_{\text{ann}} \cdot \text{AF}_{\text{ann}}$$

Therefore, the equation for calculating cancer risks is:

$$CR = \text{CP} \cdot C_{\text{ann}} \cdot \text{AF}_{\text{ann}} \cdot \text{DBR} \cdot \text{EVF} \cdot 10^{-6} \cdot \text{MP}$$

CP is cancer potency in units of $(\text{mg}/\text{kg}\text{-day})^{-1}$. The inhalation cancer potency for benzene is $0.1(\text{mg}/\text{kg}\text{-day})^{-1}$, $0.0087(\text{mg}/\text{kg}\text{-day})^{-1}$ for ethylbenzene, and $0.12(\text{mg}/\text{kg}\text{-day})^{-1}$ for naphthalene. C_{ann} is the model-predicted annual average benzene concentration in $\mu\text{g}/\text{m}^3$. AF_{ann} is a concentration adjustment factor. It adjusts the model-predicted annual average benzene concentration, which are 24 hrs/day and 7 days/week averages, to an average for the off-site worker exposure period (i.e., 8 hrs/day and 5 days/week). This is necessary because the worker breathing rate of 149 L/kg-day is only applicable to the work-day and work-week exposure. It is assumed that the worker is only exposed while at work. Since the generic gasoline service station is assumed to operate continuously, AF_{ann} is assumed to be 1 for both worker and residential receptors.

DBR is the daily breathing rate in units of L/kg-day. The daily breathing rates for workers and residents are 149 L/kg-day and 302 L/kg-day, respectively. EVF is the exposure value factor, which is assumed to be 0.38 for workers and 0.96 for residents. The multi-pathway adjustment factor (MP) is used for substances that may contribute to risk from exposures other than inhalation. Inhalation is the only pathway into the body for benzene, ethylbenzene, and naphthalene; therefore, the multipathway factor is 1.

Risk Tables

Applying the methods and equations presented above, screening risk tables were developed for a generic retail gasoline service station. The modeled stations are assumed to have Phase I and II vapor recovery with cancer risk calculated for different locations; see Table X-1 for the control efficiencies and emission factors assumed for the modeling.

Cancer risks from a typical gasoline service station can be estimated from the screening tables as follows: First, determine which of the 26 locations in these tables is closest to the gas station or best represents the facility. SCAQMD staff made use of location information that is available in the SCAQMD's permit database. The SCAQMD is broken up into 38 source/receptor areas as shown in Figure X-2. The source/receptor area is provided for each facility in SCAQMD's permit database. As shown in Table X-3, SCAQMD staff assigned one of the 26 meteorological sites to each source receptor area, which was then used to choose a meteorological site for each gasoline dispensing facility.

Next, determine the distance from the service station to the nearest residential and occupational location. Tables X-4 to X-9 provide the maximum cancer risk for a gasoline dispensing station with either underground or aboveground tanks with a one million gallon per year throughput at various residential and occupational distances, respectively. The various meteorological correction factors are also provided to adjust the cancer risk estimates to the SRA where the project is located. Using the above information, pick the cancer risk from the appropriate tables. Lastly, scale the cancer risk by the actual gasoline throughput of the service station. An example of a risk calculation is provided for a hypothetical gasoline service station in a subsequent section.

Figure X-2: Source Receptor Areas

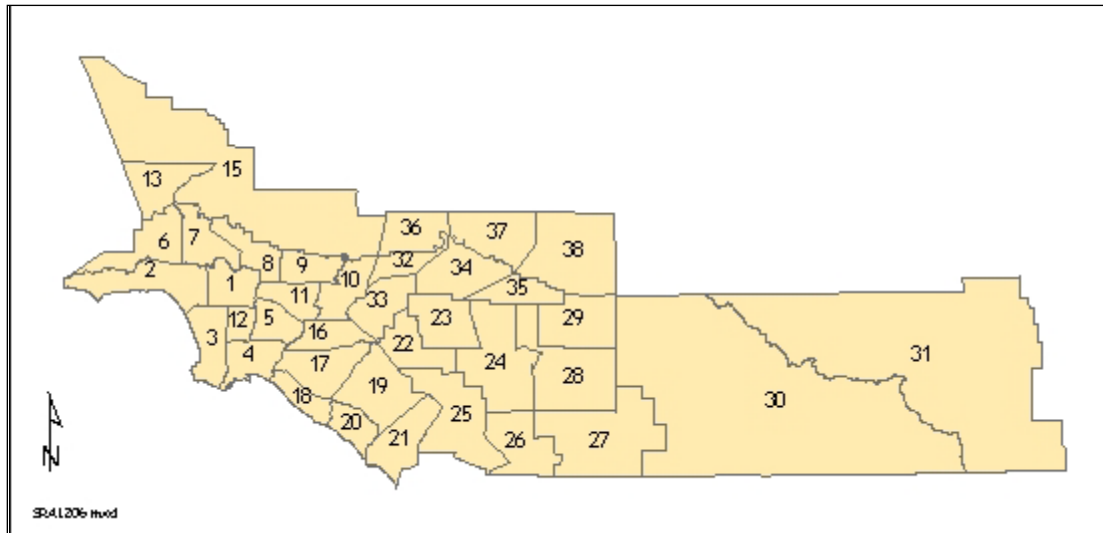


Table X-3: Meteorological Stations for Each Source Receptor Area

Meteorological Station	Source Receptor Area	Meteorological Station	Source Receptor Area
Anaheim	17	Lynwood	12
Azusa	8, 9	Mission Viejo	19, 21
Banning	29	Perris	24, 28
Burbank	7	Palm Springs	30, 31
Central LA	1	Pico Rivera	5, 11
Crestline	37	Pomona	10
Costa Mesa	18, 20	Redlands	35, 38
Fontana	34	Reseda	6
Indio	30	Riverside	22, 23
La Habra	16	Santa Clarita	13, 15
Lake Elsinore	25, 26, 27	San Bernardino	34
LAX	3	Upland	32, 33, 36
Long Beach	4	West LA	2

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Table X-4: Residential MICR – Underground Tanks per One Million Gallons of Gasoline

Distance (m)	20	25	30	40	50	60	70	75	80
MICR	5.600	4.000	3.004	1.866	1.278	0.940	0.722	0.636	0.572
Distance (m)	90	100	125	150	175	200	250	300	350
MICR	0.462	0.381	0.248	0.174	0.125	0.095	0.060	0.044	0.034
Distance (m)	400	450	500	600	700	800	900	1000	-
MICR	0.027	0.022	0.018	0.014	0.011	0.009	0.007	0.006	-

Table X-5: Commercial MICR – Underground Tanks per One Million Gallons of Gasoline

Distance (m)	20	25	30	40	50	60	70	75	80
MICR	1.094	0.781	0.587	0.364	0.250	0.184	0.141	0.124	0.112
Distance (m)	90	100	125	150	175	200	250	300	350
MICR	0.090	0.074	0.049	0.034	0.024	0.018	0.012	0.009	0.007
Distance (m)	400	450	500	600	700	800	900	1000	-
MICR	0.005	0.004	0.004	0.003	0.002	0.002	0.001	0.001	-

**Table X-6: Meteorological Correction Factors (MET) for Underground Tanks
by Source Receptor Area (SRA)**

SRA	1	2	3	4	5	6	7	8	9	10	11	12	13
MET	0.86	1.00	0.90	1.04	0.80	0.95	0.89	1.04	1.04	1.14	0.08	1.18	0.70
SRA	15	16	17	18	19	20	21	22	23	24	25	26	27
MET	0.70	0.96	0.91	1.08	0.71	1.08	0.71	0.91	0.91	0.81	0.79	0.79	0.79
SRA	28	29	30	31	32	33	34	35	36	37	38	-	-
MET	0.81	0.83	1.00	1.00	1.05	1.05	1.06	1.35	1.05	1.01	1.35	-	-

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Table X-7: Residential MICR – Aboveground Tanks per One Million Gallons of Gasoline

Distance (m)	20	25	30	40	50	60	70	75	80
MICR	5.440	3.896	2.931	1.823	1.249	0.919	0.706	0.622	0.559
Distance (m)	90	100	125	150	175	200	250	300	350
MICR	0.452	0.372	0.242	0.169	0.120	0.091	0.058	0.044	0.032
Distance (m)	400	450	500	600	700	800	900	1000	-
MICR	0.026	0.021	0.018	0.013	0.010	0.008	0.007	0.006	-

Table X-8: Commercial MICR – Aboveground Tanks per One Million Gallons of Gasoline

Distance (m)	20	25	30	40	50	60	70	75	80
MICR	1.062	0.761	0.572	0.356	0.244	0.179	0.138	0.121	0.109
Distance (m)	90	100	125	150	175	200	250	300	350
MICR	0.088	0.073	0.047	0.033	0.024	0.018	0.011	0.008	0.006
Distance (m)	400	450	500	600	700	800	900	1000	-
MICR	0.005	0.004	0.003	0.003	0.002	0.002	0.001	0.001	-

**Table X-9: Meteorological Correction Factors (MET) for Aboveground Tanks
by Source Receptor Area (SRA)**

SRA	1	2	3	4	5	6	7	8	9	10	11	12	13
MET	0.86	1.00	0.90	1.05	0.80	0.95	0.89	1.04	1.04	1.14	0.80	1.18	0.70
SRA	15	16	17	18	19	20	21	22	23	24	25	26	27
MET	0.70	0.96	0.90	1.08	0.70	1.08	0.70	0.91	0.91	0.81	0.79	0.79	0.79
SRA	28	29	30	31	32	33	34	35	36	37	38	-	-
MET	0.81	0.83	1.00	1.00	1.04	1.04	1.06	1.36	1.04	1.01	1.36	-	-

Results

Figure X-3 shows the species apportionment and Figure X-4 shows the source apportionment of the calculated cancer risks. Using the results from the West LA meteorological station and at a distance of 20 meters, emissions from spillage account for 48% of the cancer risk, while benzene is the TAC which drives the risk, accounting for 87%. This is consistent with the discussion of the relative toxicity of substances in gasoline found in Appendix I of the CAPCOA document, which shows that benzene is the most important substance driving the risk in the gasoline service stations.

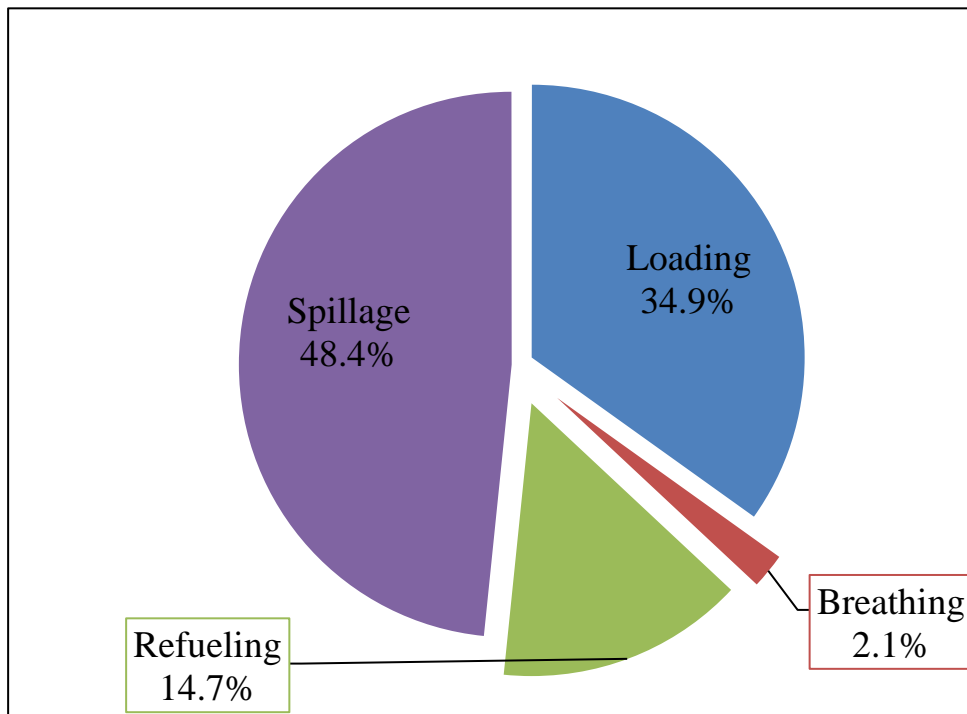
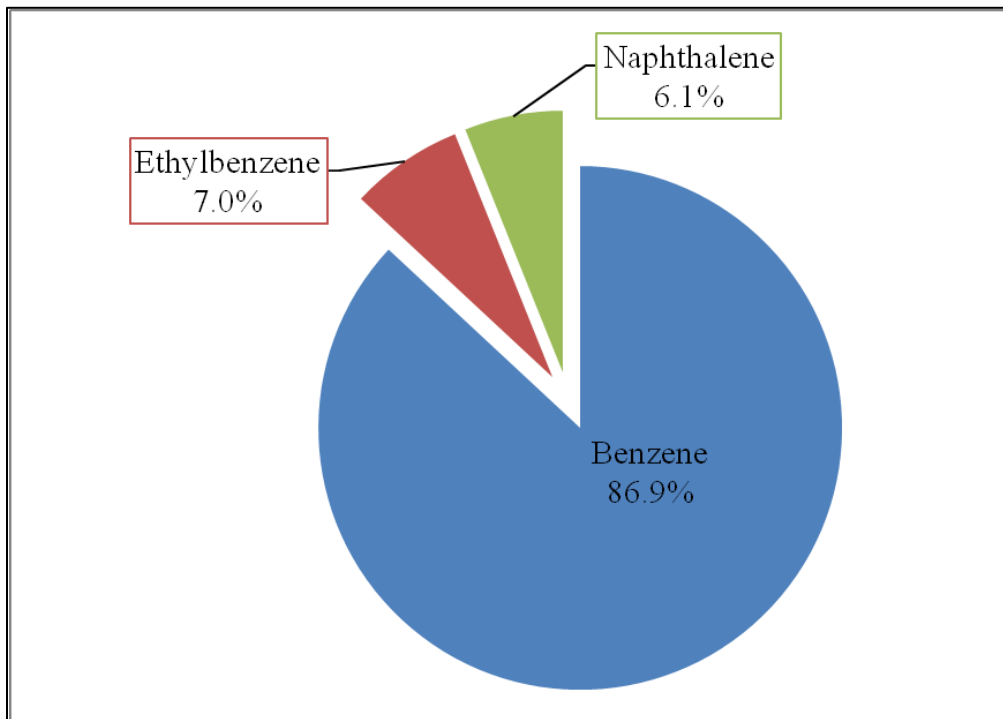
According to the CARB speciation profile of gasoline (both vapor and liquid), SCAQMD reviewed the most recent consolidated table of health values for risk assessments published by OEHHA and found that for non-cancer health effects, the following toxic compounds were analyzed:

Chronic HI: benzene, ethylbenzene, toluene, xylene, naphthalene, n-hexane, and methanol

Acute HI: benzene, toluene, xylene and methanol.

The results show that for the maximum permitted risk of 10 in a million, the Hazard Index for acute and chronic are insignificant (< 0.1). Therefore, the chronic and acute non-cancer health effects need not be calculated, which is consistent with CAPCOA's guidelines.

Figure X-3: Species Apportionment



Example Calculations

The following example demonstrates how the SCAQMD staff plans to assign health risk values for retail gasoline dispensing facilities based on information received and using Tables C-3 and C-4.

The calculation steps are as follows:

1. **Cancer Risk (CR):** The SCAQMD will assign cancer risk values to each retail gasoline dispensing facility based on facility location, process information, and receptor proximity.
 - a. *Residential CR:* Use the facility location and the distance to the nearest resident to identify the risk. The residential CRs for retail gasoline dispensing are contained in Table C-3.
 - b. *Occupational CR:* Use the facility location and the distance to the nearest worker to identify the risk. The occupational CRs for retail gasoline dispensing are contained in Table C-4.
 - c. *Maximum Individual CR (MICR):* Select the greater CR between the residential and occupational CRs (as identified above).

Please note the following when calculating risk values for gasoline dispensing facilities:

- The gasoline dispensing risk tables (Tables C-3 and C-4) are based on a gasoline throughput of 1 million (MM) gallons per year (gal/yr). Actual facility throughput should be multiplied by the values contained in the gasoline dispensing risk tables to calculate the appropriate facility risk.
- The SCAQMD maintains 26 meteorological stations as shown in Figure C-1. If there are no meteorological stations in the city of the facility, the closest meteorological station to the facility should be used.
- The gasoline dispensing risk tables (Tables C-3 and C-4) are based on discrete downwind distances, which cover two pages. If the actual downwind distance is not listed in the tables, then linear interpolation between distance cells is acceptable.
- Although gasoline vapors and its TAC constituents (for example, benzene, toluene, and xylene) have non-cancer impacts, **the risks from retail gasoline dispensing facilities are dominated by cancer risk.** Therefore, hazard index for these facilities will not be calculated.

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Example: A retail gasoline dispensing facility submits the following information: 15 MM gal/yr gasoline throughput, located in Pomona, nearest residential receptor 250 meters away, and nearest occupational receptor 25 meters away.

In this example the actual downwind distances are in the tables. However, if the actual downwind distances are not in the table, then linear interpolation between distance cells is acceptable to obtain cancer risks for the actual downwind distances.

1. Cancer Risk (CR):

- a. *Residential CR:* Using Table C-3, the residential cancer risk is 0.065 in one million (250 meters and Pomona) for 1 MM gal/yr. Since the facility's gasoline throughput for this example is 15 MM gal/yr, the corresponding residential cancer risk is 0.98 in one million.

$$\text{Residential CR} = \frac{0.065 \text{ in one million}}{(1 \text{ MM gal/yr})} \times (15 \text{ MM gal/yr})$$

Residential CR = 0.98 in one million

- a. *Occupational CR:* Using Table C-4, the occupational cancer risk is 0.784 in one million (25 meters and Pomona) for 1 MM gal/yr. Since the facility's gasoline throughput for this example is 15 MM gal/yr, the corresponding occupational cancer risk is 11.8 in one million.

$$\text{Occupational CR (GDS)} = \frac{0.784 \text{ in one million}}{(1 \text{ MM gal/yr})} \times (15 \text{ MM gal/yr})$$

Occupational CR = 11.8 in one million
--

- b. *MICR:* The MICR for this IWS facility (GDS) is **11.8** in one million (occupational receptor).

APPENDIX XI

**TIER 2 SCREENING TABLES
FOR SPRAY BOOTHS
FOR USE IN RULE 1401**

Note: This Appendix is currently in development and Spray Booths should continue to use Risk Assessment Procedures for Rules 1401 and 212 and Attachment L, Version 7.0 (July 1, 2005) to evaluate the health risk impacts

ATTACHMENTS

**PERMIT APPLICATION PACKAGES
INCLUDING TABLES**

**(Note: Attachment M,
EFFECTIVE FOR APPLICATIONS DEEMED COMPLETE
ON OR AFTER July 5, 2015)**

South Coast Air Quality Management District



DRAFT PERMIT APPLICATION PACKAGE “M”

**For Use in Conjunction with the
RISK ASSESSMENT PROCEDURES
for Rules 1401, 1401.1, and 212
Version 8.0**

Revised June 5, 2015

PERMIT APPLICATION PACKAGE “M”
used in conjunction with the
RISK ASSESSMENT PROCEDURES
FOR RULES 1401, 1401.1, AND 212, VERSION 8.0
EFFECTIVE FOR APPLICATIONS DEEMED COMPLETE
ON OR AFTER July 5, 2015

Table 1.1	Screening Emission Levels
Table 2.1	Dispersion Factors (χ/Q) for Point Source Equipment Operating 12 Hours per Day or Less, Stack Height ≥ 14 ft to 24 ft
Table 2.2	Dispersion Factors (χ/Q) for Point Source Equipment Operating 12 Hours per Day or Less, Stack Height > 24 ft to 49 ft
Table 2.3	Dispersion Factors (χ/Q) for Point Source Equipment Operating 12 Hours per Day or Less, Stack Height > 49 ft
Table 3.1	Dispersion Factors (χ/Q) for Point Source Equipment Operating More Than 12 Hours per Day, Stack Height ≥ 14 ft to 24 ft
Table 3.2	Dispersion Factors (χ/Q) for Point Source Equipment Operating More Than 12 Hours per Day, Stack Height > 24 ft to 49 ft
Table 3.3	Dispersion Factors (χ/Q) for Point Source Equipment Operating More Than 12 Hours per Day, Stack Height > 49 ft
Table 4.1	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day or Less, Building Area $\leq 3,000$ ft ² , Height ≤ 20 ft
Table 4.2	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day or Less, Building Area $> 3,000$ to 10,000 ft ² , Height ≤ 20 ft
Table 4.3	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day or Less, Building Area $> 3,000$ to 10,000 ft ² , Height > 20 ft
Table 4.4	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day or Less, Building Area $> 10,000$ to 30,000 ft ² , Height ≤ 20 ft
Table 4.5	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day or Less, Building Area $> 10,000$ to 30,000 ft ² , Height > 20 ft
Table 4.6	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day or Less, Building Area $> 30,000$ ft ² , Height > 20 ft
Table 5.1	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day, Building Area $\geq 3,000$ ft ² , Height ≤ 20 ft
Table 5.2	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day, Building Area $> 3,000$ to 10,000 ft ² , Height ≤ 20 ft

Table 5.3	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day, Building Area > 3,000 to 10,000 ft ² , Height > 20 ft
Table 5.4	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day, Building Area > 10,000 to 30,000 ft ² , Height \leq 20 ft
Table 5.5	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day, Building Area > 10,000 to 30,000 ft ² , Height > 20 ft
Table 5.6	Dispersion Factors (χ/Q) for Volume Source Equipment Operating 12 Hours per Day, Building Area > 30,000 ft ² , Height > 20 ft
Table 6.1	Dispersion Factors (χ/Q) for Acute Hazard Index Point Source Equipment
Table 7.1	Dispersion Factors (χ/Q) for Acute Hazard Index Volume Source Equipment
Table 8.1	Inhalation Cancer Potency (CP), Reference Exposure Level (REL) and Multi Pathway Adjustment Factors (MP)
Table 9.1	Residential Combined Exposure Factor (CEF)
Table 9.2	Worker Combined Exposure Factor (CEF)
Table 10.1	Worker Adjustment Factor Operating 12 Hours per Day or Less
Table 10.2	Worker Adjustment Factor Operating More Than 12 Hours per Day
Table 11.1	Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)
Table 11.2	Target Organs Affected by Toxic Air Contaminants (Acute Toxicity)
Table 11.3	Target Organs Affected by Toxic Air Contaminants (8-hour Toxicity)
Table 12.1	Meteorological Monitoring Stations in the South Coast Air Basin
Table 12.2	Meteorological Stations for Each Source/Receptor Area
Figure 1	Meteorological Monitoring Stations in the South Coast Air Basin (Map)
Figure 2	Source/Receptor Areas

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 1.1
Screening Emission Levels

THESE ARE NOT EMISSION LIMITS. Exceedances of these levels indicate that a screening health risk assessment should be performed.

Date Toxicity Criteria Last Updated				Pollutant		Annual Pollutant Screening Level			Hourly Pollutant Screening Level		
Cancer	Chronic	8-hr Chronic	Acute	Toxic Air Contaminant	CAS No	Emissions at 25 m (lb/yr)	Emissions at 50 m (lb/yr)	Emissions at 100 m (lb/yr)	Emissions at 25 m, (lb/hr)	Emissions at 50 m, (lb/hr)	Emissions at 100 m, (lb/hr)
4/99[5/93]	12/19/08	12/19/08	12/19/08	Acetaldehyde	75-07-0	5.66E+00 (ca)	1.72E+01 (ca)	3.51E+01 (ca)	5.37E-01	1.40E+00	2.09E+00
4/1/99				Acetamide	60-35-5	8.08E-01 (ca)	2.45E+00 (ca)	5.01E+00 (ca)			
	12/19/08	12/19/08	12/19/08	Acrolein	107-02-8	6.25E+00 (8hr)	2.91E+01 (8hr)	8.31E+01 (ch)	2.86E-03	7.45E-03	1.11E-02
4/99[7/90]				Acrylamide	79-06-1	1.26E-02 (ca)	3.82E-02 (ca)	7.80E-02 (ca)			
			4/1/99	Acrylic Acid	79-10-7				6.85E+00	1.79E+01	2.67E+01
4/99[1/91]	12/1/01			Acrylonitrile	107-13-1	5.66E-02 (ca)	1.72E-01 (ca)	3.51E-01 (ca)			
4/1/99				Allyl Chloride	107-05-1	2.69E+00 (ca)	8.18E+00 (ca)	1.67E+01 (ca)			
4/1/99				2-Aminoanthraquinone	117-79-3	1.71E+00 (ca)	5.21E+00 (ca)	1.06E+01 (ca)			
	2/1/00		4/1/99	Ammonia	7664-41-7	7.66E+03 (ch)	2.33E+04 (ch)	4.75E+04 (ch)	3.66E+00	9.53E+00	1.43E+01
4/1/99				Aniline	62-53-3	9.93E+00 (ca)	3.01E+01 (ca)	6.16E+01 (ca)			
7/1/90	12/19/08	12/19/08	12/19/08	Arsenic and Compounds (Inorganic)	7440-38-2	4.86E-04 (ca)	1.47E-03 (ca)	3.01E-03 (ca)	2.28E-04	5.96E-04	8.91E-04
	12/19/08	12/19/08	12/19/08	Arsine	7784-42-1	1.34E-01 (8hr)	6.24E-01 (8hr)	1.96E+00 (8hr)	2.28E-04	5.96E-04	8.91E-04
3/1/86				Asbestos	1332-21-4	7.72E-07 (ca)	2.34E-06 (ca)	4.78E-06 (ca)			
1/1/85	6/27/14	6/27/14	6/27/14	Benzene	71-43-2	5.66E-01 (ca)	1.72E+00 (ca)	3.51E+00 (ca)	3.08E-02	8.04E-02	1.20E-01
4/99[1/91]				Benzidine (and Its Salts)	92-87-5	1.13E-04 (ca)	3.44E-04 (ca)	7.02E-04 (ca)			
4/99[1/91]				Benzidine Based Dyes	1020	1.13E-04 (ca)	3.44E-04 (ca)	7.02E-04 (ca)			
4/99[1/91]				Direct Black	1937-37-7	1.13E-04 (ca)	3.44E-04 (ca)	7.02E-04 (ca)			
4/99[1/91]				Direct Blue	2602-46-2	1.13E-04 (ca)	3.44E-04 (ca)	7.02E-04 (ca)			
4/99[1/91]				Direct Brown (Technical Grade)	16071-86-6	1.13E-04 (ca)	3.44E-04 (ca)	7.02E-04 (ca)			
4/1/99			4/1/99	Benzyl Chloride	100-44-7	3.33E-01 (ca)	1.01E+00 (ca)	2.06E+00 (ca)	2.74E-01	7.15E-01	1.07E+00
4/99[7/90]	12/1/01			Beryllium and Compounds	7440-41-7	6.74E-03 (ca)	2.05E-02 (ca)	4.18E-02 (ca)			
4/1/99				Bis(2-Chloroethyl)Ether (Dichloroethyl Ether)	111-44-4	2.26E-02 (ca)	6.87E-02 (ca)	1.40E-01 (ca)			
4/99[1/91]				Bis(Chloromethyl)Ether	542-88-1	1.23E-03 (ca)	3.74E-03 (ca)	7.63E-03 (ca)			
4/99[10/93]				Potassium Bromate	7758-01-2	1.15E-01 (ca)	3.51E-01 (ca)	7.16E-01 (ca)			
7/1/92	7/29/13	7/29/13	7/29/13	1,3-Butadiene	106-99-0	9.43E-02 (ca)	2.86E-01 (ca)	5.85E-01 (ca)	7.54E-01	1.97E+00	2.94E+00
1/1/87	1/1/01			Cadmium and Compounds	7440-43-9	3.77E-03 (ca)	1.15E-02 (ca)	2.34E-02 (ca)			
	5/13/02		4/1/99	Carbon Disulfide	75-15-0	3.06E+04 (ch)	9.30E+04 (ch)	1.90E+05 (ch)	7.08E+00	1.85E+01	2.76E+01
9/1/87	1/1/01		4/1/99	Carbon Tetrachloride (Tetrachloromethane)	56-23-5	3.77E-01 (ca)	1.15E+00 (ca)	2.34E+00 (ca)	2.17E+00	5.66E+00	8.47E+00
4/1/99				Chlorinated Paraffins	108171-26-2	6.36E-01 (ca)	1.93E+00 (ca)	3.94E+00 (ca)			
	2/1/00		4/1/99	Chlorine	7782-50-5	7.66E+00 (ch)	2.33E+01 (ch)	4.75E+01 (ch)	2.40E-01	6.25E-01	9.36E-01
	1/1/01			Chlorine Dioxide	10049-04-4	2.30E+01 (ch)	6.98E+01 (ch)	1.42E+02 (ch)			
4/1/99				4-Chloro-o-Phenylenediamine	95-83-0	3.54E+00 (ca)	1.07E+01 (ca)	2.19E+01 (ca)			
	1/1/01			Chlorobenzene	108-90-7	3.83E+04 (ch)	1.16E+05 (ch)	2.37E+05 (ch)			
12/1/90	4/1/00		4/1/99	Chloroform	67-66-3	2.98E+00 (ca)	9.04E+00 (ca)	1.85E+01 (ca)	1.71E-01	4.47E-01	6.68E-01
4/1/99				Pentachlorophenol	87-86-5	3.14E+00 (ca)	9.55E+00 (ca)	1.95E+01 (ca)			
4/99[1/91]				2,4,6-Trichlorophenol	88-06-2	8.08E-01 (ca)	2.45E+00 (ca)	5.01E+00 (ca)			
	12/1/01		4/1/99	Chloropicrin	76-06-2	1.53E+01 (ch)	4.65E+01 (ch)	9.50E+01 (ch)	3.31E-02	8.64E-02	1.29E-01
4/1/99				p-Chloro-o-Toluidine	95-69-2	2.10E-01 (ca)	6.36E-01 (ca)	1.30E+00 (ca)			
1/1/86	1/1/01			Chromium 6+	18540-29-9	6.95E-05 (ca)	2.11E-04 (ca)	4.31E-04 (ca)			
1/1/86	1/1/01			Barium Chromate	10294-40-3	3.38E-04 (ca)	1.03E-03 (ca)	2.10E-03 (ca)			
1/1/86	1/1/01			Calcium Chromate	13765-19-0	2.09E-04 (ca)	6.33E-04 (ca)	1.29E-03 (ca)			
1/1/86	1/1/01			Lead Chromate	7758-97-6	4.32E-04 (ca)	1.31E-03 (ca)	2.68E-03 (ca)			
1/1/86	1/1/01			Sodium Dichromate	10588-01-9	1.75E-04 (ca)	5.31E-04 (ca)	1.09E-03 (ca)			
1/1/86	1/1/01			Strontium Chromate	7789-06-2	2.72E-04 (ca)	8.26E-04 (ca)	1.69E-03 (ca)			

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 1.1 (continued)
Screening Emission Levels

Date Toxicity Criteria Last Updated				Pollutant		Annual Pollutant Screening Level			Hourly Pollutant Screening Level		
Cancer	Chronic	8-hr Chronic	Acute	Toxic Air Contaminant	CAS No	Emissions at 25 m (lb/yr)	Emissions at 50 m (lb/yr)	Emissions at 100 m (lb/yr)	Emissions at 25 m, (lb/hr)	Emissions at 50 m, (lb/hr)	Emissions at 100 m, (lb/hr)
1/1/86	1/1/01			Chromic Trioxide (as Chromic Acid Mist)	1333-82-0	1.34E-04 (ca)	4.06E-04 (ca)	8.28E-04 (ca)			
			4/1/99	Copper and Compounds	7440-50-8				1.14E-01	2.98E-01	4.46E-01
4/1/99				p-Cresidine	120-71-8	3.77E-01 (ca)	1.15E+00 (ca)	2.34E+00 (ca)			
	1/1/01			Cresols (Mixtures of)	1319-77-3	2.30E+04 (ch)	6.98E+04 (ch)	1.42E+05 (ch)			
	1/1/01			m-Cresol	108-39-4	2.30E+04 (ch)	6.98E+04 (ch)	1.42E+05 (ch)			
	1/1/01			o-Cresol	95-48-7	2.30E+04 (ch)	6.98E+04 (ch)	1.42E+05 (ch)			
	1/1/01			p-Cresol	106-44-5	2.30E+04 (ch)	6.98E+04 (ch)	1.42E+05 (ch)			
4/1/99				Cupferron	135-20-6	2.57E-01 (ca)	7.81E-01 (ca)	1.59E+00 (ca)			
	4/1/00		4/1/99	Hydrogen Cyanide (Hydrocyanic Acid)	74-90-8	3.45E+02 (ch)	1.05E+03 (ch)	2.14E+03 (ch)	3.88E-01	1.01E+00	1.51E+00
4/1/99				2,4-Diaminoanisole	615-05-4	2.46E+00 (ca)	7.47E+00 (ca)	1.53E+01 (ca)			
4/1/99				2,4-Diaminotoluene	95-80-7	1.41E-02 (ca)	4.30E-02 (ca)	8.77E-02 (ca)			
4/99[1/92]				1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	8.08E-03 (ca)	2.45E-02 (ca)	5.01E-02 (ca)			
4/99[1/91]	1/1/01			p-Dichlorobenzene	106-46-7	1.41E+00 (ca)	4.30E+00 (ca)	8.77E+00 (ca)			
4/99[1/91]				3,3-Dichlorobenzidine	91-94-1	4.72E-02 (ca)	1.43E-01 (ca)	2.92E-01 (ca)			
4/1/99				1,1,-Dichloroethane (Ethylidene Dichloride)	75-34-3	9.93E+00 (ca)	3.01E+01 (ca)	6.16E+01 (ca)			
4/99[1/92]				Di(2-Ethylhexyl)Phthalate (DEHP)	117-81-7	1.29E+00 (ca)	3.92E+00 (ca)	8.00E+00 (ca)			
	12/1/01			Diethanolamine	111-42-2	1.15E+02 (ch)	3.49E+02 (ch)	7.12E+02 (ch)			
4/1/99				p-Dimethylaminoazobenzene	60-11-7	1.23E-02 (ca)	3.74E-02 (ca)	7.63E-02 (ca)			
	1/1/01			N,N-Dimethyl Formamide	68-12-2	3.06E+03 (ch)	9.30E+03 (ch)	1.90E+04 (ch)			
4/1/99				2,4-Dinitrotoluene	121-14-2	1.83E-01 (ca)	5.54E-01 (ca)	1.13E+00 (ca)			
4/99[1/91]	4/1/00		4/1/99	1,4-Dioxane (1,4-Diethylene Dioxide)	123-91-1	2.10E+00 (ca)	6.36E+00 (ca)	1.30E+01 (ca)	3.43E+00	8.93E+00	1.34E+01
1/1/88				1,2-Diphenylhydrazine {Hydrazobenzene}	122-66-7	6.47E-02 (ca)	1.96E-01 (ca)	4.01E-01 (ca)			
4/99[1/92]	1/1/01		4/1/99	Epichlorohydrin (1-Chloro-2,3-Epoxypropane)	106-89-8	7.07E-01 (ca)	2.15E+00 (ca)	4.39E+00 (ca)	1.48E+00	3.87E+00	5.79E+00
	1/1/01			1,2-Epoxybutane	106-88-7	7.66E+02 (ch)	2.33E+03 (ch)	4.75E+03 (ch)			
11/7/07	2/1/00			Ethyl Benzene	100-41-4	6.50E+00 (ca)	1.97E+01 (ca)	4.03E+01 (ca)			
	4/1/00			Ethyl Chloride (Chloroethane)	75-00-3	1.15E+06 (ch)	3.49E+06 (ch)	7.12E+06 (ch)			
7/1/85	12/1/01			Ethylene Dibromide (1,2-Dibromoethane)	106-93-4	2.26E-01 (ca)	6.87E-01 (ca)	1.40E+00 (ca)			
9/1/85	1/1/01			Ethylene Dichloride (1,2-Dichloroethane)	107-06-2	7.86E-01 (ca)	2.39E+00 (ca)	4.87E+00 (ca)			
	4/1/00			Ethylene Glycol	107-21-1	1.53E+04 (ch)	4.65E+04 (ch)	9.50E+04 (ch)			
11/1/87	1/1/01			Ethylene Oxide (1,2-Epoxyethane)	75-21-8	1.83E-01 (ca)	5.54E-01 (ca)	1.13E+00 (ca)			
4/1/99				Ethylene Thiourea	96-45-7	1.26E+00 (ca)	3.82E+00 (ca)	7.80E+00 (ca)			
	8/14/03		4/1/99	Flourides	1101	8.73E+01 (ch)	2.65E+02 (ch)	5.41E+02 (ch)	2.74E-01	7.15E-01	1.07E+00
	8/14/03		4/1/99	Hydrogen Fluoride (Hydrofluoric Acid)	7664-39-3	8.84E+01 (ch)	2.68E+02 (ch)	5.48E+02 (ch)	2.74E-01	7.15E-01	1.07E+00
3/1/92	12/19/08	12/19/08	12/19/08	Formaldehyde	50-00-0	2.69E+00 (ca)	8.18E+00 (ca)	1.67E+01 (ca)	6.28E-02	1.64E-01	2.45E-01
	1/1/01			Glutaraldehyde	111-30-8	3.06E+00 (ch)	9.30E+00 (ch)	1.90E+01 (ch)			
			4/1/99	Ethylene Glycol Butyl Ether – EGBE	111-76-2				1.60E+01	4.17E+01	6.24E+01
	2/1/00		4/99[1/92]	Ethylene Glycol Ethyl Ether – EGEE	110-80-5	2.68E+03 (ch)	8.14E+03 (ch)	1.66E+04 (ch)	4.23E-01	1.10E+00	1.65E+00
	2/1/00		4/1/99	Ethylene Glycol Ethyl Ether Acetate – EGEEA	111-15-9	1.15E+04 (ch)	3.49E+04 (ch)	7.12E+04 (ch)	1.60E-01	4.17E-01	6.24E-01
	2/1/00		4/1/99	Ethylene Glycol Methyl Ether – EGME	109-86-4	2.30E+03 (ch)	6.98E+03 (ch)	1.42E+04 (ch)	1.06E-01	2.77E-01	4.14E-01

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 1.1 (continued)
Screening Emission Levels

Date Toxicity Criteria Last Updated				Pollutant		Annual Pollutant Screening Level			Hourly Pollutant Screening Level		
Cancer	Chronic	8-hr Chronic	Acute	Toxic Air Contaminant	CAS No	Emissions at 25 m (lb/yr)	Emissions at 50 m (lb/yr)	Emissions at 100 m (lb/yr)	Emissions at 25 m, (lb/hr)	Emissions at 50 m, (lb/hr)	Emissions at 100 m, (lb/hr)
	2/1/00			Ethylene Glycol Methyl Ether Acetate – EGMEA	110-49-6	3.45E+03 (ch)	1.05E+04 (ch)	2.14E+04 (ch)			
4/99[1/91]				Hexachlorobenzene	118-74-1	3.14E-02 (ca)	9.55E-02 (ca)	1.95E-01 (ca)			
4/99[1/91]				Hexachlorocyclohexanes	608-73-1	2.63E-03 (ca)	7.97E-03 (ca)	1.63E-02 (ca)			
4/99[1/91]				Alpha-Hexachlorocyclohexane	319-84-6	2.63E-03 (ca)	7.97E-03 (ca)	1.63E-02 (ca)			
4/99[1/91]				Beta- Hexachlorocyclohexane	319-85-7	2.63E-03 (ca)	7.97E-03 (ca)	1.63E-02 (ca)			
4/1/1999				Gamma-Hexachlorocyclohexane (Lindane)	58-89-9	9.55E-03 (ca)	2.90E-02 (ca)	5.92E-02 (ca)			
	4/1/00			n-Hexane	110-54-3	2.68E+05 (ch)	8.14E+05 (ch)	1.66E+06 (ch)			
4/99[7/90]	1/1/01			Hydrazine	302-01-2	3.33E-03 (ca)	1.01E-02 (ca)	2.06E-02 (ca)			
	2/1/00		4/1/99	Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	3.45E+02 (ch)	1.05E+03 (ch)	2.14E+03 (ch)	2.40E+00	6.25E+00	9.36E+00
	4/1/00		4/99[7/90]	Hydrogen Sulfide	7783-06-4	3.83E+02 (ch)	1.16E+03 (ch)	2.37E+03 (ch)	4.80E-02	1.25E-01	1.87E-01
	12/1/01			Isophorone	78-59-1	7.66E+04 (ch)	2.33E+05 (ch)	4.75E+05 (ch)			
	2/1/00		4/1/99	Isopropyl Alcohol (Isopropanol)	67-63-0	2.68E+05 (ch)	8.14E+05 (ch)	1.66E+06 (ch)	3.66E+00	9.53E+00	1.43E+01
4/1/97				Lead and Compounds (Inorganic)	7439-92-1	1.18E-01 (ca)	3.58E-01 (ca)	7.32E-01 (ca)			
4/1/97				Lead Acetate	301-04-2	1.85E-01 (ca)	5.63E-01 (ca)	1.15E+00 (ca)			
4/1/97				Lead Phosphate	7446-27-7	1.54E-01 (ca)	4.68E-01 (ca)	9.56E-01 (ca)			
4/1/97				Lead Subacetate	1335-32-6	1.53E-01 (ca)	4.66E-01 (ca)	9.51E-01 (ca)			
	12/1/01			Maleic Anhydride	108-31-6	2.68E+01 (ch)	8.14E+01 (ch)	1.66E+02 (ch)			
	12/19/08	12/19/08		Manganese and Compounds	7439-96-5	1.52E+00 (8hr)	7.08E+00 (8hr)	2.14E+01 (ch)			
	12/19/08	12/19/08	12/19/08	Mercury and Compounds (Inorganic)	7439-97-6	2.97E-01 (ch)	9.03E-01 (ch)	1.84E+00 (ch)	6.85E-04	1.79E-03	2.67E-03
				Methyl Mercury*	593-74-8						
	12/19/08	12/19/08	12/19/08	Mercuric Chloride	7487-94-7	2.97E-01 (ch)	9.03E-01 (ch)	1.84E+00 (ch)	6.85E-04	1.79E-03	2.67E-03
	4/1/00		4/1/99	Methanol	67-56-1	1.53E+05 (ch)	4.65E+05 (ch)	9.50E+05 (ch)	3.20E+01	8.34E+01	1.25E+02
	2/1/00		4/1/99	Methyl Bromide (Bromomethane)	74-83-9	1.91E+02 (ch)	5.81E+02 (ch)	1.19E+03 (ch)	4.45E+00	1.16E+01	1.74E+01
11/1/99	2/1/00			Methyl Tertiary-Butyl Ether	1634-04-4	3.14E+01 (ca)	9.55E+01 (ca)	1.95E+02 (ca)			
	2/1/00		4/1/99	Methyl Chloroform (1,1,1-Trichloroethane)	71-55-6	3.83E+04 (ch)	1.16E+05 (ch)	2.37E+05 (ch)	7.77E+01	2.03E+02	3.03E+02
			4/1/99	Methyl Ethyl Ketone (2-Butanone)	78-93-3				1.48E+01	3.87E+01	5.79E+01
	12/1/01			Methyl Isocyanate	624-83-9	3.83E+01 (ch)	1.16E+02 (ch)	2.37E+02 (ch)			
4/1/99				4,4'-Methylene Bis (2-Chloroaniline) (MOCA)	101-14-4	3.77E-02 (ca)	1.15E-01 (ca)	2.34E-01 (ca)			
7/1/89	2/1/00		4/1/99	Methylene Chloride (Dichloromethane)	75-09-2	1.62E+01 (ca)	4.91E+01 (ca)	1.00E+02 (ca)	1.60E+01	4.17E+01	6.24E+01
4/1/99	12/1/01			4,4'-Methylene Dianiline (and Its Dichloride)	101-77-9	4.90E-03 (ca)	1.49E-02 (ca)	3.04E-02 (ca)			
	1/1/01			Methylene Diphenyl Isocyanate	101-68-8	2.68E+01 (ch)	8.14E+01 (ch)	1.66E+02 (ch)			
4/1/99				Michler's Ketone (4,4'-Bis(Dimethylamino)Benzophenone)	90-94-8	6.58E-02 (ca)	2.00E-01 (ca)	4.08E-01 (ca)			
4/99[1/92]				n-Nitrosodi-n-Butylamine	924-16-3	5.14E-03 (ca)	1.56E-02 (ca)	3.19E-02 (ca)			
4/99[1/91]				n-Nitrosodi-n-Propylamine	621-64-7	8.08E-03 (ca)	2.45E-02 (ca)	5.01E-02 (ca)			
4/99[1/91]				n-Nitrosodiethylamine	55-18-5	1.57E-03 (ca)	4.77E-03 (ca)	9.75E-03 (ca)			
4/99[1/91]				n-Nitrosodimethylamine	62-75-9	3.54E-03 (ca)	1.07E-02 (ca)	2.19E-02 (ca)			
4/1/99				n-Nitrosodiphenylamine	86-30-6	6.29E+00 (ca)	1.91E+01 (ca)	3.90E+01 (ca)			
4/99[7/90]				n-Nitroso-n-Methylethylamine	10595-95-6	2.57E-03 (ca)	7.81E-03 (ca)	1.59E-02 (ca)			
10/1/87				n-Nitroso-n-Methylurea	684-93-5	4.75E-04 (ca)	1.44E-03 (ca)	2.95E-03 (ca)			
10/1/87				n-Nitroso-n-Ethylurea	759-73-9	2.10E-03 (ca)	6.36E-03 (ca)	1.30E-02 (ca)			
4/99[7/92]				n-Nitrosomorpholine	59-89-2	8.45E-03 (ca)	2.56E-02 (ca)	5.24E-02 (ca)			
4/99[7/92]				n-Nitrosopiperidine	100-75-4	6.02E-03 (ca)	1.83E-02 (ca)	3.73E-02 (ca)			
4/99[7/90]				n-Nitrosopyrrolidine	930-55-2	2.69E-02 (ca)	8.18E-02 (ca)	1.67E-01 (ca)			

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 1.1 (continued)
Screening Emission Levels

Date Toxicity Criteria Last Updated				Pollutant		Annual Pollutant Screening Level			Hourly Pollutant Screening Level		
Cancer	Chronic	8-hr Chronic	Acute	Toxic Air Contaminant	CAS No	Emissions at 25 m (lb/yr)	Emissions at 50 m (lb/yr)	Emissions at 100 m (lb/yr)	Emissions at 25 m, (lb/hr)	Emissions at 50 m, (lb/hr)	Emissions at 100 m, (lb/hr)
8/1/91	3/23/12	3/23/12	3/23/12	Nickel and Compounds	7440-02-0	6.22E-02 (ca)	1.89E-01 (ca)	3.86E-01 (ca)	2.28E-04	5.96E-04	8.91E-04
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Acetate	373-02-4	1.87E-01 (ca)	5.69E-01 (ca)	1.16E+00 (ca)	6.88E-04	1.79E-03	2.68E-03
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Carbonate	3333-67-3	1.26E-01 (ca)	3.82E-01 (ca)	7.80E-01 (ca)	4.62E-04	1.20E-03	1.80E-03
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Carbonyl	13463-39-3	1.81E-01 (ca)	5.49E-01 (ca)	1.12E+00 (ca)	6.64E-04	1.73E-03	2.59E-03
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Hydroxide	12054-48-7	9.82E-02 (ca)	2.98E-01 (ca)	6.09E-01 (ca)	3.61E-04	9.41E-04	1.41E-03
8/1/91	3/23/12	3/23/12	3/23/12	Nickelocene	1271-28-9	1.26E-01 (ca)	3.82E-01 (ca)	7.81E-01 (ca)	4.63E-04	1.21E-03	1.81E-03
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Oxide	1313-99-1	7.91E-02 (ca)	2.40E-01 (ca)	4.91E-01 (ca)	2.91E-04	7.58E-04	1.13E-03
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Refinery Dust (Pyrometallurgical Process)	1146	6.22E-02 (ca)	1.89E-01 (ca)	3.86E-01 (ca)	2.28E-04	5.96E-04	8.91E-04
8/1/91	3/23/12	3/23/12	3/23/12	Nickel Sub sulfide	12035-72-2	2.55E-01 (ca)	7.73E-01 (ca)	1.58E+00 (ca)	9.35E-04	2.44E-03	3.65E-03
			4/1/99	Nitric Acid	7697-37-2				9.82E-02	2.56E-01	3.83E-01
4/1/99				p-Nitrosodiphenylamine	156-10-5	2.57E+00 (ca)	7.81E+00 (ca)	1.59E+01 (ca)			
8/1/98	8/1/98			Particulate Emissions From Diesel-Fueled Engines	9901	5.14E-02 (ca)	1.56E-01 (ca)	3.19E-01 (ca)			
10/1/91	10/1/91		4/1/99	Perchloroethylene (Tetrachloroethylene)	127-18-4	2.69E+00 (ca)	8.18E+00 (ca)	1.67E+01 (ca)	2.28E+01	5.96E+01	8.91E+01
			4/1/00	Phenol	108-95-2	7.66E+03 (ch)	2.33E+04 (ch)	4.75E+04 (ch)	6.63E+00	1.73E+01	2.58E+01
			4/1/99	Phosgene	75-44-5				4.57E-03	1.19E-02	1.78E-02
			9/3/02	Phosphine	7803-51-2	3.06E+01 (ch)	9.30E+01 (ch)	1.90E+02 (ch)			
			2/1/00	Phosphoric Acid	7664-38-2	2.68E+02 (ch)	8.14E+02 (ch)	1.66E+03 (ch)			
			1/1/01	Phthalic Anhydride	85-44-9	7.66E+02 (ch)	2.33E+03 (ch)	4.75E+03 (ch)			
4/1/99	8/29/03			PCB (Polychlorinated Biphenyls)	1336-36-3	6.28E-05 (ch)	1.91E-04 (ch)	3.89E-04 (ch)			
8/29/03	8/29/03			3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	32598-13-3	1.58E-04 (ca)	4.79E-04 (ca)	9.79E-04 (ca)			
1/31/11	1/31/11			3,4,4',5'-Tetrachlorobiphenyl (PCB 81)	70362-50-4	5.26E-05 (ca)	1.60E-04 (ca)	3.26E-04 (ca)			
1/31/11	1/31/11			2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	32598-14-4	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
1/31/11	1/31/11			2,3,4,4',5'-Pentachlorobiphenyl (PCB 114)	74472-37-0	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
1/31/11	1/31/11			2,3',4,4',5'-Pentachlorobiphenyl (PCB 118)	31508-00-6	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
1/31/11	1/31/11			2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	65510-44-3	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
8/29/03	8/29/03			3,3',4,4',5'-Pentachlorobiphenyl (PCB 126)	57465-28-8	1.58E-07 (ca)	4.79E-07 (ca)	9.79E-07 (ca)			
1/31/11	1/31/11			2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 156)	38380-08-4	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
1/31/11	1/31/11			2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	69782-90-7	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
1/31/11	1/31/11			2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	52663-72-6	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
1/31/11	1/31/11			3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	32774-16-6	5.26E-07 (ca)	1.60E-06 (ca)	3.26E-06 (ca)			
1/31/11	1/31/11			2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	39635-31-9	5.26E-04 (ca)	1.60E-03 (ca)	3.26E-03 (ca)			
8/1/86	2/1/00			Polychlorinated Dibenzo-p-Dioxins (PCDD)	1086	1.69E-08 (ca)	5.14E-08 (ca)	1.05E-07 (ca)			
8/1/86	2/1/00			2,3,7,8-Tetrachlorodibenzo-p-Dioxin	1746-01-6	1.69E-08 (ca)	5.14E-08 (ca)	1.05E-07 (ca)			
8/1/03	8/1/03			1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1.69E-08 (ca)	5.14E-08 (ca)	1.05E-07 (ca)			
4/1/99	2/1/00			1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1.69E-07 (ca)	5.14E-07 (ca)	1.05E-06 (ca)			

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 1.1 (continued)
Screening Emission Levels

Date Toxicity Criteria Last Updated				Pollutant		Annual Pollutant Screening Level			Hourly Pollutant Screening Level		
Cancer	Chronic	8-hr Chronic	Acute	Toxic Air Contaminant	CAS No	Emissions at 25 m (lb/yr)	Emissions at 50 m (lb/yr)	Emissions at 100 m (lb/yr)	Emissions at 25 m, (lb/hr)	Emissions at 50 m, (lb/hr)	Emissions at 100 m, (lb/hr)
4/1/99	2/1/00			1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1.69E-07 (ca)	5.14E-07 (ca)	1.05E-06 (ca)			
4/1/99	2/1/00			1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1.69E-07 (ca)	5.14E-07 (ca)	1.05E-06 (ca)			
4/1/99	2/1/00			1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1.69E-06 (ca)	5.14E-06 (ca)	1.05E-05 (ca)			
1/31/11	1/31/11			1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin	3268-87-9	5.64E-05 (ca)	1.71E-04 (ca)	3.50E-04 (ca)			
8/1/86	2/1/00			Polychlorinated Dibenzofurans (PCDF)	1080	2.39E-08 (ca)	7.27E-08 (ca)	1.48E-07 (ca)			
4/1/99	2/1/00			2,3,7,8-Tetrachlorodibenzofuran	5120-73-19	2.39E-07 (ca)	7.27E-07 (ca)	1.48E-06 (ca)			
1/31/11	1/31/11			1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	7.98E-07 (ca)	2.42E-06 (ca)	4.95E-06 (ca)			
1/31/11	1/31/11			2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	7.98E-08 (ca)	2.42E-07 (ca)	4.95E-07 (ca)			
4/1/99	2/1/00			1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	2.39E-07 (ca)	7.27E-07 (ca)	1.48E-06 (ca)			
4/1/99	2/1/00			1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	2.39E-07 (ca)	7.27E-07 (ca)	1.48E-06 (ca)			
4/1/99	2/1/00			1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	2.39E-07 (ca)	7.27E-07 (ca)	1.48E-06 (ca)			
4/1/99	2/1/00			2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	2.39E-07 (ca)	7.27E-07 (ca)	1.48E-06 (ca)			
4/1/99	2/1/00			1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	2.39E-06 (ca)	7.27E-06 (ca)	1.48E-05 (ca)			
4/1/99	2/1/00			1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	2.39E-06 (ca)	7.27E-06 (ca)	1.48E-05 (ca)			
1/31/11	1/31/11			1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	7.98E-05 (ca)	2.42E-04 (ca)	4.95E-04 (ca)			
4/99[4/94]				Polycyclic Aromatic Hydrocarbon (PAH)	1150	1.45E-02 (ca)	4.41E-02 (ca)	9.00E-02 (ca)			
4/99[4/94]				Benz(A)Anthracene	56-55-3	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				Benzo(a)Pyrene	50-32-8	6.28E-04 (ca)	1.91E-03 (ca)	3.89E-03 (ca)			
4/99[4/94]				Benzo(b)Fluoranthene	205-99-2	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				Benzo(j)Fluoranthene	205-82-3	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				Benzo(k)Fluoranthene	207-08-9	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				Chrysene	218-01-9	6.28E-02 (ca)	1.91E-01 (ca)	3.89E-01 (ca)			
4/99[4/94]				Dibenz(a,h)Acridine	226-36-8	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				Dibenz(a,h)Anthracene	53-70-3	1.73E-03 (ca)	5.25E-03 (ca)	1.07E-02 (ca)			
4/99[4/94]				Dibenz(a,j)Acridine	224-42-0	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				Dibenzo(a,e)Pyrene	192-65-4	6.28E-04 (ca)	1.91E-03 (ca)	3.89E-03 (ca)			
4/99[4/94]				Dibenzo(a,h)Pyrene	189-64-0	6.28E-05 (ca)	1.91E-04 (ca)	3.89E-04 (ca)			
4/99[4/94]				Dibenzo(a,i)Pyrene	189-55-9	6.28E-05 (ca)	1.91E-04 (ca)	3.89E-04 (ca)			
4/99[4/94]				Dibenzo(a,l)Pyrene	191-30-0	6.28E-05 (ca)	1.91E-04 (ca)	3.89E-04 (ca)			
4/99[4/94]				7H-Dibenzo(c,g)Carbazole	194-59-2	6.28E-04 (ca)	1.91E-03 (ca)	3.89E-03 (ca)			
4/99[4/94]				7,12-Dimethylbenz(a)Anthracene	57-97-6	2.83E-05 (ca)	8.60E-05 (ca)	1.76E-04 (ca)			
4/99[4/94]				1,6-Dinitropyrene	42397-64-8	6.28E-05 (ca)	1.91E-04 (ca)	3.89E-04 (ca)			
4/99[4/94]				1,8-Dinitropyrene	42397-65-9	6.28E-04 (ca)	1.91E-03 (ca)	3.89E-03 (ca)			
4/99[4/94]				Indeno(1,2,3-c,d)Pyrene	193-39-5	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				3-Methylcholanthrene	56-49-5	3.22E-04 (ca)	9.78E-04 (ca)	2.00E-03 (ca)			
4/99[4/94]				5-Methylchrysene	3697-24-3	6.28E-04 (ca)	1.91E-03 (ca)	3.89E-03 (ca)			
8/4/2004	4/1/00			Naphthalene	91-20-3	4.72E-01 (ca)	1.43E+00 (ca)	2.92E+00 (ca)			
4/99[4/94]				5-Nitroacenaphthene	602-87-9	5.45E-02 (ca)	1.65E-01 (ca)	3.38E-01 (ca)			
4/99[4/94]				6-Nitrochrysene	7496-02-8	6.28E-05 (ca)	1.91E-04 (ca)	3.89E-04 (ca)			
4/99[4/94]				2-Nitrofluorene	607-57-8	6.28E-02 (ca)	1.91E-01 (ca)	3.89E-01 (ca)			
4/99[4/94]				1-Nitropyrene	5522-43-0	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/99[4/94]				4-Nitropyrene	57835-92-4	6.28E-03 (ca)	1.91E-02 (ca)	3.89E-02 (ca)			
4/1/99				1,3-Propane Sultone	1120-71-4	2.36E-02 (ca)	7.16E-02 (ca)	1.46E-01 (ca)			

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 1.1 (continued)
Screening Emission Levels

Date Toxicity Criteria Last Updated				Pollutant		Annual Pollutant Screening Level			Hourly Pollutant Screening Level		
Cancer	Chronic	8-hr Chronic	Acute	Toxic Air Contaminant	CAS No	Emissions at 25 m (lb/yr)	Emissions at 50 m (lb/yr)	Emissions at 100 m (lb/yr)	Emissions at 25 m, (lb/hr)	Emissions at 50 m, (lb/hr)	Emissions at 100 m, (lb/hr)
	4/1/00			Propylene (Propene)	115-07-1	1.15E+05 (ch)	3.49E+05 (ch)	7.12E+05 (ch)			
	2/1/00			Propylene Glycol Monomethyl Ether	107-98-2	2.68E+05 (ch)	8.14E+05 (ch)	1.66E+06 (ch)			
4/99[7/90]	2/1/00		4/1/99	Propylene Oxide	75-56-9	4.35E+00 (ca)	1.32E+01 (ca)	2.70E+01 (ca)	3.54E+00	9.23E+00	1.38E+01
	12/1/01			Selenium and Compounds	7782-49-2	3.92E+00 (ch)	1.19E+01 (ch)	2.43E+01 (ch)			
			4/1/99	Hydrogen Selenide	7783-07-5				5.71E-03	1.49E-02	2.23E-02
	12/1/01			Selenium Sulfide	7446-34-6	3.92E+00 (ch)	1.19E+01 (ch)	2.43E+01 (ch)			
			4/1/99	Sodium Hydroxide	1310-73-2				9.14E-03	2.38E-02	3.56E-02
	4/1/00		4/1/99	Styrene	100-42-5	3.45E+04 (ch)	1.05E+05 (ch)	2.14E+05 (ch)	2.40E+01	6.25E+01	9.36E+01
	12/1/01		4/1/99	Sulfuric Acid	7664-93-9	3.83E+01 (ch)	1.16E+02 (ch)	2.37E+02 (ch)	1.37E-01	3.57E-01	5.35E-01
	12/1/08		4/1/99	Sulfuric Acid (Sulfur Trioxide)	7446-71-9	3.83E+01 (ch)	1.16E+02 (ch)	2.37E+02 (ch)	1.37E-01	3.57E-01	5.35E-01
			4/1/99	Sulfuric Acid (Oleum)	8014-95-7				1.37E-01	3.57E-01	5.35E-01
4/1/99				1,1,2,2-Tetrachloroethane	79-34-5	2.83E-01 (ca)	8.59E-01 (ca)	1.75E+00 (ca)			
4/1/99				Thioacetamide	62-55-5	9.28E-03 (ca)	2.82E-02 (ca)	5.75E-02 (ca)			
	4/1/00		4/1/99	Toluene	108-88-3	1.15E+04 (ch)	3.49E+04 (ch)	7.12E+04 (ch)	4.23E+01	1.10E+02	1.65E+02
4/1/99	1/1/01			Toluene Diisocyanates	26471-62-5	1.45E+00 (ca)	4.41E+00 (ca)	9.00E+00 (ca)			
4/1/99	1/1/01			Toluene-2,4-Diisocyanate	584-84-9	1.45E+00 (ca)	4.41E+00 (ca)	9.00E+00 (ca)			
4/1/99	1/1/01			Toluene-2,6-Diisocyanate	91-08-7	1.45E+00 (ca)	4.41E+00 (ca)	9.00E+00 (ca)			
4/1/99				1,1,2-Trichloroethane (Vinyl Trichloride)	79-00-5	9.93E-01 (ca)	3.01E+00 (ca)	6.16E+00 (ca)			
10/1/90	4/1/00			Trichloroethylene	79-01-6	8.08E+00 (ca)	2.45E+01 (ca)	5.01E+01 (ca)			
	9/3/02		4/1/99	Triethylamine	121-44-8	7.66E+03 (ch)	2.33E+04 (ch)	4.75E+04 (ch)	3.20E+00	8.34E+00	1.25E+01
4/99[7/90]				Urethane (Ethyl Carbamate)	51-79-6	5.66E-02 (ca)	1.72E-01 (ca)	3.51E-01 (ca)			
			4/1/99	Vanadium (Fume or Dust)	7440-62-2				3.43E-02	8.93E-02	1.34E-01
			4/1/99	Vanadium Pentoxide	1314-62-1				3.43E-02	8.93E-02	1.34E-01
	12/1/01			Vinyl Acetate	108-05-4	7.66E+03 (ch)	2.33E+04 (ch)	4.75E+04 (ch)			
12/1/90			4/1/99	Vinyl Chloride (Chloroethylene)	75-01-4	2.10E-01 (ca)	6.36E-01 (ca)	1.30E+00 (ca)	2.06E+02	5.36E+02	8.02E+02
	1/1/01			Vinylidene Chloride (1,1-Dichloroethylene)	75-35-4	2.68E+03 (ch)	8.14E+03 (ch)	1.66E+04 (ch)			
	4/1/00		4/1/99	Xylenes (Mixed Isomers)	1330-20-7	2.68E+04 (ch)	8.14E+04 (ch)	1.66E+05 (ch)	2.51E+01	6.55E+01	9.80E+01
	4/1/00		4/1/99	m-Xylene	108-38-3	2.68E+04 (ch)	8.14E+04 (ch)	1.66E+05 (ch)	2.51E+01	6.55E+01	9.80E+01
	4/1/00		4/1/99	o-Xylene	95-47-6	2.68E+04 (ch)	8.14E+04 (ch)	1.66E+05 (ch)	2.51E+01	6.55E+01	9.80E+01
	4/1/00		4/1/99	p-Xylene	106-42-3	2.68E+04 (ch)	8.14E+04 (ch)	1.66E+05 (ch)	2.51E+01	6.55E+01	9.80E+01

* ARB removed methyl mercury from the July 3, 2014 Table 1 - Consolidated Table Of OEHHA/ARB Approved Risk Assessment Health Values because it has different chemical properties, potency, and toxicity compared to elemental mercury and mercury salts, and it is not emitted directly from any California facilities.
 Note: Molecular weight adjustment factors have been applied to values in this table.

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 2.1
Dispersion Factors (χ/Q)
for Point Source Equipment
Operating 12 Hours per Day or Less

Stack Height \geq 14 ft to 24 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Stack Ht (ft)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
\geq 14 to 24*	Anaheim	48.05	9.89	5.04	2.90	0.58	0.20	0.06	0.02
\geq 14 to 24*	Azusa	44.21	9.44	4.80	2.75	0.54	0.19	0.06	0.01
\geq 14 to 24*	Banning	39.03	9.60	5.11	3.05	0.71	0.26	0.08	0.02
\geq 14 to 24*	Burbank	33.68	6.88	3.38	1.88	0.35	0.12	0.04	0.01
\geq 14 to 24*	Central LA	37.67	7.94	3.94	2.24	0.44	0.15	0.05	0.01
\geq 14 to 24*	Compton	38.70	8.01	4.03	2.30	0.46	0.15	0.05	0.01
\geq 14 to 24*	Costa Mesa	38.48	8.48	4.23	2.37	0.46	0.16	0.05	0.01
\geq 14 to 24*	Crestline	34.71	7.21	3.56	1.97	0.38	0.13	0.04	0.01
\geq 14 to 24*	Fontana	44.18	10.01	5.22	3.06	0.65	0.23	0.07	0.02
\geq 14 to 24*	Indio	25.10	6.10	3.06	1.73	0.35	0.13	0.04	0.01
\geq 14 to 24*	La Habra	42.02	8.77	4.27	2.37	0.44	0.15	0.05	0.01
\geq 14 to 24*	Lake Elsinore	30.88	7.19	3.62	2.04	0.40	0.14	0.04	0.01
\geq 14 to 24*	LAX	53.29	11.44	6.07	3.64	0.80	0.28	0.09	0.02
\geq 14 to 24*	Long Beach	30.11	6.35	3.18	1.79	0.35	0.12	0.04	0.01
\geq 14 to 24*	Lynwood	43.68	9.11	4.56	2.60	0.51	0.17	0.06	0.01
\geq 14 to 24*	Mission Viejo	32.37	6.95	3.48	1.95	0.37	0.13	0.04	0.01
\geq 14 to 24*	Palm Springs	25.82	5.62	2.73	1.56	0.31	0.11	0.04	0.01
\geq 14 to 24*	Perris	23.01	5.87	3.00	1.74	0.37	0.14	0.04	0.01
\geq 14 to 24*	Pico Rivera	40.67	8.32	4.25	2.43	0.48	0.17	0.06	0.01
\geq 14 to 24*	Pomona	25.80	6.96	3.69	2.12	0.42	0.15	0.05	0.01
\geq 14 to 24*	Redlands	42.39	9.39	4.55	2.49	0.46	0.16	0.05	0.01
\geq 14 to 24*	Reseda	28.17	6.18	2.84	1.49	0.25	0.09	0.03	0.01
\geq 14 to 24*	Riverside	40.92	8.91	4.59	2.66	0.54	0.19	0.06	0.02
\geq 14 to 24*	San Bernardino	35.55	7.97	3.97	2.24	0.45	0.16	0.05	0.01
\geq 14 to 24*	Santa Clarita	30.79	7.13	3.69	2.17	0.46	0.17	0.06	0.01
\geq 14 to 24*	Upland	45.39	9.91	5.09	2.94	0.60	0.21	0.07	0.02
\geq 14 to 24*	West LA	43.75	8.82	4.36	2.42	0.46	0.17	0.06	0.01

*Note: Facilities with stack heights less than 14 feet must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 2.2
Dispersion Factors (χ/Q)
for Point Source Equipment
Operating 12 Hours per Day or Less

Stack Height > 24 ft to 49 ft

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Stack Ht (ft)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
> 24 to 49	Anaheim	29.30	6.78	3.76	2.26	0.50	0.19	0.06	0.02
> 24 to 49	Azusa	24.53	6.55	3.65	2.18	0.47	0.17	0.06	0.01
> 24 to 49	Banning	20.41	6.04	3.66	2.35	0.62	0.24	0.08	0.02
> 24 to 49	Burbank	19.69	4.80	2.58	1.51	0.31	0.12	0.04	0.01
> 24 to 49	Central LA	22.11	5.29	2.91	1.73	0.38	0.14	0.05	0.01
> 24 to 49	Compton	21.37	5.39	2.96	1.76	0.39	0.14	0.05	0.01
> 24 to 49	Costa Mesa	21.18	5.97	3.29	1.93	0.41	0.15	0.05	0.01
> 24 to 49	Crestline	20.22	5.11	2.77	1.61	0.34	0.13	0.04	0.01
> 24 to 49	Fontana	26.01	6.86	3.95	2.43	0.57	0.22	0.07	0.02
> 24 to 49	Indio	14.65	4.37	2.44	1.45	0.32	0.12	0.04	0.01
> 24 to 49	La Habra	24.55	6.18	3.28	1.90	0.39	0.15	0.05	0.01
> 24 to 49	Lake Elsinore	18.89	5.25	2.89	1.69	0.36	0.13	0.04	0.01
> 24 to 49	LAX	31.53	7.71	4.50	2.83	0.69	0.26	0.09	0.02
> 24 to 49	Long Beach	17.32	4.28	2.36	1.39	0.30	0.11	0.04	0.01
> 24 to 49	Lynwood	24.63	6.30	3.43	2.04	0.44	0.16	0.05	0.01
> 24 to 49	Mission Viejo	18.53	4.94	2.74	1.61	0.34	0.13	0.04	0.01
> 24 to 49	Palm Springs	14.67	4.05	2.13	1.25	0.28	0.10	0.03	0.01
> 24 to 49	Perris	13.47	4.17	2.36	1.43	0.34	0.13	0.04	0.01
> 24 to 49	Pico Rivera	23.87	5.76	3.23	1.94	0.43	0.17	0.05	0.01
> 24 to 49	Pomona	14.23	4.69	2.74	1.66	0.37	0.14	0.05	0.01
> 24 to 49	Redlands	23.47	6.69	3.56	2.04	0.42	0.16	0.05	0.01
> 24 to 49	Reseda	16.38	4.49	2.22	1.22	0.23	0.08	0.03	0.01
> 24 to 49	Riverside	22.58	6.17	3.49	2.11	0.47	0.18	0.06	0.01
> 24 to 49	San Bernardino	21.51	5.71	3.10	1.83	0.40	0.15	0.05	0.01
> 24 to 49	Santa Clarita	17.01	4.61	2.67	1.68	0.41	0.16	0.06	0.01
> 24 to 49	Upland	25.17	6.82	3.86	2.33	0.53	0.20	0.07	0.02
> 24 to 49	West LA	25.56	6.18	3.35	1.95	0.42	0.16	0.05	0.01

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 2.3
Dispersion Factors (χ/Q)
for Point Source Equipment
Operating 12 Hours per Day or Less

Stack Height > 49 ft

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Stack Ht (ft)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
> 49	Anaheim	0.25	0.86	1.16	1.00	0.36	0.17	0.06	0.01
> 49	Azusa	0.39	0.95	1.09	0.93	0.34	0.16	0.05	0.01
> 49	Banning	0.05	0.16	0.51	0.73	0.43	0.21	0.08	0.02
> 49	Burbank	0.39	0.87	0.91	0.73	0.24	0.11	0.04	0.01
> 49	Central LA	0.18	0.72	0.93	0.79	0.28	0.13	0.05	0.01
> 49	Compton	0.44	0.93	0.99	0.79	0.27	0.12	0.05	0.01
> 49	Costa Mesa	0.59	0.98	1.08	0.90	0.31	0.14	0.05	0.01
> 49	Crestline	0.46	0.94	1.00	0.79	0.26	0.12	0.04	0.01
> 49	Fontana	0.21	0.63	0.98	0.99	0.42	0.20	0.07	0.02
> 49	Indio	0.39	0.77	0.84	0.72	0.26	0.12	0.04	0.01
> 49	La Habra	0.80	1.18	1.14	0.89	0.30	0.13	0.05	0.01
> 49	Lake Elsinore	0.38	0.87	0.91	0.76	0.27	0.12	0.04	0.01
> 49	LAX	0.10	0.55	1.02	1.09	0.48	0.23	0.08	0.02
> 49	Long Beach	0.27	0.83	0.86	0.67	0.22	0.10	0.03	0.01
> 49	Lynwood	1.12	1.27	1.18	0.93	0.32	0.15	0.05	0.01
> 49	Mission Viejo	0.23	0.76	0.91	0.78	0.27	0.12	0.04	0.01
> 49	Palm Springs	0.91	1.10	0.94	0.70	0.22	0.10	0.03	0.01
> 49	Perris	0.65	0.83	0.80	0.69	0.27	0.12	0.04	0.01
> 49	Pico Rivera	0.18	0.69	0.93	0.86	0.33	0.15	0.05	0.01
> 49	Pomona	0.66	0.93	0.94	0.78	0.28	0.13	0.05	0.01
> 49	Redlands	0.90	1.29	1.23	0.97	0.32	0.15	0.05	0.01
> 49	Reseda	1.25	1.33	0.96	0.65	0.18	0.08	0.03	0.01
> 49	Riverside	0.46	0.88	1.08	0.94	0.35	0.16	0.06	0.01
> 49	San Bernardino	0.97	1.12	1.08	0.88	0.31	0.14	0.05	0.01
> 49	Santa Clarita	0.38	0.45	0.64	0.69	0.31	0.15	0.06	0.01
> 49	Upland	0.32	0.87	1.16	1.04	0.39	0.18	0.06	0.02
> 49	West LA	0.36	0.91	1.09	0.92	0.33	0.15	0.05	0.01

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 3.1
Dispersion Factors (χ/Q)
for Point Source Equipment
Operating More Than 12 Hours per Day

Stack Height \geq 14 ft to 24 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Stack Ht (ft)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
\geq 14 to 24*	Anaheim	49.22	15.26	9.36	6.37	1.81	0.60	0.18	0.05
\geq 14 to 24*	Azusa	50.39	15.35	9.61	6.69	2.01	0.63	0.17	0.05
\geq 14 to 24*	Banning	51.06	15.91	10.06	7.03	2.40	0.96	0.34	0.11
\geq 14 to 24*	Burbank	49.94	15.24	9.21	6.26	1.80	0.56	0.15	0.05
\geq 14 to 24*	Central LA	37.59	12.14	7.40	5.09	1.47	0.45	0.14	0.04
\geq 14 to 24*	Compton	50.39	15.66	10.01	7.03	2.16	0.67	0.18	0.05
\geq 14 to 24*	Costa Mesa	44.29	14.60	9.35	6.42	1.88	0.65	0.21	0.06
\geq 14 to 24*	Crestline	42.84	13.75	8.82	6.17	1.89	0.64	0.19	0.06
\geq 14 to 24*	Fontana	51.74	16.42	10.24	7.11	2.24	0.78	0.24	0.07
\geq 14 to 24*	Indio	48.20	15.85	10.13	7.16	2.34	0.84	0.26	0.08
\geq 14 to 24*	La Habra	47.02	14.44	8.56	5.67	1.67	0.60	0.20	0.06
\geq 14 to 24*	Lake Elsinore	38.60	14.03	8.87	6.21	1.95	0.67	0.20	0.06
\geq 14 to 24*	LAX	52.24	15.71	9.50	6.44	1.93	0.69	0.22	0.06
\geq 14 to 24*	Long Beach	45.54	15.42	9.91	7.07	2.21	0.66	0.16	0.05
\geq 14 to 24*	Lynwood	50.44	15.59	9.82	6.76	2.01	0.67	0.20	0.06
\geq 14 to 24*	Mission Viejo	39.31	12.37	7.92	5.51	1.68	0.58	0.19	0.06
\geq 14 to 24*	Palm Springs	51.14	16.67	10.62	7.44	2.11	0.62	0.16	0.05
\geq 14 to 24*	Perris	41.64	14.37	8.79	6.02	1.88	0.70	0.23	0.07
\geq 14 to 24*	Pico Rivera	45.69	13.52	8.26	5.58	1.58	0.54	0.17	0.05
\geq 14 to 24*	Pomona	50.92	15.96	9.89	6.91	2.09	0.67	0.19	0.06
\geq 14 to 24*	Redlands	51.82	16.13	11.19	8.36	2.76	0.82	0.22	0.07
\geq 14 to 24*	Reseda	41.68	13.81	8.56	5.87	1.74	0.60	0.18	0.06
\geq 14 to 24*	Riverside	47.16	14.61	9.12	6.28	1.90	0.66	0.21	0.06
\geq 14 to 24*	San Bernardino	51.83	17.20	10.51	7.25	2.18	0.73	0.22	0.07
\geq 14 to 24*	Santa Clarita	39.36	12.98	8.53	6.19	1.96	0.60	0.19	0.06
\geq 14 to 24*	Upland	50.91	15.87	10.09	7.36	2.16	0.72	0.21	0.06
\geq 14 to 24*	West LA	46.84	16.73	11.54	8.42	2.56	0.74	0.20	0.06

*Note: Facilities with stack heights less than 14 feet must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 3.2
Dispersion Factors (χ/Q)
for Point Source Equipment
Operating More Than 12 Hours per Day

Stack Height > 24 ft to 49 ft

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Stack Ht (ft)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
> 24 to 49	Anaheim	28.70	9.01	5.91	4.16	1.35	0.54	0.19	0.06
> 24 to 49	Azusa	25.56	8.44	5.69	4.12	1.42	0.54	0.18	0.06
> 24 to 49	Banning	26.52	8.57	5.84	4.31	1.77	0.87	0.36	0.12
> 24 to 49	Burbank	28.70	8.95	5.72	4.02	1.31	0.49	0.16	0.05
> 24 to 49	Central LA	19.13	6.70	4.45	3.19	1.05	0.38	0.14	0.04
> 24 to 49	Compton	27.06	9.24	6.09	4.39	1.50	0.56	0.18	0.05
> 24 to 49	Costa Mesa	26.66	9.74	5.76	3.85	1.25	0.56	0.22	0.07
> 24 to 49	Crestline	27.42	9.34	5.51	3.66	1.18	0.53	0.21	0.07
> 24 to 49	Fontana	28.29	9.20	6.12	4.42	1.64	0.72	0.27	0.09
> 24 to 49	Indio	29.02	9.13	6.03	4.38	1.71	0.79	0.31	0.10
> 24 to 49	La Habra	29.03	9.99	5.81	3.84	1.21	0.54	0.21	0.06
> 24 to 49	Lake Elsinore	20.29	8.15	5.38	3.84	1.38	0.58	0.22	0.07
> 24 to 49	LAX	29.04	9.62	6.19	4.34	1.48	0.63	0.23	0.07
> 24 to 49	Long Beach	20.86	8.21	5.69	4.23	1.52	0.54	0.17	0.05
> 24 to 49	Lynwood	31.63	10.52	6.45	4.44	1.47	0.59	0.21	0.06
> 24 to 49	Mission Viejo	20.90	7.41	5.05	3.61	1.25	0.53	0.20	0.06
> 24 to 49	Palm Springs	30.97	9.31	5.92	4.18	1.40	0.56	0.20	0.06
> 24 to 49	Perris	23.64	9.10	5.65	3.90	1.37	0.63	0.25	0.08
> 24 to 49	Pico Rivera	25.45	7.92	5.23	3.70	1.23	0.51	0.19	0.06
> 24 to 49	Pomona	30.91	10.17	6.23	4.37	1.52	0.59	0.20	0.06
> 24 to 49	Redlands	29.00	10.84	6.36	4.25	1.45	0.62	0.24	0.08
> 24 to 49	Reseda	24.01	8.94	5.25	3.53	1.14	0.48	0.18	0.06
> 24 to 49	Riverside	26.44	9.02	5.80	4.09	1.42	0.61	0.23	0.07
> 24 to 49	San Bernardino	31.81	10.73	6.55	4.53	1.57	0.68	0.26	0.08
> 24 to 49	Santa Clarita	22.26	7.20	4.73	3.39	1.22	0.50	0.20	0.06
> 24 to 49	Upland	26.29	9.28	6.06	4.35	1.58	0.67	0.25	0.08
> 24 to 49	West LA	28.33	9.71	5.68	3.70	1.18	0.51	0.20	0.06

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Table 3.3
Dispersion Factors (χ/Q)
for Point Source Equipment
Operating More Than 12 Hours per Day

Stack Height > 49 ft

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Stack Ht (ft)	Location	Downwind Distance (meters)							
		25	50	75	100	200	300	500	1,000
> 49	Anaheim	0.13	0.54	0.86	0.98	0.71	0.43	0.21	0.07
> 49	Azusa	0.20	0.59	0.81	0.89	0.66	0.42	0.21	0.08
> 49	Banning	0.02	0.11	0.30	0.46	0.60	0.50	0.29	0.12
> 49	Burbank	0.18	0.53	0.72	0.86	0.65	0.42	0.21	0.07
> 49	Central LA	0.09	0.33	0.51	0.59	0.45	0.30	0.16	0.06
> 49	Compton	0.22	1.05	1.34	1.33	0.75	0.45	0.22	0.07
> 49	Costa Mesa	0.33	1.68	1.93	1.69	0.83	0.47	0.22	0.07
> 49	Crestline	0.31	1.44	1.68	1.43	0.75	0.44	0.21	0.07
> 49	Fontana	0.12	0.44	0.68	0.83	0.75	0.52	0.27	0.10
> 49	Indio	0.17	0.57	0.69	0.74	0.71	0.54	0.30	0.11
> 49	La Habra	0.44	1.71	1.94	1.66	0.80	0.45	0.21	0.07
> 49	Lake Elsinore	0.21	0.79	0.95	1.02	0.73	0.46	0.23	0.08
> 49	LAX	0.07	0.66	0.91	1.01	0.72	0.46	0.23	0.08
> 49	Long Beach	0.13	0.52	0.79	0.92	0.66	0.41	0.21	0.07
> 49	Lynwood	0.53	1.75	1.91	1.69	0.87	0.51	0.24	0.08
> 49	Mission Viejo	0.12	0.56	0.79	0.91	0.65	0.40	0.20	0.07
> 49	Palm Springs	0.41	0.93	1.15	1.16	0.80	0.50	0.25	0.09
> 49	Perris	0.36	1.29	1.32	1.24	0.76	0.48	0.24	0.08
> 49	Pico Rivera	0.09	0.46	0.66	0.77	0.61	0.39	0.20	0.07
> 49	Pomona	0.54	1.90	2.02	1.74	0.90	0.53	0.25	0.09
> 49	Redlands	0.51	1.60	1.88	1.80	0.97	0.58	0.28	0.10
> 49	Reseda	0.62	1.92	1.93	1.60	0.72	0.40	0.18	0.06
> 49	Riverside	0.27	1.02	1.25	1.25	0.79	0.48	0.23	0.08
> 49	San Bernardino	0.52	1.38	1.49	1.39	0.88	0.56	0.28	0.10
> 49	Santa Clarita	0.23	0.73	0.84	0.87	0.63	0.40	0.20	0.07
> 49	Upland	0.19	0.64	0.92	1.05	0.87	0.57	0.30	0.11
> 49	West LA	0.22	1.50	1.75	1.56	0.75	0.42	0.19	0.06

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 4.1
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating 12 Hours per Day or Less

Building Area $\leq 3,000$ ft², Height ≤ 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
$\leq 3,000$	≤ 20	Anaheim	8.62	3.03	1.74	1.13	0.36	0.17	0.06	0.02
$\leq 3,000$	≤ 20	Azusa	10.08	3.50	1.85	1.15	0.34	0.16	0.06	0.01
$\leq 3,000$	≤ 20	Banning	15.42	5.59	2.88	1.76	0.50	0.23	0.08	0.02
$\leq 3,000$	≤ 20	Burbank	8.31	2.55	1.34	0.83	0.24	0.11	0.04	0.01
$\leq 3,000$	≤ 20	Central LA	7.61	2.36	1.33	0.86	0.27	0.13	0.05	0.01
$\leq 3,000$	≤ 20	Compton	8.11	2.45	1.31	0.83	0.26	0.13	0.05	0.01
$\leq 3,000$	≤ 20	Costa Mesa	10.20	3.43	1.78	1.09	0.31	0.14	0.05	0.01
$\leq 3,000$	≤ 20	Crestline	9.45	2.96	1.49	0.90	0.25	0.12	0.04	0.01
$\leq 3,000$	≤ 20	Fontana	13.28	4.84	2.53	1.56	0.44	0.20	0.07	0.02
$\leq 3,000$	≤ 20	Indio	10.78	3.48	1.69	0.99	0.26	0.11	0.04	0.01
$\leq 3,000$	≤ 20	La Habra	9.50	2.92	1.53	0.96	0.28	0.13	0.05	0.01
$\leq 3,000$	≤ 20	Lake Elsinore	11.33	3.60	1.75	1.03	0.27	0.12	0.04	0.01
$\leq 3,000$	≤ 20	LAX	13.61	5.21	2.81	1.76	0.52	0.24	0.09	0.02
$\leq 3,000$	≤ 20	Long Beach	8.37	2.57	1.28	0.77	0.22	0.10	0.04	0.01
$\leq 3,000$	≤ 20	Lynwood	9.67	3.13	1.64	1.03	0.31	0.15	0.06	0.01
$\leq 3,000$	≤ 20	Mission Viejo	10.69	3.50	1.74	1.03	0.27	0.12	0.04	0.01
$\leq 3,000$	≤ 20	Palm Springs	9.11	2.73	1.32	0.78	0.21	0.09	0.03	0.01
$\leq 3,000$	≤ 20	Perris	12.21	3.88	1.86	1.09	0.28	0.12	0.04	0.01
$\leq 3,000$	≤ 20	Pico Rivera	10.18	3.60	1.90	1.18	0.34	0.15	0.05	0.01
$\leq 3,000$	≤ 20	Pomona	9.36	2.91	1.53	0.95	0.28	0.13	0.05	0.01
$\leq 3,000$	≤ 20	Redlands	11.12	3.60	1.82	1.11	0.31	0.14	0.05	0.01
$\leq 3,000$	≤ 20	Reseda	9.54	2.70	1.23	0.70	0.17	0.08	0.03	0.01
$\leq 3,000$	≤ 20	Riverside	10.76	3.77	1.97	1.22	0.35	0.16	0.06	0.02
$\leq 3,000$	≤ 20	San Bernardino	10.84	3.60	1.83	1.11	0.31	0.14	0.05	0.01
$\leq 3,000$	≤ 20	Santa Clarita	10.97	3.64	1.85	1.13	0.33	0.16	0.06	0.01
$\leq 3,000$	≤ 20	Upland	10.95	3.99	2.14	1.34	0.39	0.18	0.07	0.02
$\leq 3,000$	≤ 20	West LA	9.02	3.14	1.70	1.08	0.32	0.15	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 4.2
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating 12 Hours per Day or Less

Building Area > 3,000 to 10,000 ft², Height ≤ 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 3,000 to 10,000	≤ 20	Anaheim	6.49	2.68	1.59	1.05	0.34	0.17	0.06	0.02
> 3,000 to 10,000	≤ 20	Azusa	7.74	3.04	1.67	1.07	0.33	0.15	0.06	0.01
> 3,000 to 10,000	≤ 20	Banning	11.98	4.81	2.59	1.62	0.48	0.22	0.08	0.02
> 3,000 to 10,000	≤ 20	Burbank	6.24	2.22	1.22	0.77	0.23	0.10	0.04	0.01
> 3,000 to 10,000	≤ 20	Central LA	5.73	2.07	1.21	0.80	0.26	0.12	0.05	0.01
> 3,000 to 10,000	≤ 20	Compton	6.08	2.13	1.19	0.77	0.25	0.12	0.05	0.01
> 3,000 to 10,000	≤ 20	Costa Mesa	7.78	2.98	1.61	1.01	0.29	0.13	0.05	0.01
> 3,000 to 10,000	≤ 20	Crestline	7.10	2.55	1.34	0.83	0.24	0.11	0.04	0.01
> 3,000 to 10,000	≤ 20	Fontana	10.36	4.19	2.28	1.44	0.42	0.20	0.07	0.02
> 3,000 to 10,000	≤ 20	Indio	8.24	2.97	1.51	0.91	0.25	0.11	0.04	0.01
> 3,000 to 10,000	≤ 20	La Habra	7.09	2.53	1.38	0.89	0.27	0.13	0.05	0.01
> 3,000 to 10,000	≤ 20	Lake Elsinore	8.63	3.08	1.57	0.95	0.26	0.12	0.04	0.01
> 3,000 to 10,000	≤ 20	LAX	10.70	4.54	2.54	1.63	0.50	0.24	0.09	0.02
> 3,000 to 10,000	≤ 20	Long Beach	6.29	2.21	1.15	0.71	0.21	0.10	0.04	0.01
> 3,000 to 10,000	≤ 20	Lynwood	7.24	2.72	1.49	0.95	0.30	0.14	0.05	0.01
> 3,000 to 10,000	≤ 20	Mission Viejo	8.19	3.01	1.56	0.95	0.26	0.12	0.04	0.01
> 3,000 to 10,000	≤ 20	Palm Springs	6.78	2.33	1.19	0.71	0.20	0.09	0.03	0.01
> 3,000 to 10,000	≤ 20	Perris	9.30	3.30	1.66	0.99	0.27	0.12	0.04	0.01
> 3,000 to 10,000	≤ 20	Pico Rivera	7.90	3.14	1.72	1.09	0.32	0.15	0.05	0.01
> 3,000 to 10,000	≤ 20	Pomona	6.98	2.53	1.38	0.88	0.27	0.13	0.05	0.01
> 3,000 to 10,000	≤ 20	Redlands	8.44	3.10	1.64	1.02	0.30	0.14	0.05	0.01
> 3,000 to 10,000	≤ 20	Reseda	7.08	2.28	1.09	0.64	0.17	0.07	0.03	0.01
> 3,000 to 10,000	≤ 20	Riverside	8.32	3.27	1.78	1.13	0.34	0.16	0.06	0.02
> 3,000 to 10,000	≤ 20	San Bernardino	8.28	3.11	1.65	1.02	0.29	0.14	0.05	0.01
> 3,000 to 10,000	≤ 20	Santa Clarita	8.36	3.12	1.66	1.04	0.32	0.15	0.06	0.01
> 3,000 to 10,000	≤ 20	Upland	8.51	3.48	1.94	1.24	0.38	0.18	0.06	0.02
> 3,000 to 10,000	≤ 20	West LA	6.86	2.75	1.55	1.00	0.31	0.15	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 4.3
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating 12 Hours per Day or Less

Building Area > 3,000 to 10,000 ft², Height > 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 3,000 to 10,000	> 20	Anaheim	6.89	2.99	1.69	1.09	0.34	0.16	0.06	0.02
> 3,000 to 10,000	> 20	Azusa	7.69	3.16	1.72	1.08	0.32	0.15	0.05	0.01
> 3,000 to 10,000	> 20	Banning	9.27	4.39	2.48	1.57	0.47	0.22	0.08	0.02
> 3,000 to 10,000	> 20	Burbank	6.04	2.38	1.28	0.80	0.23	0.10	0.04	0.01
> 3,000 to 10,000	> 20	Central LA	5.84	2.42	1.34	0.86	0.26	0.12	0.05	0.01
> 3,000 to 10,000	> 20	Compton	5.97	2.35	1.28	0.81	0.25	0.12	0.05	0.01
> 3,000 to 10,000	> 20	Costa Mesa	7.58	3.06	1.65	1.02	0.29	0.13	0.05	0.01
> 3,000 to 10,000	> 20	Crestline	6.87	2.65	1.39	0.86	0.24	0.11	0.04	0.01
> 3,000 to 10,000	> 20	Fontana	9.46	4.15	2.28	1.43	0.42	0.19	0.07	0.02
> 3,000 to 10,000	> 20	Indio	7.32	2.89	1.50	0.91	0.24	0.11	0.04	0.01
> 3,000 to 10,000	> 20	La Habra	6.96	2.70	1.46	0.92	0.27	0.13	0.05	0.01
> 3,000 to 10,000	> 20	Lake Elsinore	7.74	3.01	1.56	0.95	0.26	0.12	0.04	0.01
> 3,000 to 10,000	> 20	LAX	9.87	4.50	2.53	1.61	0.49	0.23	0.08	0.02
> 3,000 to 10,000	> 20	Long Beach	6.00	2.28	1.18	0.72	0.21	0.09	0.03	0.01
> 3,000 to 10,000	> 20	Lynwood	7.36	2.89	1.56	0.98	0.29	0.14	0.05	0.01
> 3,000 to 10,000	> 20	Mission Viejo	7.52	2.99	1.57	0.95	0.26	0.12	0.04	0.01
> 3,000 to 10,000	> 20	Palm Springs	6.67	2.42	1.22	0.73	0.20	0.09	0.03	0.01
> 3,000 to 10,000	> 20	Perris	8.00	3.15	1.63	0.98	0.26	0.12	0.04	0.01
> 3,000 to 10,000	> 20	Pico Rivera	7.69	3.24	1.77	1.11	0.32	0.15	0.05	0.01
> 3,000 to 10,000	> 20	Pomona	6.97	2.72	1.46	0.91	0.27	0.12	0.04	0.01
> 3,000 to 10,000	> 20	Redlands	8.24	3.19	1.68	1.04	0.30	0.14	0.05	0.01
> 3,000 to 10,000	> 20	Reseda	6.75	2.30	1.11	0.65	0.17	0.07	0.03	0.01
> 3,000 to 10,000	> 20	Riverside	8.07	3.33	1.81	1.13	0.33	0.15	0.06	0.01
> 3,000 to 10,000	> 20	San Bernardino	8.03	3.17	1.68	1.03	0.29	0.13	0.05	0.01
> 3,000 to 10,000	> 20	Santa Clarita	7.25	3.08	1.67	1.05	0.31	0.15	0.06	0.01
> 3,000 to 10,000	> 20	Upland	8.55	3.63	1.99	1.26	0.37	0.17	0.06	0.02
> 3,000 to 10,000	> 20	West LA	7.03	2.93	1.62	1.03	0.31	0.14	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 4.4
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating 12 Hours per Day or Less

Building Area > 10,000 to 30,000 ft², Height \leq 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 10,000 to 30,000	\leq 20	Anaheim	4.46	2.23	1.38	0.94	0.32	0.16	0.06	0.02
> 10,000 to 30,000	\leq 20	Azusa	5.38	2.45	1.43	0.94	0.30	0.15	0.05	0.01
> 10,000 to 30,000	\leq 20	Banning	8.23	3.80	2.18	1.42	0.44	0.21	0.08	0.02
> 10,000 to 30,000	\leq 20	Burbank	4.13	1.80	1.04	0.68	0.21	0.10	0.04	0.01
> 10,000 to 30,000	\leq 20	Central LA	3.81	1.72	1.05	0.71	0.24	0.12	0.05	0.01
> 10,000 to 30,000	\leq 20	Compton	4.02	1.73	1.03	0.69	0.23	0.12	0.05	0.01
> 10,000 to 30,000	\leq 20	Costa Mesa	5.37	2.39	1.37	0.89	0.27	0.13	0.05	0.01
> 10,000 to 30,000	\leq 20	Crestline	4.77	2.03	1.14	0.73	0.23	0.11	0.04	0.01
> 10,000 to 30,000	\leq 20	Fontana	7.27	3.36	1.94	1.26	0.39	0.19	0.07	0.02
> 10,000 to 30,000	\leq 20	Indio	5.58	2.33	1.27	0.79	0.23	0.11	0.04	0.01
> 10,000 to 30,000	\leq 20	La Habra	4.70	2.03	1.19	0.78	0.25	0.12	0.04	0.01
> 10,000 to 30,000	\leq 20	Lake Elsinore	5.84	2.42	1.31	0.82	0.24	0.11	0.04	0.01
> 10,000 to 30,000	\leq 20	LAX	7.59	3.66	2.17	1.43	0.47	0.23	0.08	0.02
> 10,000 to 30,000	\leq 20	Long Beach	4.17	1.76	0.97	0.62	0.19	0.09	0.03	0.01
> 10,000 to 30,000	\leq 20	Lynwood	4.91	2.19	1.27	0.84	0.28	0.14	0.05	0.01
> 10,000 to 30,000	\leq 20	Mission Viejo	5.61	2.38	1.31	0.83	0.24	0.11	0.04	0.01
> 10,000 to 30,000	\leq 20	Palm Springs	4.48	1.83	1.00	0.62	0.18	0.09	0.03	0.01
> 10,000 to 30,000	\leq 20	Perris	6.27	2.58	1.39	0.86	0.25	0.11	0.04	0.01
> 10,000 to 30,000	\leq 20	Pico Rivera	5.54	2.53	1.47	0.96	0.30	0.14	0.05	0.01
> 10,000 to 30,000	\leq 20	Pomona	4.63	2.04	1.18	0.78	0.25	0.12	0.04	0.01
> 10,000 to 30,000	\leq 20	Redlands	5.73	2.47	1.39	0.90	0.28	0.13	0.05	0.01
> 10,000 to 30,000	\leq 20	Reseda	4.61	1.75	0.91	0.55	0.15	0.07	0.03	0.01
> 10,000 to 30,000	\leq 20	Riverside	5.80	2.63	1.52	0.99	0.32	0.15	0.06	0.02
> 10,000 to 30,000	\leq 20	San Bernardino	5.68	2.48	1.40	0.90	0.27	0.13	0.05	0.01
> 10,000 to 30,000	\leq 20	Santa Clarita	5.65	2.46	1.41	0.92	0.30	0.14	0.06	0.01
> 10,000 to 30,000	\leq 20	Upland	6.01	2.82	1.66	1.09	0.35	0.17	0.06	0.02
> 10,000 to 30,000	\leq 20	West LA	4.78	2.24	1.33	0.89	0.29	0.14	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

**SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015**

**Table 4.5
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating 12 Hours per Day or Less**

Building Area > 10,000 to 30,000ft², Height > 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 10,000 to 30,000	>20	Anaheim	5.02	2.44	1.45	0.96	0.32	0.15	0.06	0.01
> 10,000 to 30,000	>20	Azusa	5.50	2.54	1.47	0.95	0.30	0.14	0.05	0.01
> 10,000 to 30,000	>20	Banning	6.85	3.54	2.10	1.37	0.43	0.21	0.08	0.02
> 10,000 to 30,000	>20	Burbank	4.28	1.91	1.09	0.70	0.21	0.10	0.04	0.01
> 10,000 to 30,000	>20	Central LA	4.19	1.96	1.15	0.76	0.24	0.12	0.04	0.01
> 10,000 to 30,000	>20	Compton	4.21	1.89	1.09	0.71	0.23	0.11	0.04	0.01
> 10,000 to 30,000	>20	Costa Mesa	5.42	2.46	1.40	0.90	0.27	0.12	0.05	0.01
> 10,000 to 30,000	>20	Crestline	4.83	2.11	1.18	0.75	0.23	0.11	0.04	0.01
> 10,000 to 30,000	>20	Fontana	6.91	3.34	1.93	1.25	0.39	0.18	0.07	0.02
> 10,000 to 30,000	>20	Indio	5.18	2.28	1.26	0.79	0.23	0.10	0.04	0.01
> 10,000 to 30,000	>20	La Habra	4.87	2.17	1.24	0.81	0.25	0.12	0.04	0.01
> 10,000 to 30,000	>20	Lake Elsinore	5.46	2.38	1.31	0.82	0.24	0.11	0.04	0.01
> 10,000 to 30,000	>20	LAX	7.27	3.64	2.15	1.41	0.45	0.22	0.08	0.02
> 10,000 to 30,000	>20	Long Beach	4.19	1.81	1.00	0.63	0.19	0.09	0.03	0.01
> 10,000 to 30,000	>20	Lynwood	5.16	2.32	1.33	0.86	0.27	0.13	0.05	0.01
> 10,000 to 30,000	>20	Mission Viejo	5.37	2.38	1.32	0.83	0.24	0.11	0.04	0.01
> 10,000 to 30,000	>20	Palm Springs	4.57	1.90	1.02	0.63	0.18	0.09	0.03	0.01
> 10,000 to 30,000	>20	Perris	5.65	2.49	1.37	0.85	0.25	0.11	0.04	0.01
> 10,000 to 30,000	>20	Pico Rivera	5.59	2.62	1.51	0.97	0.30	0.14	0.05	0.01
> 10,000 to 30,000	>20	Pomona	4.89	2.18	1.24	0.80	0.25	0.12	0.04	0.01
> 10,000 to 30,000	>20	Redlands	5.77	2.54	1.42	0.91	0.28	0.13	0.05	0.01
> 10,000 to 30,000	>20	Reseda	4.53	1.78	0.92	0.56	0.15	0.07	0.03	0.01
> 10,000 to 30,000	>20	Riverside	5.78	2.67	1.53	0.99	0.31	0.15	0.05	0.01
> 10,000 to 30,000	>20	San Bernardino	5.66	2.52	1.42	0.90	0.27	0.13	0.05	0.01
> 10,000 to 30,000	>20	Santa Clarita	5.19	2.45	1.41	0.92	0.29	0.14	0.05	0.01
> 10,000 to 30,000	>20	Upland	6.19	2.92	1.70	1.10	0.34	0.16	0.06	0.02
> 10,000 to 30,000	>20	West LA	5.06	2.37	1.38	0.91	0.29	0.14	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 4.6
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating 12 Hours per Day or Less

Building Area > 30,000 ft², Height > 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 30,000	>20	Anaheim	3.21	1.78	1.14	0.79	0.28	0.14	0.05	0.01
> 30,000	>20	Azusa	3.42	1.83	1.13	0.77	0.26	0.13	0.05	0.01
> 30,000	>20	Banning	4.36	2.52	1.61	1.11	0.38	0.19	0.07	0.02
> 30,000	>20	Burbank	2.66	1.38	0.85	0.57	0.19	0.09	0.03	0.01
> 30,000	>20	Central LA	2.64	1.43	0.90	0.62	0.22	0.11	0.04	0.01
> 30,000	>20	Compton	2.60	1.37	0.85	0.58	0.21	0.10	0.04	0.01
> 30,000	>20	Costa Mesa	3.38	1.77	1.08	0.73	0.24	0.11	0.04	0.01
> 30,000	>20	Crestline	2.95	1.51	0.91	0.61	0.20	0.10	0.04	0.01
> 30,000	>20	Fontana	4.35	2.38	1.49	1.01	0.34	0.17	0.06	0.02
> 30,000	>20	Indio	3.14	1.60	0.95	0.63	0.20	0.09	0.03	0.01
> 30,000	>20	La Habra	2.98	1.56	0.97	0.66	0.22	0.11	0.04	0.01
> 30,000	>20	Lake Elsinore	3.32	1.67	1.00	0.66	0.21	0.10	0.04	0.01
> 30,000	>20	LAX	4.62	2.61	1.66	1.14	0.40	0.20	0.08	0.02
> 30,000	>20	Long Beach	2.55	1.28	0.76	0.51	0.17	0.08	0.03	0.01
> 30,000	>20	Lynwood	3.16	1.66	1.03	0.70	0.24	0.12	0.05	0.01
> 30,000	>20	Mission Viejo	3.31	1.69	1.01	0.67	0.21	0.10	0.04	0.01
> 30,000	>20	Palm Springs	2.69	1.32	0.77	0.51	0.16	0.08	0.03	0.01
> 30,000	>20	Perris	3.43	1.74	1.04	0.68	0.22	0.10	0.04	0.01
> 30,000	>20	Pico Rivera	3.53	1.89	1.17	0.79	0.26	0.13	0.05	0.01
> 30,000	>20	Pomona	2.99	1.56	0.97	0.66	0.22	0.11	0.04	0.01
> 30,000	>20	Redlands	3.50	1.80	1.09	0.73	0.24	0.12	0.05	0.01
> 30,000	>20	Reseda	2.58	1.21	0.69	0.44	0.13	0.06	0.02	0.01
> 30,000	>20	Riverside	3.58	1.90	1.18	0.80	0.27	0.13	0.05	0.01
> 30,000	>20	San Bernardino	3.46	1.79	1.09	0.73	0.24	0.12	0.04	0.01
> 30,000	>20	Santa Clarita	3.19	1.73	1.08	0.74	0.26	0.13	0.05	0.01
> 30,000	>20	Upland	3.89	2.10	1.31	0.89	0.31	0.15	0.06	0.01
> 30,000	>20	West LA	3.18	1.72	1.08	0.74	0.25	0.12	0.05	0.01

*Note: Facilities with building dimensions outside the ranges in Tables 4 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 5.1
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating More Than 12 Hours per Day
Building Area $\leq 3,000$ ft², Height ≤ 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$)

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
$\leq 3,000$	≤ 20	Anaheim	20.33	7.40	3.98	2.53	0.81	0.41	0.17	0.05
$\leq 3,000$	≤ 20	Azusa	19.40	7.11	3.79	2.40	0.76	0.39	0.16	0.05
$\leq 3,000$	≤ 20	Banning	29.64	12.42	6.96	4.51	1.52	0.79	0.34	0.11
$\leq 3,000$	≤ 20	Burbank	19.10	6.77	3.58	2.25	0.72	0.36	0.15	0.05
$\leq 3,000$	≤ 20	Central LA	16.03	5.71	3.07	1.95	0.63	0.32	0.13	0.04
$\leq 3,000$	≤ 20	Compton	21.02	7.40	3.93	2.49	0.80	0.41	0.17	0.05
$\leq 3,000$	≤ 20	Costa Mesa	25.65	9.20	4.86	3.05	0.96	0.48	0.20	0.06
$\leq 3,000$	≤ 20	Crestline	23.49	8.37	4.40	2.76	0.88	0.44	0.19	0.06
$\leq 3,000$	≤ 20	Fontana	24.92	9.60	5.21	3.33	1.09	0.56	0.24	0.07
$\leq 3,000$	≤ 20	Indio	26.75	10.36	5.62	3.59	1.19	0.61	0.27	0.09
$\leq 3,000$	≤ 20	La Habra	24.67	8.71	4.61	2.90	0.92	0.47	0.20	0.06
$\leq 3,000$	≤ 20	Lake Elsinore	24.71	8.94	4.71	2.95	0.94	0.47	0.20	0.06
$\leq 3,000$	≤ 20	LAX	24.26	9.16	4.93	3.13	1.00	0.51	0.21	0.07
$\leq 3,000$	≤ 20	Long Beach	19.36	6.87	3.63	2.28	0.73	0.37	0.16	0.05
$\leq 3,000$	≤ 20	Lynwood	23.89	8.50	4.50	2.84	0.91	0.46	0.19	0.06
$\leq 3,000$	≤ 20	Mission Viejo	23.44	8.45	4.44	2.77	0.87	0.44	0.18	0.06
$\leq 3,000$	≤ 20	Palm Springs	19.46	6.87	3.60	2.25	0.71	0.36	0.15	0.05
$\leq 3,000$	≤ 20	Perris	27.48	10.06	5.33	3.35	1.07	0.54	0.23	0.07
$\leq 3,000$	≤ 20	Pico Rivera	19.93	7.33	3.90	2.46	0.78	0.39	0.16	0.05
$\leq 3,000$	≤ 20	Pomona	23.75	8.40	4.45	2.80	0.89	0.45	0.19	0.06
$\leq 3,000$	≤ 20	Redlands	26.76	9.60	5.07	3.19	1.01	0.51	0.22	0.07
$\leq 3,000$	≤ 20	Reseda	23.86	8.27	4.28	2.66	0.84	0.42	0.18	0.06
$\leq 3,000$	≤ 20	Riverside	23.99	8.80	4.68	2.96	0.94	0.48	0.20	0.06
$\leq 3,000$	≤ 20	San Bernardino	25.53	9.31	4.96	3.13	1.00	0.51	0.22	0.07
$\leq 3,000$	≤ 20	Santa Clarita	21.89	8.02	4.26	2.69	0.86	0.44	0.19	0.06
$\leq 3,000$	≤ 20	Upland	24.01	8.91	4.78	3.03	0.98	0.49	0.21	0.06
$\leq 3,000$	≤ 20	West LA	23.97	8.63	4.59	2.89	0.92	0.46	0.19	0.06

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 5.2
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating More Than 12 Hours per Day

Building Area > 3,000 to 10,000 ft², Height ≤ 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 3,000 to 10,000	≤ 20	Anaheim	15.93	6.47	3.62	2.35	0.78	0.40	0.17	0.05
> 3,000 to 10,000	≤ 20	Azusa	15.27	6.20	3.45	2.23	0.74	0.38	0.16	0.05
> 3,000 to 10,000	≤ 20	Banning	23.82	10.88	6.33	4.20	1.47	0.77	0.34	0.11
> 3,000 to 10,000	≤ 20	Burbank	14.93	5.90	3.26	2.09	0.69	0.35	0.15	0.05
> 3,000 to 10,000	≤ 20	Central LA	12.56	4.99	2.79	1.81	0.60	0.31	0.13	0.04
> 3,000 to 10,000	≤ 20	Compton	16.40	6.44	3.57	2.31	0.77	0.40	0.17	0.05
> 3,000 to 10,000	≤ 20	Costa Mesa	20.09	8.01	4.41	2.83	0.93	0.47	0.20	0.06
> 3,000 to 10,000	≤ 20	Crestline	18.39	7.28	4.00	2.56	0.84	0.43	0.18	0.06
> 3,000 to 10,000	≤ 20	Fontana	19.79	8.39	4.74	3.09	1.04	0.54	0.23	0.07
> 3,000 to 10,000	≤ 20	Indio	21.26	9.04	5.11	3.34	1.14	0.60	0.26	0.09
> 3,000 to 10,000	≤ 20	La Habra	19.24	7.58	4.18	2.69	0.89	0.45	0.19	0.06
> 3,000 to 10,000	≤ 20	Lake Elsinore	19.43	7.78	4.27	2.74	0.90	0.46	0.20	0.06
> 3,000 to 10,000	≤ 20	LAX	19.22	8.00	4.48	2.90	0.97	0.49	0.21	0.06
> 3,000 to 10,000	≤ 20	Long Beach	15.14	5.98	3.29	2.12	0.70	0.36	0.15	0.05
> 3,000 to 10,000	≤ 20	Lynwood	18.64	7.40	4.09	2.64	0.88	0.45	0.19	0.06
> 3,000 to 10,000	≤ 20	Mission Viejo	18.44	7.35	4.02	2.57	0.84	0.43	0.18	0.06
> 3,000 to 10,000	≤ 20	Palm Springs	15.19	5.97	3.26	2.09	0.68	0.35	0.15	0.05
> 3,000 to 10,000	≤ 20	Perris	21.65	8.76	4.83	3.11	1.03	0.53	0.23	0.07
> 3,000 to 10,000	≤ 20	Pico Rivera	15.73	6.40	3.55	2.28	0.75	0.38	0.16	0.05
> 3,000 to 10,000	≤ 20	Pomona	18.51	7.31	4.04	2.60	0.86	0.44	0.19	0.06
> 3,000 to 10,000	≤ 20	Redlands	20.96	8.35	4.60	2.96	0.97	0.50	0.21	0.07
> 3,000 to 10,000	≤ 20	Reseda	18.57	7.17	3.88	2.47	0.80	0.41	0.18	0.06
> 3,000 to 10,000	≤ 20	Riverside	18.90	7.67	4.25	2.74	0.91	0.47	0.20	0.06
> 3,000 to 10,000	≤ 20	San Bernardino	20.07	8.12	4.50	2.90	0.96	0.50	0.21	0.07
> 3,000 to 10,000	≤ 20	Santa Clarita	17.24	6.98	3.87	2.50	0.83	0.43	0.18	0.06
> 3,000 to 10,000	≤ 20	Upland	18.94	7.78	4.35	2.82	0.94	0.48	0.21	0.06
> 3,000 to 10,000	≤ 20	West LA	18.76	7.52	4.17	2.69	0.89	0.45	0.19	0.06

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 5.3
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating More Than 12 Hours per Day

Building Area > 3,000 to 10,000 ft², Height > 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 3,000 to 10,000	>20	Anaheim	14.07	6.16	3.51	2.30	0.77	0.40	0.17	0.05
> 3,000 to 10,000	>20	Azusa	13.11	5.77	3.29	2.15	0.72	0.37	0.16	0.05
> 3,000 to 10,000	>20	Banning	15.44	8.15	5.09	3.51	1.31	0.71	0.32	0.10
> 3,000 to 10,000	>20	Burbank	13.10	5.59	3.15	2.05	0.68	0.35	0.15	0.05
> 3,000 to 10,000	>20	Central LA	10.92	4.78	2.73	1.78	0.60	0.31	0.13	0.04
> 3,000 to 10,000	>20	Compton	14.74	6.23	3.51	2.28	0.77	0.39	0.17	0.05
> 3,000 to 10,000	>20	Costa Mesa	17.74	7.57	4.26	2.76	0.92	0.47	0.20	0.06
> 3,000 to 10,000	>20	Crestline	16.00	6.82	3.84	2.49	0.83	0.43	0.18	0.06
> 3,000 to 10,000	>20	Fontana	15.41	7.24	4.26	2.83	0.98	0.52	0.22	0.07
> 3,000 to 10,000	>20	Indio	15.55	7.40	4.40	2.96	1.06	0.56	0.25	0.08
> 3,000 to 10,000	>20	La Habra	17.22	7.27	4.08	2.65	0.88	0.45	0.19	0.06
> 3,000 to 10,000	>20	Lake Elsinore	16.09	7.06	4.01	2.61	0.88	0.45	0.19	0.06
> 3,000 to 10,000	>20	LAX	15.78	7.21	4.17	2.75	0.93	0.48	0.20	0.06
> 3,000 to 10,000	>20	Long Beach	13.29	5.67	3.19	2.07	0.69	0.35	0.15	0.05
> 3,000 to 10,000	>20	Lynwood	16.84	7.12	4.00	2.59	0.87	0.44	0.19	0.06
> 3,000 to 10,000	>20	Mission Viejo	15.58	6.77	3.82	2.48	0.82	0.42	0.18	0.06
> 3,000 to 10,000	>20	Palm Springs	13.13	5.58	3.13	2.02	0.67	0.35	0.15	0.05
> 3,000 to 10,000	>20	Perris	17.55	7.79	4.46	2.92	0.99	0.51	0.22	0.07
> 3,000 to 10,000	>20	Pico Rivera	13.22	5.88	3.36	2.20	0.73	0.38	0.16	0.05
> 3,000 to 10,000	>20	Pomona	16.74	7.05	3.95	2.56	0.85	0.44	0.19	0.06
> 3,000 to 10,000	>20	Redlands	18.51	7.89	4.44	2.88	0.96	0.49	0.21	0.07
> 3,000 to 10,000	>20	Reseda	16.65	6.82	3.76	2.42	0.80	0.41	0.18	0.06
> 3,000 to 10,000	>20	Riverside	16.20	7.10	4.04	2.64	0.89	0.46	0.20	0.06
> 3,000 to 10,000	>20	San Bernardino	17.04	7.44	4.24	2.77	0.94	0.48	0.21	0.07
> 3,000 to 10,000	>20	Santa Clarita	14.00	6.28	3.61	2.37	0.80	0.42	0.18	0.06
> 3,000 to 10,000	>20	Upland	16.17	7.19	4.12	2.70	0.91	0.47	0.20	0.06
> 3,000 to 10,000	>20	West LA	16.89	7.21	4.06	2.64	0.88	0.45	0.19	0.06

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 5.4
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating More Than 12 Hours per Day

Building Area > 10,000 to 30,000 ft², Height ≤ 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 10,000 to 30,000	≤ 20	Anaheim	11.28	5.27	3.12	2.09	0.73	0.38	0.17	0.05
> 10,000 to 30,000	≤ 20	Azusa	10.85	5.03	2.96	1.98	0.69	0.36	0.15	0.05
> 10,000 to 30,000	≤ 20	Banning	17.16	8.82	5.44	3.72	1.38	0.74	0.33	0.11
> 10,000 to 30,000	≤ 20	Burbank	10.49	4.78	2.80	1.86	0.65	0.34	0.15	0.05
> 10,000 to 30,000	≤ 20	Central LA	8.84	4.06	2.41	1.61	0.57	0.30	0.13	0.04
> 10,000 to 30,000	≤ 20	Compton	11.50	5.23	3.08	2.06	0.73	0.38	0.17	0.05
> 10,000 to 30,000	≤ 20	Costa Mesa	14.20	6.48	3.78	2.51	0.87	0.45	0.20	0.06
> 10,000 to 30,000	≤ 20	Crestline	12.96	5.88	3.43	2.28	0.79	0.41	0.18	0.06
> 10,000 to 30,000	≤ 20	Fontana	14.15	6.80	4.07	2.74	0.98	0.52	0.23	0.07
> 10,000 to 30,000	≤ 20	Indio	15.18	7.32	4.39	2.97	1.07	0.57	0.26	0.08
> 10,000 to 30,000	≤ 20	La Habra	13.51	6.14	3.59	2.39	0.83	0.43	0.19	0.06
> 10,000 to 30,000	≤ 20	Lake Elsinore	13.76	6.28	3.66	2.43	0.84	0.44	0.19	0.06
> 10,000 to 30,000	≤ 20	LAX	13.73	6.49	3.85	2.58	0.91	0.47	0.20	0.06
> 10,000 to 30,000	≤ 20	Long Beach	10.64	4.84	2.83	1.88	0.66	0.34	0.15	0.05
> 10,000 to 30,000	≤ 20	Lynwood	13.12	5.99	3.51	2.34	0.82	0.43	0.19	0.06
> 10,000 to 30,000	≤ 20	Mission Viejo	13.06	5.94	3.45	2.28	0.79	0.41	0.18	0.06
> 10,000 to 30,000	≤ 20	Palm Springs	10.66	4.81	2.79	1.85	0.64	0.34	0.15	0.05
> 10,000 to 30,000	≤ 20	Perris	15.34	7.07	4.14	2.76	0.96	0.50	0.22	0.07
> 10,000 to 30,000	≤ 20	Pico Rivera	11.21	5.19	3.05	2.03	0.70	0.36	0.16	0.05
> 10,000 to 30,000	≤ 20	Pomona	12.99	5.92	3.47	2.31	0.81	0.42	0.18	0.06
> 10,000 to 30,000	≤ 20	Redlands	14.79	6.75	3.95	2.63	0.91	0.48	0.21	0.07
> 10,000 to 30,000	≤ 20	Reseda	12.97	5.76	3.32	2.19	0.75	0.39	0.17	0.05
> 10,000 to 30,000	≤ 20	Riverside	13.43	6.21	3.65	2.44	0.85	0.45	0.19	0.06
> 10,000 to 30,000	≤ 20	San Bernardino	14.21	6.57	3.86	2.58	0.90	0.47	0.21	0.07
> 10,000 to 30,000	≤ 20	Santa Clarita	12.21	5.65	3.32	2.22	0.78	0.41	0.18	0.06
> 10,000 to 30,000	≤ 20	Upland	13.49	6.31	3.74	2.50	0.88	0.46	0.20	0.06
> 10,000 to 30,000	≤ 20	West LA	13.27	6.10	3.58	2.39	0.83	0.43	0.19	0.06

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 5.5
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating More Than 12 Hours per Day

Building Area > 10,000 to 30,000 ft², Height > 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 10,000 to 30,000	> 20	Anaheim	10.37	5.05	3.04	2.04	0.72	0.38	0.16	0.05
> 10,000 to 30,000	> 20	Azusa	9.67	4.73	2.84	1.91	0.68	0.35	0.15	0.05
> 10,000 to 30,000	> 20	Banning	11.82	6.80	4.44	3.15	1.23	0.68	0.31	0.10
> 10,000 to 30,000	> 20	Burbank	9.57	4.57	2.72	1.82	0.64	0.33	0.14	0.05
> 10,000 to 30,000	> 20	Central LA	8.05	3.92	2.35	1.59	0.56	0.29	0.13	0.04
> 10,000 to 30,000	> 20	Compton	10.71	5.09	3.03	2.03	0.72	0.38	0.16	0.05
> 10,000 to 30,000	> 20	Costa Mesa	12.95	6.18	3.67	2.45	0.86	0.45	0.19	0.06
> 10,000 to 30,000	> 20	Crestline	11.68	5.57	3.31	2.22	0.78	0.41	0.18	0.06
> 10,000 to 30,000	> 20	Fontana	11.55	5.97	3.69	2.52	0.93	0.49	0.22	0.07
> 10,000 to 30,000	> 20	Indio	11.67	6.12	3.82	2.64	0.99	0.54	0.24	0.08
> 10,000 to 30,000	> 20	La Habra	12.51	5.93	3.52	2.35	0.83	0.43	0.19	0.06
> 10,000 to 30,000	> 20	Lake Elsinore	11.87	5.78	3.46	2.33	0.82	0.43	0.19	0.06
> 10,000 to 30,000	> 20	LAX	11.76	5.93	3.61	2.44	0.87	0.46	0.20	0.06
> 10,000 to 30,000	> 20	Long Beach	9.69	4.62	2.75	1.84	0.65	0.34	0.15	0.05
> 10,000 to 30,000	> 20	Lynwood	12.22	5.80	3.44	2.31	0.81	0.43	0.18	0.06
> 10,000 to 30,000	> 20	Mission Viejo	11.47	5.54	3.30	2.21	0.77	0.40	0.17	0.06
> 10,000 to 30,000	> 20	Palm Springs	9.56	4.55	2.69	1.80	0.63	0.33	0.14	0.05
> 10,000 to 30,000	> 20	Perris	12.96	6.39	3.85	2.60	0.93	0.49	0.22	0.07
> 10,000 to 30,000	> 20	Pico Rivera	9.81	4.83	2.90	1.95	0.69	0.36	0.15	0.05
> 10,000 to 30,000	> 20	Pomona	12.14	5.74	3.41	2.28	0.80	0.42	0.18	0.06
> 10,000 to 30,000	> 20	Redlands	13.48	6.43	3.82	2.56	0.90	0.47	0.20	0.07
> 10,000 to 30,000	> 20	Reseda	11.96	5.53	3.23	2.15	0.75	0.39	0.17	0.05
> 10,000 to 30,000	> 20	Riverside	11.92	5.81	3.49	2.35	0.83	0.44	0.19	0.06
> 10,000 to 30,000	> 20	San Bernardino	12.50	6.09	3.66	2.47	0.88	0.46	0.20	0.07
> 10,000 to 30,000	> 20	Santa Clarita	10.36	5.15	3.12	2.11	0.76	0.40	0.17	0.06
> 10,000 to 30,000	> 20	Upland	11.95	5.89	3.56	2.40	0.86	0.45	0.20	0.06
> 10,000 to 30,000	> 20	West LA	12.32	5.89	3.50	2.35	0.82	0.43	0.19	0.06

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 5.6
Dispersion Factors (χ/Q)
for Volume Source Equipment
Operating More Than 12 Hours per Day

Building Area > 30,000 ft², Height > 20 ft*

Carcinogenic, Chronic and Chronic 8-Hour χ/Q Values ([$\mu\text{g}/\text{m}^3$]/[ton/year])

Source Dimensions*		Location	Downwind Distance (meters)							
Area (ft ²)	Ht (ft)		25	50	75	100	200	300	500	1,000
> 30,000	>20	Anaheim	6.74	3.75	2.42	1.70	0.65	0.35	0.16	0.05
> 30,000	>20	Azusa	6.28	3.51	2.26	1.59	0.61	0.33	0.15	0.05
> 30,000	>20	Banning	8.02	5.13	3.57	2.63	1.11	0.63	0.29	0.10
> 30,000	>20	Burbank	6.17	3.38	2.16	1.51	0.58	0.31	0.14	0.04
> 30,000	>20	Central LA	5.24	2.91	1.87	1.32	0.51	0.27	0.12	0.04
> 30,000	>20	Compton	6.86	3.75	2.40	1.69	0.65	0.35	0.16	0.05
> 30,000	>20	Costa Mesa	8.33	4.56	2.91	2.04	0.77	0.42	0.19	0.06
> 30,000	>20	Crestline	7.52	4.12	2.63	1.84	0.70	0.38	0.17	0.06
> 30,000	>20	Fontana	7.63	4.45	2.94	2.10	0.83	0.46	0.21	0.07
> 30,000	>20	Indio	7.74	4.58	3.06	2.21	0.90	0.50	0.23	0.08
> 30,000	>20	La Habra	8.00	4.37	2.79	1.95	0.74	0.40	0.18	0.06
> 30,000	>20	Lake Elsinore	7.72	4.28	2.75	1.93	0.74	0.40	0.18	0.06
> 30,000	>20	LAX	7.71	4.40	2.87	2.03	0.79	0.43	0.19	0.06
> 30,000	>20	Long Beach	6.22	3.41	2.18	1.53	0.58	0.32	0.14	0.05
> 30,000	>20	Lynwood	7.81	4.27	2.73	1.91	0.73	0.40	0.18	0.06
> 30,000	>20	Mission Viejo	7.44	4.09	2.62	1.83	0.70	0.38	0.17	0.05
> 30,000	>20	Palm Springs	6.11	3.34	2.13	1.49	0.57	0.31	0.14	0.05
> 30,000	>20	Perris	8.43	4.74	3.07	2.16	0.84	0.46	0.21	0.07
> 30,000	>20	Pico Rivera	6.43	3.59	2.31	1.63	0.62	0.33	0.15	0.05
> 30,000	>20	Pomona	7.75	4.23	2.70	1.89	0.72	0.39	0.17	0.06
> 30,000	>20	Redlands	8.64	4.74	3.03	2.12	0.81	0.44	0.20	0.06
> 30,000	>20	Reseda	7.54	4.04	2.55	1.78	0.67	0.37	0.16	0.05
> 30,000	>20	Riverside	7.73	4.30	2.77	1.95	0.75	0.41	0.18	0.06
> 30,000	>20	San Bernardino	8.08	4.51	2.91	2.05	0.79	0.43	0.19	0.06
> 30,000	>20	Santa Clarita	6.76	3.82	2.48	1.75	0.68	0.37	0.17	0.05
> 30,000	>20	Upland	7.77	4.37	2.83	2.00	0.77	0.42	0.19	0.06
> 30,000	>20	West LA	7.91	4.34	2.78	1.95	0.74	0.40	0.18	0.06

*Note: Facilities with building dimensions outside the ranges in Tables 5 must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table 6.1
Dispersion Factors (χ/Q)
for Acute Hazard Index
Point Source Equipment

All Operating Conditions χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{lb}/\text{hr}]$)

Stack Ht (ft)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1,000
≥ 14 to 24*	802.52	335.78	271.20	224.43	95.39	31.94	9.05	3.38
> 24 to 49	507.65	227.75	175.96	132.75	58.26	33.76	16.85	6.44
> 49	35.82	28.25	44.38	51.18	41.24	28.42	15.85	6.51

*Note: Facilities with stack heights less than 14 feet must perform Tier 3 or 4 dispersion modeling

Table 7.1
Dispersion Factors (χ/Q)
for Acute Hazard Index
Volume Source Equipment

All Operating Conditions χ/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{lb}/\text{hr}]$)

Source Dimensions*		Downwind Distance (meters)							
Area (ft ²)	Ht (ft)	25	50	75	100	200	300	500	1,000
$\leq 3,000$	≤ 20	875.45	316.53	165.11	107.40	36.79	21.11	10.44	3.99
> 3,000 to 10,000	≤ 20	430.68	204.89	125.46	86.86	33.25	19.75	10.04	3.91
> 3,000 to 10,000	> 20	355.29	196.58	123.09	84.50	30.58	16.12	8.17	3.21
> 10,000 to 30,000	≤ 20	659.28	267.89	149.04	99.31	35.51	20.62	10.29	3.96
> 10,000 to 30,000	>20	500.86	248.96	146.57	96.92	32.88	16.94	8.37	3.25
> 30,000	≥ 20	215.10	135.21	92.18	66.89	26.89	14.80	7.83	3.14

*Note: Facilities with building dimensions outside the ranges here must perform Tier 3 or 4 dispersion modeling

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL µg/m ³	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Acetaldehyde	75-07-0	1.00E-02	1.00	1.00	1	1.40E+02	1.00	1.00	3.00E+02	4.70E+02
Acetamide	60-35-5	7.00E-02	1.00	1.00	1					
Acrolein	107-02-8					3.50E-01	1.00	1.00	7.00E-01	2.50E+00
Acrylamide	79-06-1	4.50E+00	1.00	1.00	1					
Acrylic Acid	79-10-7									6.00E+03
Acrylonitrile	107-13-1	1.00E+00	1.00	1.00	1	5.00E+00	1.00	1.00		
Allyl Chloride	107-05-1	2.10E-02	1.00	1.00	1					
2-Aminoanthraquinone	117-79-3	3.30E-02	1.00	1.00	1					
Ammonia	7664-41-7					2.00E+02	1.00	1.00		3.20E+03
Aniline	62-53-3	5.70E-03	1.00	1.00	1					
Arsenic and Compounds (Inorganic)	7440-38-2	1.20E+01	9.71	4.52	1	1.50E-02	88.03	28.37	1.50E-02	2.00E-01
Arsine	7784-42-1					1.50E-02	1.00	1.00	1.50E-02	2.00E-01
Asbestos ²	1332-21-4	2.20E+02	1.00	1.00	333					
Benzene	71-43-2	1.00E-01	1.00	1.00	1	3.00E+00	1.00	1.00	3.00E+00	2.70E+01
Benzidine (and Its Salts)	92-87-5	5.00E+02	1.00	1.00	1					
Benzidine Based Dyes	1020	5.00E+02	1.00	1.00	1					
Direct Black	1937-37-7	5.00E+02	1.00	1.00	1					
Direct Blue	2602-46-2	5.00E+02	1.00	1.00	1					
Direct Brown (Technical Grade)	16071-86-6	5.00E+02	1.00	1.00	1					
Benzyl Chloride	100-44-7	1.70E-01	1.00	1.00	1					2.40E+02
Beryllium and Compounds	7440-41-7	8.40E+00	1.00	1.00	1	7.00E-03	1.00	1.00		
Bis(2-Chloroethyl)Ether (Dichloroethyl Ether)	111-44-4	2.50E+00	1.00	1.00	1					
Bis(Chloromethyl)Ether	542-88-1	4.60E+01	1.00	1.00	1					
Potassium Bromate	7758-01-2	4.90E-01	1.00	1.00	1					
1,3-Butadiene	106-99-0	6.00E-01	1.00	1.00	1	2.00E+00	1.00	1.00	9.00E+00	6.60E+02
Cadmium and Compounds	7440-43-9	1.50E+01	1.00	1.00	1	2.00E-02	1.98	1.20		
Carbon Disulfide	75-15-0					8.00E+02	1.00	1.00		6.20E+03
Carbon Tetrachloride (Tetrachloromethane)	56-23-5	1.50E-01	1.00	1.00	1	4.00E+01	1.00	1.00		1.90E+03
Chlorinated Paraffins	108171-26-2	8.90E-02	1.00	1.00	1					

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Chlorine	7782-50-5					2.00E-01	1.00	1.00		2.10E+02
Chlorine Dioxide	10049-04-4					6.00E-01	1.00	1.00		
4-Chloro-o-Phenylenediamine	95-83-0	1.60E-02	1.00	1.00	1					
Chlorobenzene	108-90-7					1.00E+03	1.00	1.00		
Chloroform	67-66-3	1.90E-02	1.00	1.00	1	3.00E+02	1.00	1.00		1.50E+02
Pentachlorophenol	87-86-5	1.80E-02	1.00	1.00	1					
2,4,6-Trichlorophenol	88-06-2	7.00E-02	1.00	1.00	1					
Chloropicrin	76-06-2					4.00E-01	1.00	1.00		2.90E+01
p-Chloro-o-Toluidine	95-69-2	2.70E-01	1.00	1.00	1					
Chromium 6+	18540-29-9	5.10E+02	1.60	1.02	1	2.00E-01	2.44	1.00		
Barium Chromate	10294-40-3	5.10E+02	1.60	1.02	0	2.00E-01	2.44	1.00		
Calcium Chromate	13765-19-0	5.10E+02	1.60	1.02	0	2.00E-01	2.44	1.00		
Lead Chromate	7758-97-6	5.10E+02	1.60	1.02	0	2.00E-01	2.44	1.00		
Sodium Dichromate	10588-01-9	5.10E+02	1.60	1.02	0	2.00E-01	2.44	1.00		
Strontium Chromate	7789-06-2	5.10E+02	1.60	1.02	0	2.00E-01	2.44	1.00		
Chromic Trioxide (as Chromic Acid Mist)	1333-82-0	5.10E+02	1.60	1.02	1	2.00E-03	1.00	1.00		
Copper and Compounds	7440-50-8									1.00E+02
p-Cresidine	120-71-8	1.50E-01	1.00	1.00	1					
Cresols (Mixtures of)	1319-77-3					6.00E+02	1.00	1.00		
m-Cresol	108-39-4					6.00E+02	1.00	1.00		
o-Cresol	95-48-7					6.00E+02	1.00	1.00		
p-Cresol	106-44-5					6.00E+02	1.00	1.00		
Cupferron	135-20-6	2.20E-01	1.00	1.00	1					
Hydrogen Cyanide (Hydrocyanic Acid)	74-90-8					9.00E+00	1.00	1.00		3.40E+02
2,4-Diaminoanisole	615-05-4	2.30E-02	1.00	1.00	1					
2,4-Diaminotoluene	95-80-7	4.00E+00	1.00	1.00	1					
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	7.00E+00	1.00	1.00	1					
p-Dichlorobenzene	106-46-7	4.00E-02	1.00	1.00	1	8.00E+02	1.00	1.00		
3,3-Dichlorobenzidine	91-94-1	1.20E+00	1.00	1.00	1					
1,1,-Dichloroethane (Ethylidene Dichloride)	75-34-3	5.70E-03	1.00	1.00	1					

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Di(2-Ethylhexyl)Phthalate (DEHP)	117-81-7	8.40E-03	5.22	1.05	1					
Diethanolamine	111-42-2					3.00E+00	1.00	1.00		
p-Dimethylaminoazobenzene	60-11-7	4.60E+00	1.00	1.00	1					
n,n-Dimethyl Formamide	68-12-2					8.00E+01	1.00	1.00		
2,4-Dinitrotoluene	121-14-2	3.10E-01	1.00	1.00	1					
1,2-Diphenylhydrazine {Hydrazobenzene}	122-66-7	8.8E-01	1.00	1.00	1					
1,4-Dioxane (1,4-Diethylene Dioxide)	123-91-1	2.70E-02	1.00	1.00	1	3.00E+03	1.00	1.00		3.00E+03
Epichlorohydrin (1-Chloro-2,3-Epoxypropane)	106-89-8	8.00E-02	1.00	1.00	1	3.00E+00	1.00	1.00		1.30E+03
1,2-Epoxybutane	106-88-7					2.00E+01	1.00	1.00		
Ethyl Benzene	100-41-4	8.70E-03	1.00	1.00	1	2.00E+03	1.00	1.00		
Ethyl Chloride (Chloroethane)	75-00-3					3.00E+04	1.00	1.00		
Ethylene Dibromide (1,2-Dibromoethane)	106-93-4	2.50E-01	1.00	1.00	1	8.00E-01	1.00	1.00		
Ethylene Dichloride (1,2-Dichloroethane)	107-06-2	7.20E-02	1.00	1.00	1	4.00E+02	1.00	1.00		
Ethylene Glycol	107-21-1					4.00E+02	1.00	1.00		
Ethylene Oxide (1,2-Epoxyethane)	75-21-8	3.10E-01	1.00	1.00	1	3.00E+01	1.00	1.00		
Ethylene Thiourea	96-45-7	4.50E-02	1.00	1.00	1					
Flourides	1101					1.30E+01	5.70	2.85		2.40E+02
Hydrogen Fluoride (Hydrofluoric Acid)	7664-39-3					1.40E+01	6.06	2.99		2.40E+02
Formaldehyde	50-00-0	2.10E-02	1.00	1.00	1	9.00E+00	1.00	1.00	9.00E+00	5.50E+01
Glutaraldehyde	111-30-8					8.00E-02	1.00	1.00		
Ethylene Glycol Butyl Ether – EGBE	111-76-2									1.40E+04
Ethylene Glycol Ethyl Ether – EGEE	110-80-5					7.00E+01	1.00	1.00		3.70E+02
Ethylene Glycol Ethyl Ether Acetate – EGEEA	111-15-9					3.00E+02	1.00	1.00		1.40E+02
Ethylene Glycol Methyl Ether – EGME	109-86-4					6.00E+01	1.00	1.00		9.30E+01

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Ethylene Glycol Methyl Ether Acetate – EGMEA	110-49-6					9.00E+01	1.00	1.00		
Hexachlorobenzene	118-74-1	1.80E+00	1.00	1.00	1					
Hexachlorocyclohexanes	608-73-1	4.00E+00	5.39	1.25	1					
Alpha-Hexachlorocyclohexane	319-84-6	4.00E+00	5.39	1.25	1					
Beta-Hexachlorocyclohexane	319-85-7	4.00E+00	5.39	1.25	1					
Gamma-Hexachlorocyclohexane (Lindane)	58-89-9	1.10E+00	5.39	1.25	1					
n-Hexane	110-54-3					7.00E+03	1.00	1.00		
Hydrazine	302-01-2	1.70E+01	1.00	1.00	1	2.00E-01	1.00	1.00		
Hydrochloric Acid (Hydrogen Chloride)	7647-01-0					9.00E+00	1.00	1.00		2.10E+03
Hydrogen Sulfide	7783-06-4					1.00E+01	1.00	1.00		4.20E+01
Isophorone	78-59-1					2.00E+03	1.00	1.00		
Isopropyl Alcohol (Isopropanol)	67-63-0					7.00E+03	1.00	1.00		3.20E+03
Lead and Compounds (Inorganic)	7439-92-1	4.20E-02	11.41	5.83	1					
Lead Acetate	301-04-2	4.20E-02	11.41	5.83	1					
Lead Phosphate	7446-27-7	4.20E-02	11.41	5.83	1					
Lead Subacetate	1335-32-6	4.20E-02	11.41	5.83	1					
Maleic Anhydride	108-31-6					7.00E-01	1.00	1.00		
Manganese and Compounds	7439-96-5					9.00E-02	1.00	1.00	1.70E-01	
Mercury and Compounds (Inorganic)	7439-97-6					3.00E-02	3.86	2.11	6.00E-02	6.00E-01
Methyl Mercury ³	593-74-8									
Mercuric Chloride	7487-94-7					3.00E-02	3.86	2.11	6.00E-02	6.00E-01
Methanol	67-56-1					4.00E+03	1.00	1.00		2.80E+04
Methyl Bromide (Bromomethane)	74-83-9					5.00E+00	1.00	1.00		3.90E+03
Methyl Tertiary-Butyl Ether	1634-04-4	1.80E-03	1.00	1.00	1	8.00E+03	1.00	1.00		
Methyl Chloroform (1,1,1-Trichloroethane)	71-55-6					1.00E+03	1.00	1.00		6.80E+04
Methyl Ethyl Ketone (2-	78-93-3									1.30E+04

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL µg/m ³	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Butanone)										
Methyl Isocyanate	624-83-9					1.00E+00	1.00	1.00		
4,4'-Methylene Bis (2-Chloroaniline) (MOCA)	101-14-4	1.50E+00	1.00	1.00	1					
Methylene Chloride (Dichloromethane)	75-09-2	3.50E-03	1.00	1.00	1	4.00E+02	1.00	1.00		1.40E+04
4,4'-Methylene Dianiline (and Its Dichloride)	101-77-9	1.60E+00	7.22	2.47	1	2.00E+01	1.00	1.00		
Methylene Diphenyl Isocyanate	101-68-8					7.00E-01	1.00	1.00		
Michler's Ketone (4,4'-Bis(Dimethylamino)Benzophenone)	90-94-8	8.60E-01	1.00	1.00	1					
n-Nitrosodi-n-Butylamine	924-16-3	1.10E+01	1.00	1.00	1					
n-Nitrosodi-n-Propylamine	621-64-7	7.00E+00	1.00	1.00	1					
N-Nitrosodiethylamine	55-18-5	3.60E+01	1.00	1.00	1					
n-Nitrosodimethylamine	62-75-9	1.60E+01	1.00	1.00	1					
n-Nitrosodiphenylamine	86-30-6	9.00E-03	1.00	1.00	1					
n-Nitroso-n-Methylethylamine	10595-95-6	2.20E+01	1.00	1.00	1					
n-Nitroso-n-Methylurea	684-93-5	1.2E+02	1.00	1.00	1					
n-Nitroso-n-Ethylurea	759-73-9	2.7E+01	1.00	1.00	1					
n-Nitrosomorpholine	59-89-2	6.70E+00	1.00	1.00	1					
n-Nitrosopiperidine	100-75-4	9.40E+00	1.00	1.00	1					
n-Nitrosopyrrolidine	930-55-2	2.10E+00	1.00	1.00	1					
Nickel and Compounds	7440-02-0	9.10E-01	1.00	1.00	1	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Acetate	373-02-4	9.10E-01	1.00	1.00	0	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Carbonate	3333-67-3	9.10E-01	1.00	1.00	0	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Carbonyl	13463-39-3	9.10E-01	1.00	1.00	0	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Hydroxide	12054-48-7	9.10E-01	1.00	1.00	1	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickelocene	1271-28-9	9.10E-01	1.00	1.00	0	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Oxide	1313-99-1	9.10E-01	1.00	1.00	1	2.00E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Refinery Dust, Pyrometallurgical Process	1146	9.10E-01	1.00	1.00	1	1.40E-02	1.00	1.00	6.00E-02	2.00E-01
Nickel Subsulfide	12035-72-2	9.10E-01	1.00	1.00	0	1.40E-02	1.00	1.00	6.00E-02	2.00E-01

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Nitric Acid	7697-37-2									8.60E+01
p-Nitrosodiphenylamine	156-10-5	2.20E-02	1.00	1.00	1					
Particulate Emissions from Diesel-Fueled Engines	9901	1.10E+00	1.00	1.00	1	5.00E+00	1.00	1.00		
Perchloroethylene (Tetrachloroethylene)	127-18-4	2.10E-02	1.00	1.00	1	3.50E+01	1.00	1.00		2.00E+04
Phenol	108-95-2					2.00E+02	1.00	1.00		5.80E+03
Phosgene	75-44-5									4.00E+00
Phosphine	7803-51-2					8.00E-01	1.00	1.00		
Phosphoric Acid	7664-38-2					7.00E+00	1.00	1.00		
Phthalic Anhydride	85-44-9					2.00E+01	1.00	1.00		
PCB (Polychlorinated Biphenyls)	1336-36-3	7.00E-02	18.94	13.12	1	4.0E-04	243.90	10.82		
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	32598-13-3	1.30E+01	27.57	13.12	1	4.00E-01	243.90	10.82		
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	70362-50-4	3.90E+01	27.57	13.12	1	1.30E-01	240.21	10.67		
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	32598-14-4	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	74472-37-0	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	31508-00-6	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	65510-44-3	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	57465-28-8	1.30E+04	27.57	13.12	1	4.00E-04	243.90	10.82		
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	38380-08-4	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	69782-90-7	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
2,3',4,4',5,5'-	52663-72-6	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Hexachlorobiphenyl (PCB 167)										
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	32774-16-6	3.90E+03	27.57	13.12	1	1.30E-03	240.21	10.67		
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	39635-31-9	3.90E+00	27.57	13.12	1	1.30E+00	240.21	10.67		
Polychlorinated Dibenzo-p-Dioxins (PCDD)	1086	1.30E+05	25.72	7.58	1	4.00E-05	307.60	6.73		
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	1746-01-6	1.30E+05	25.72	7.58	1	4.00E-05	307.60	6.73		
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	40321-76-4	1.30E+05	25.72	7.58	1	4.00E-05	307.60	6.73		
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	39227-28-6	1.30E+04	25.72	7.58	1	4.00E-04	307.60	6.73		
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	57653-85-7	1.30E+04	25.72	7.58	1	4.00E-04	307.60	6.73		
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	19408-74-3	1.30E+04	25.72	7.58	1	4.00E-04	307.60	6.73		
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	35822-46-9	1.30E+03	25.72	7.58	1	4.00E-03	307.60	6.73		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin	3268-87-9	3.90E+01	25.72	7.58	1	1.30E-01	302.95	6.64		
Polychlorinated Dibenzofurans (PCDF)	1080	1.30E+05	18.19	7.58	1	4.00E-05	154.97	6.73		
2,3,7,8-Tetrachlorodibenzofuran	5120-73-19	1.30E+04	18.19	7.58	1	4.00E-04	154.97	6.73		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	3.90E+03	18.19	7.58	1	1.30E-03	152.63	6.64		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	3.90E+04	18.19	7.58	1	1.30E-04	152.63	6.64		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	1.30E+04	18.19	7.58	1	4.00E-04	154.97	6.73		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	1.30E+04	18.19	7.58	1	4.00E-04	154.97	6.73		

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	1.30E+04	18.19	7.58	1	4.00E-04	154.97	6.73		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	1.30E+04	18.19	7.58	1	4.00E-04	154.97	6.73		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	1.30E+03	18.19	7.58	1	4.00E-03	154.97	6.73		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	1.30E+03	18.19	7.58	1	4.00E-03	154.97	6.73		
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	3.90E+01	18.19	7.58	1	1.30E-01	152.63	6.64		
Polycyclic Aromatic Hydrocarbon (PAH)	1150	3.90E+00	1.00	1.00	1					
Benz(a)Anthracene	56-55-3	3.90E-01	23.12	6.62	1					
Benzo(a)Pyrene	50-32-8	3.90E+00	23.12	6.62	1					
Benzo(b)Fluoranthene	205-99-2	3.90E-01	23.12	6.62	1					
Benzo(j)Fluoranthene	205-82-3	3.90E-01	23.12	6.62	1					
Benzo(k)Fluoranthene	207-08-9	3.90E-01	23.12	6.62	1					
Chrysene	218-01-9	3.90E-02	23.12	6.62	1					
Dibenz(a,h)Acridine	226-36-8	3.90E-01	23.12	6.62	1					
Dibenz(a,h)Anthracene	53-70-3	4.10E+00	7.99	2.48	1					
Dibenz(a,j)Acridine	224-42-0	3.90E-01	23.12	6.62	1					
Dibenzo(a,e)Pyrene	192-65-4	3.90E+00	23.12	6.62	1					
Dibenzo(a,h)Pyrene	189-64-0	3.90E+01	23.12	6.62	1					
Dibenzo(a,i)Pyrene	189-55-9	3.90E+01	23.12	6.62	1					
Dibenzo(a,l)Pyrene	191-30-0	3.90E+01	23.12	6.62	1					
7H-Dibenzo(c,g)Carbazole	194-59-2	3.90E+00	23.12	6.62	1					
7,12-Dimethylbenz(a)Anthracene	57-97-6	2.50E+02	7.99	2.48	1					
1,6-Dinitropyrene	42397-64-8	3.90E+01	23.12	6.62	1					
1,8-Dinitropyrene	42397-65-9	3.90E+00	23.12	6.62	1					
Indeno(1,2,3-c,d)Pyrene	193-39-5	3.90E-01	23.12	6.62	1					
3-Methylcholanthrene	56-49-5	2.20E+01	7.99	2.48	1					
5-Methylchrysene	3697-24-3	3.90E+00	23.12	6.62	1					
Naphthalene	91-20-3	1.20E-01	1.00	1.00	1	9.00E+00	1.00	1.00		
5-Nitroacenaphthene	602-87-9	1.30E-01	7.99	2.49	1					
6-Nitrochrysene	7496-02-8	3.90E+01	23.12	6.62	1					

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Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL (µg/m ³)	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
2-Nitrofluorene	607-57-8	3.90E-02	23.12	6.62	1					
1-Nitropyrene	5522-43-0	3.90E-01	23.12	6.62	1					
4-Nitropyrene	57835-92-4	3.90E-01	23.12	6.62	1					
1,3-Propane Sultone	1120-71-4	2.40E+00	1.00	1.00	1					
Propylene (Propene)	115-07-1					3.00E+03	1.00	1.00		
Propylene Glycol Monomethyl Ether	107-98-2					7.00E+03	1.00	1.00		
Propylene Oxide	75-56-9	1.30E-02	1.00	1.00	1	3.00E+01	1.00	1.00		3.10E+03
Selenium and Compounds	7782-49-2					2.00E+01	195.58	23.71		
Hydrogen Selenide	7783-07-5									5.00E+00
Selenium Sulfide	7446-34-6					2.00E+01	195.58	23.71		
Sodium Hydroxide	1310-73-2									8.00E+00
Styrene	100-42-5					9.00E+02	1.00	1.00		2.10E+04
Sulfuric Acid	7664-93-9					1.00E+00	1.00	1.00		1.20E+02
Sulfuric Acid (Sulfur Trioxide)	7446-71-9					1.00E+00	1.00	1.00		1.20E+02
Sulfuric Acid (Oleum)	8014-95-7									1.20E+02
1,1,2,2-Tetrachloroethane	79-34-5	2.00E-01	1.00	1.00	1					
Thioacetamide	62-55-5	6.10E+00	1.00	1.00	1					
Toluene	108-88-3					3.00E+02	1.00	1.00		3.70E+04
Toluene Diisocyanates	26471-62-5	3.90E-02	1.00	1.00	1	7.00E-02	1.00	1.00		
Toluene-2,4-Diisocyanate	584-84-9	3.90E-02	1.00	1.00	1	7.00E-02	1.00	1.00		
Toluene-2,6-Diisocyanate	91-08-7	3.90E-02	1.00	1.00	1	7.00E-02	1.00	1.00		
1,1,2-Trichloroethane (Vinyl Trichloride)	79-00-5	5.70E-02	1.00	1.00	1					
Trichloroethylene	79-01-6	7.00E-03	1.00	1.00	1	6.00E+02	1.00	1.00		
Triethylamine	121-44-8					2.00E+02	1.00	1.00		2.80E+03
Urethane (Ethyl Carbamate)	51-79-6	1.00E+00	1.00	1.00	1					
Vanadium (Fume or Dust)	7440-62-2									3.00E+01
Vanadium Pentoxide	1314-62-1									3.00E+01
Vinyl Acetate	108-05-4					2.00E+02	1.00	1.00		
Vinyl Chloride (Chloroethylene)	75-01-4	2.70E-01	1.00	1.00	1					1.80E+05
Vinylidene Chloride (1,1-Dichloroethylene)	75-35-4					7.00E+01	1.00	1.00		

**SCAQMD PERMIT APPLICATION PACKAGE “M”
Tables Effective for Applications Deemed Complete On or After July 5, 2015**

**Table – 8.1 (continued)
Inhalation Cancer Potency (CP), Reference Exposure Level (REL)
and Multi Pathway Adjustment Factors (MP)**

Toxic Air Contaminant	CAS No	Cancer				Chronic			8hr Chronic	Acute
		Cancer Potency Factor (mg/kg-dy) ⁻¹	MP _R	MP _W	MWAF ¹	REL µg/m ³	MP _R	MP _W	REL (µg/m ³)	REL (µg/m ³)
Xylenes (Mixed Isomers)	1330-20-7					7.00E+02	1.00	1.00		2.20E+04
m-Xylene	108-38-3					7.00E+02	1.00	1.00		2.20E+04
o-Xylene	95-47-6					7.00E+02	1.00	1.00		2.20E+04
p-Xylene	106-42-3					7.00E+02	1.00	1.00		2.20E+04

CP – cancer potency factor

MP_R – multi-pathway factor (residential)

MP_W – multi-pathway factor (work)

MWAF – molecular weight adjustment factor

REL – Reference Exposure Level

- 1. Molecular Weight Adjustment Factor: MWAFs are to be used for calculating cancer risks, chronic, chronic 8-hour, and acute hazard indices. For most of the Hot Spots toxic metals, the OEHHA cancer potency factor applies to the weight of the toxic metal atom contained in the overall compound. This ensures that the cancer potency factor is applied only to the fraction of the overall weight of the emissions that are associated with health effects of the metal.
So, for example, assume 100 pounds of “Nickel hydroxide” emissions are reported under CAS number 12054-48-7. To get the Nickel atom equivalent of these emissions, multiply by the listed MWAF (0.6332) for Nickel hydroxide: 100 pounds x 0.6332 = 63.32 pounds of Nickel atom equivalent*
- 2. The value listed in the MWAF column for Asbestos is not a molecular weight adjustment. This is a conversion factor for adjusting mass to fibers or structures. See Appendix C of OEHHA’s document The Air Toxics Hot Spots Program Risk Assessment Guidelines for more information.*
- 3. ARB removed methyl mercury from the July 3, 2014 Table 1 - Consolidated Table Of OEHHA/ARB Approved Risk Assessment Health Values because it has different chemical properties, potency, and toxicity compared to elemental mercury and mercury salts, and it is not emitted directly from any California facilities.*

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Table 9.1
Residential Combined Exposure Factor (CEF)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (350 days/year)	CEFR
-0.25 to 0	361	10	0.25	1	0.96	676.63
0 to 2	1,090	10	2	1	0.96	
2 to 16	572	3	14	1	0.96	
16 to 30	261	1	14	0.73	0.96	

Table 9.2
Worker Combined Exposure Factor (CEF)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (250 days/year)	CEF _w
16 - 41	230	1	25	0.68	56.26

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Table 10.1
Worker Adjustment Factor (WAF)
Operating 12 Hours Per Day or Less

Hours of Operation Per Day	Days of Operation Per Week						
	1	2	3	4	5	6	7
1	4.2	4.2	4.2	4.2	4.2	3.5	3.0
2	4.2	4.2	4.2	4.2	4.2	3.5	3.0
3	4.2	4.2	4.2	4.2	4.2	3.5	3.0
4	4.2	4.2	4.2	4.2	4.2	3.5	3.0
5	4.2	4.2	4.2	4.2	4.2	3.5	3.0
6	4.2	4.2	4.2	4.2	4.2	3.5	3.0
7	4.2	4.2	4.2	4.2	4.2	3.5	3.0
8	4.2	4.2	4.2	4.2	4.2	3.5	3.0
9	3.7	3.7	3.7	3.7	3.7	3.1	2.7
10	3.4	3.4	3.4	3.4	3.4	2.8	2.4
11	3.1	3.1	3.1	3.1	3.1	2.5	2.2
12	2.8	2.8	2.8	2.8	2.8	2.3	2.0

Note: The WAF value for residential/sensitive receptors is 1.0, which assumes exposure of 24 hours/day, 7 days/week

Table 10.2
Worker Adjustment Factor (WAF)
Operating More Than 12 Hours Per Day

Hours of Operation Per Day	Days of Operation Per Week						
	1	2	3	4	5	6	7
13	2.6	2.6	2.6	2.6	2.6	2.2	1.8
14	2.4	2.4	2.4	2.4	2.4	2	1.7
15	2.2	2.2	2.2	2.2	2.2	1.9	1.6
16	2.1	2.1	2.1	2.1	2.1	1.8	1.5
17	2.0	2.0	2.0	2.0	2.0	1.6	1.4
18	1.9	1.9	1.9	1.9	1.9	1.6	1.3
19	1.8	1.8	1.8	1.8	1.8	1.5	1.3
20	1.7	1.7	1.7	1.7	1.7	1.4	1.2
21	1.6	1.6	1.6	1.6	1.6	1.3	1.1
22	1.5	1.5	1.5	1.5	1.5	1.3	1.1
23	1.5	1.5	1.5	1.5	1.5	1.2	1.0
24	1.4	1.4	1.4	1.4	1.4	1.2	1.0

Note: The WAF value for residential/sensitive receptors is 1.0, which assumes exposure of 24 hours/day, 7 days/week

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.1
Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Acetaldehyde												X	
Acrolein												X	
Acrylonitrile												X	
Ammonia												X	
Arsenic & Compounds (Inorganic) ^{TAC}			X	X						X	X	X	X
Arsine			X	X						X	X	X	X
Benzene ^{TAC}							X						
Beryllium & Compounds	X							X				X	
1,3-Butadiene ^{TAC}				X							X		
Cadmium & Compounds ^{TAC}									X			X	
Caprolactam												X	
Carbon Disulfide				X						X	X		
Carbon Tetrachloride ^{TAC} (Tetrachloromethane)	X			X						X	X		
Chlorine												X	
Chlorine Dioxide												X	
Chlorobenzene	X			X					X		X		
Chloroform ^{TAC}	X			X					X		X		
Chloropicrin												X	
Chromium 6+ ^{TAC}							X					X	
Barium Chromate							X					X	
Calcium Chromate							X					X	
Lead Chromate							X					X	
Sodium Dichromate							X					X	
Strontium Chromate							X					X	
Chromium Trioxide (As Chromic Acid Mist)							X					X	
Cresols (Mixtures Of)										X			
m-Cresol										X			
o-Cresol										X			
p-Cresol										X			
Cyanide Compounds (Inorganic)			X		X					X			
Hydrogen Cyanide (Hydrocyanic Acid)			X		X					X			
P-Dichlorobenzene	X								X	X		X	
1,1,-Dichloroethylene ...													

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.1 (continued)
Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
(See Vinylidene Chloride)													
Diesel Exhaust ... (See Particulate Emissions From Diesel-Fueled Engines)													
Diethanolamine							X					X	
N,N-Dimethyl Formamide	X											X	
1,4-Dioxane (1,4-Diethylene Dioxide)	X		X						X				
Epichlorohydrin (1-Chloro-2,3- Epoxypropane)						X						X	
1,2-Epoxybutane			X									X	
Ethyl Benzene	X			X	X				X		X		
Ethyl Chloride (Chlorethane)	X			X							X		
Ethylene Dibromide ^{TAC} (1,2- Dibromoethane)				X							X		
Ethylene Dichloride ^{TAC} (1,2- Dichloroethane)	X												
Ethylene Glycol				X					X		X	X	
Ethylene Oxide ^{TAC} (1,2- Epoxyethane)										X			
Fluorides		X										X	
Hydrogen Fluoride (Hydrofluoric Acid)		X										X	
Formaldehyde ^{TAC}												X	
Glutaraldehyde												X	
Glycol Ethers													
Ethylene Glycol Ethyl Ether - (EGEE)				X			X				X		
Ethylene Glycol Ethyl Ether Acetate (EGEEA)				X							X		
Ethylene Glycol Methyl Ether - (EGME)				X							X		
Ethylene Glycol Methyl Ether Acetate (EGMEA)				X							X		
N-Hexane										X			
Hydrazine	X				X								
Hydrochloric Acid (Hydrogen Chloride)												X	
Hydrogen Cyanide (Hydrocyanic Acid) (See Cyanide Compounds)													
Hydrogen Bromide ... (See Bromine & Compounds)													
Hydrogen Fluoride (Hydrofluoric Acid)													

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.1 (continued)
Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
(See Fluorides & Compounds)													
Hydrogen Sulfide												X	
Isophorone	X			X							X		
Isopropyl Alcohol (Isopropanol)				X					X		X		
Lindane ... (See Gamma-Hexachlorocyclohexane)													
Maleic Anhydride												X	
Manganese & Compounds										X			
Mercury & Inorganic Compounds				X					X	X	X		
Mercuric Chloride				X					X	X	X		
Methanol				X							X		
Methyl Bromide (Bromomethane)				X						X	X	X	
Methyl Tertiary-Butyl Ether	X					X			X				
Methyl Chloroform (1,1,1-Trichloroethane)										X			
Methyl Isocyanate				X							X	X	
Methylene Chloride ^{TAC} (Dichloromethane)			X							X			
4,4'-Methylene Dianiline (& Its Dichloride)	X					X							
Methylene Diphenyl Isocyanate												X	
Naphthalene												X	
Nickel & Compounds ^{TAC}				X			X				X	X	
Nickel Acetate				X			X				X	X	
Nickel Carbonate				X			X				X	X	
Nickel Carbonyl				X			X				X	X	
Nickel Hydroxide				X			X				X	X	
Nickelocene				X			X				X	X	
Nickel Oxide				X							X	X	
Nickel Refinery Dust From Pyrometallurgical Process				X			X				X	X	
Nickel Subulfide				X			X				X	X	
Particulate Emissions From Diesel-Fueled Engines ^{TAC, E}												X	
Perchloroethylene ^{TAC} (Tetrachloroethylene)	X								X				
Phenol	X		X						X	X			
Phosphine	X						X		X	X		X	

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.1 (continued)
Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Phosphoric Acid												X	
Phthalic Anhydride												X	
Dioxin-Like Polychlorinated Biphenyls (PCBS) ^{F, G}													
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	X			X	X		X				X	X	
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	X			X	X		X				X	X	
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	X			X	X		X				X	X	
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	X			X	X		X				X	X	
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	X			X	X		X				X	X	
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	X			X	X		X				X	X	
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	X			X	X		X				X	X	
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	X			X	X		X				X	X	
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	X			X	X		X				X	X	
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	X			X	X		X				X	X	
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	X			X	X		X				X	X	
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	X			X	X		X				X	X	
Polychlorinated Dibenzo-P-Dioxins (PCDD) (Treated As 2,3,7,8-TCDD for HRA) ^{TAC, F}	X			X	X		X				X	X	
2,3,7,8-Tetrachlorodibenzo-P-Dioxin ^{TAC}	X			X	X		X				X	X	
1,2,3,7,8-Pentachlorodibenzo-P-Dioxin	X			X	X		X				X	X	
1,2,3,4,7,8-Hexachlorodibenzo-P-Dioxin	X			X	X		X				X	X	
1,2,3,6,7,8-Hexachlorodibenzo-P-Dioxin	X			X	X		X				X	X	
1,2,3,7,8,9-Hexachlorodibenzo-P-Dioxin	X			X	X		X				X	X	
1,2,3,4,6,7,8-Heptachlorodibenzo-P-Dioxin	X			X	X		X				X	X	
1,2,3,4,6,7,8,9-Octachlorodibenzo-P-Dioxin	X			X	X		X				X	X	
Polychlorinated Dibenzofurans (PCDF) (Treated As 2,3,7,8-TCDD for HRA) ^{TAC, F}	X			X	X		X				X	X	
2,3,7,8-Tetrachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,7,8-	X			X	X		X				X	X	

SCAQMD PERMIT APPLICATION PACKAGE "M"
Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.1 (continued)
Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Pentachlorodibenzofuran													
2,3,4,7,8-Pentachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,4,7,8-Hexachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,6,7,8-Hexachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,7,8,9-Hexachlorodibenzofuran	X			X	X		X				X	X	
2,3,4,6,7,8-Hexachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	X			X	X		X				X	X	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	X			X	X		X				X	X	
Potassium Bromate ... (See Bromine & Compounds)													
Propylene (Propene)												X	
Propylene Glycol Monomethyl Ether	X												
Propylene Oxide												X	
Selenium & Compounds (Other Than Hydrogen H Selenide)	X		X							X			
Selenium Sulfide	X		X							X			
Silica [Crystalline, Respirable]												X	
Styrene										X			
Sulfuric Acid												X	
Sulfuric Trioxide												X	
Toluene				X						X	X	X	
Toluene Diisocyanates												X	
Toluene-2,4-Diisocyanate												X	
Toluene-2,6-Diisocyanate												X	
Trichloroethylenetac						X				X			
Triethylamine						X							
Vinyl Acetate												X	
Vinylidene Chloride (1,1-Dichloroethylene)	X												
Xylenes (Mixed Isomers)						X				X		X	
m-Xylene						X				X		X	

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.1 (continued)
Target Organs Affected by Toxic Air Contaminants (Chronic Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
o-Xylene						X				X		X	
p-Xylene						X				X		X	

- AL: Alimentary system (liver)
- BN: Bones and teeth
- CV: Cardiovascular system
- DEV: Developmental
- END: Endocrine system
- EYE: Eye
- HEM: Hematopoietic system
- IMM: Immune system
- KID: Kidney
- NS: Nervous system
- REP: Reproductive system
- RESP: Respiratory system
- SKIN: Skin

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Tables Effective for Applications Deemed Complete On or After July 5, 2015

Table – 11.2
Target Organs Affected by Toxic Air Contaminants (Acute Toxicity)

Toxic Air Contaminant	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Acetaldehyde				X					X	
Acrolein				X					X	
Acrylic Acid				X					X	
Ammonia				X					X	
Arsenic & Compounds (Inorganic) ^{TAC}		X	X				X	X		
Arsine		X	X				X	X		
Benzene ^{TAC}			X		X	X		X		
Benzyl Chloride				X					X	
1,3-Butadiene ^{TAC}			X					X		
Caprolactam				X						
Carbon Disulfide			X				X	X		
Carbon Monoxide		X								
Carbon Tetrachloride ^{TAC} (Tetrachloromethane)	X		X				X	X		
Chlorine				X					X	
Chloroform ^{TAC}			X				X	X	X	
Chloropicrin				X					X	
Copper & Compounds									X	
Cyanide Compounds (Inorganic)							X			
Hydrogen Cyanide (Hydrocyanic Acid)							X			
1,4-Dioxane (1,4-Diethylene Dioxide)				X					X	
Epichlorohydrin (1-Chloro-2,3-Epoxypropane)				X					X	
Fluorides & Compounds				X					X	
Hydrogen Fluoride (Hydrofluoric Acid)				X					X	
Formaldehyde ^{TAC}				X						
Glycol Ethers										
Ethylene Glycol Butyl Ether – (EGBE)				X					X	
Ethylene Glycol Ethyl Ether – (EGEE)			X					X		
Ethylene Glycol Ethyl Ether Acetate - (EGEEA)			X				X	X		
Ethylene Glycol Methyl Ether – (EGME)			X					X		
Hydrochloric Acid (Hydrogen Chloride)				X					X	
Hydrogen Cyanide (Hydrocyanic Acid) (See Cyanide Compounds)										
Hydrogen Fluoride (Hydrofluoric Acid) (See										

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**Table – 11.2 (continued)
Target Organs Affected by Toxic Air Contaminants (Acute Toxicity)**

Toxic Air Contaminant	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Fluorides & Compounds)										
Hydrogen Selenide (See Selenium & Compounds)										
Hydrogen Sulfide							X			
Isopropyl Alcohol (Isopropanol)				X					X	
Mercury & Compounds (Inorganic)			X				X	X		
Mercuric Chloride			X				X	X		
Methanol							X			
Methyl Bromide (Bromomethane)			X				X	X	X	
Methyl Chloroform (1,1,1-Trichloroethane)							X			
Methyl Ethyl Ketone (2-Butanone)				X					X	
Methylene Chloride ^{TAC} (Dichloromethane)		X					X			
Nickel & Compounds ^{TAC}						X				
Nickel Acetate						X				
Nickel Carbonate						X				
Nickel Carbonyl						X				
Nickel Hydroxide						X				
Nickelocene						X				
Nickel Oxide						X				
Nickel Refinery Dust From The Pyrometallurgical Process						X				
Nickel Subsulfide						X				
Nitric Acid									X	
Nitrogen Dioxide									X	
Ozone				X					X	
Perchloroethylene ^{TAC} (Tetrachloroethylene)				X			X		X	
Phenol				X					X	
Phosgene									X	
Propylene Oxide			X	X				X	X	
Selenium & Compounds										
Hydrogen Selenide				X					X	
Sodium Hydroxide				X					X	X
Styrene			X	X				X	X	
Sulfates									X	

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Table – 11.2 (continued)
Target Organs Affected by Toxic Air Contaminants (Acute Toxicity)

Toxic Air Contaminant	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Sulfur Dioxide									X	
Sulfuric Acid									X	
Sulfur Trioxide									X	
Oleum									X	
Toluene			X	X			X	X	X	
Triethylamine				X			X			
Vanadium Compounds										
Vanadium (Fume Or Dust)				X					X	
Vanadium Pentoxide				X					X	
Vinyl Chlorideta c (Chloroethylene)				X			X		X	
Xylenes (Mixed Isomers)				X			X		X	
m-Xylene				X			X		X	
o-Xylene				X			X		X	
p-Xylene				X			X		X	

AL: Alimentary system (liver)
CV: Cardiovascular system
DEV: Developmental
EYE: Eye
HEM: Hematopoietic system
IMM: Immune system
NS: Nervous system
REP: Reproductive system
RESP: Respiratory system
SKIN: Skin

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Table – 11.3
Target Organs Affected by Toxic Air Contaminants (8-hour Toxicity)

Toxic Air Contaminant	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Acetaldehyde												X	
Acrolein												X	
Arsenic And Compounds (Inorganic) ^{TAC}			X	X						X	X	X	X
Arsine			X	X						X	X	X	X
Benzene ^{TAC}							X						
1,3-Butadien ²				X							X		
Caprolactam												X	
Formaldehyde ^{TAC}												X	
Manganese And Compounds										X			
Mercury And Compounds (Inorganic)				X					X	X	X		
Mercuric Chloride				X					X	X	X		
Nickel And Compounds ^{TAC}								X				X	
Nickel Acetate								X				X	
Nickel Carbonate								X				X	
Nickel Carbonyl								X				X	
Nickel Hydroxide								X				X	
Nickelocene								X				X	
Nickel Oxide								X				X	
Nickel Refinery Dust From The Pyrometallurgical Process								X				X	
Nickel Subsulfide								X				X	

AL: Alimentary system (liver)
CV: Cardiovascular system
DEV: Developmental
EYE: Eye
HEM: Hematopoietic system
IMM: Immune system
NS: Nervous system
REP: Reproductive system
RESP: Respiratory system
SKIN: Skin

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Table – 12.1
Meteorological Monitoring Stations in the South Coast Air Basin

Station name	UTM Coordinates (km)		Lat./Long. Coordinates		Elevation (m)
	Easting	Northing	Latitude	Longitude	
Anaheim	413.14	3743.57	33:49:50	117:56:19	41
Azusa	414.81	3777.47	34:08:11	117:55:26	182
Banning	513.10	3753.19	33:55:15	116:51:30	660
Burbank	378.62	3782.24	34:10:33	118:19:01	175
Central LA	386.79	3770.00	34:03:59	118:13:36	87
Compton	388.59	3751.88	33:54:05	118:12:18	22
Costa Mesa	414.16	3726.19	33:40:26	117:55:33	20
Crestline	474.62	3788.76	34:14:29	117:16:32	1387
Fontana	454.62	3773.19	34:06:01	117:29:31	367
Indio	572.67	3729.90	33:42:30	116:12:57	-4
La Habra	411.98	3754.08	33:55:31	117:57:08	82
Lake Elsinore	469.33	3726.13	33:40:35	117:19:51	406
LAX	367.83	3757.80	33:57:15	118:25:49	42
Long Beach	389.99	3743.04	33:49:25	118:11:19	30
Lynwood	388.07	3754.73	33:55:44	118:12:39	29
Mission Viejo	437.39	3721.17	33:37:49	117:40:30	170
Palm Springs	542.46	3745.73	33:51:10	116:32:28	171
Perris	478.91	3738.58	33:47:20	117:13:40	442
Pico Rivera	401.31	3763.61	34:00:37	118:04:07	58
Pomona	430.78	3769.61	34:04:00	117:45:00	270
Redlands	486.36	3768.50	34:03:32	117:08:52	481
Reseda	358.76	3785.11	34:11:57	118:31:58	228
Riverside	461.64	3762.10	34:00:02	117:24:55	250
San Bernardino	474.76	3773.82	34:06:24	117:16:25	305
Santa Clarita	359.48	3805.52	34:23:00	118:31:42	375
Upland	441.96	3773.66	34:06:14	117:37:45	379
West LA	365.54	3768.52	34:03:02	118:27:24	97

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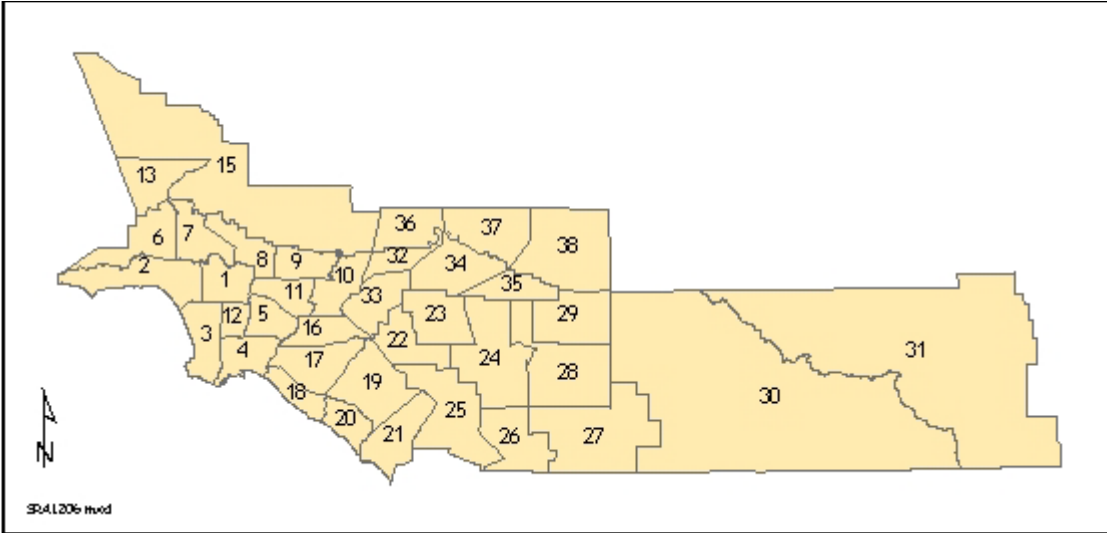
Table - 12.2
Meteorological Stations for Each Source/Receptor Area

Meteorological Station	Source/ Receptor Area	Meteorological Station	Source/ Receptor Area
Anaheim	17	Compton/Lynwood	12
Azusa	8, 9	Mission Viejo	19, 21
Banning	29	Perris	24, 28
Burbank	7	Palm Springs	30, 31
Central LA	1	Pico Rivera	5, 11
Crestline	37	Pomona	10
Costa Mesa	18, 20	Redlands	35, 38
Fontana	34	Reseda	6
Indio	30	Riverside	22, 23
La Habra	16	Santa Clarita	13, 15
Lake Elsinore	25, 26, 27	San Bernardino	34
LAX	3	Upland	32, 33, 36
Long Beach	4	West LA	2

Figure 1
Meteorological Monitoring Stations in the South Coast Air Basin



Figure 2
Source/Receptor Areas





South Coast Air Quality Management District

**DRAFT Supplemental Guidelines for Preparing
Risk Assessments for the Air Toxics “Hot Spots”
Information and Assessment Act**

**DRAFT
June 5, 2015**

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1. INTRODUCTION

This guidance document is a supplement to a document prepared by the State of California Office of Environmental Health Hazard Assessment (OEHHA) entitled, “Air Toxics Hot Spots Program Risk Assessment Guidelines” (referred to as the OEHHA Guidelines).¹ Facilities required to submit risk assessments to the South Coast Air Quality Management District (SCAQMD) under the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB2588) must follow the OEHHA Guidelines pursuant to Health and Safety Code 44360(b)(2). While the information provided in the OEHHA Guidelines is complete, there are several areas in the document that refer the user to their local air district for specific or additional requirements. This supplemental guidance addresses those areas and other issues that have arisen during the implementation of the AB2588 Program.

A certification form must be submitted to the SCAQMD with all documents and correspondence relating to health risk assessments.²

Please visit SCAQMD’s AB2588 webpage provided below for additional information, ~~and documents, and any~~. Questions regarding this document, health risk assessment methodology, and other AB2588 issues, ~~should be directed to Ian MacMillan at (909) 396-3244, or via email at imacmillan@aqmd.gov.~~

Send correspondence to:

South Coast Air Quality Management District -

~~ATTN: Ian MacMillan~~
~~Program Supervisor~~—AB2588
21865 Copley Drive
Diamond Bar, CA 91765

¹ OEHHA. 2015. http://oehha.ca.gov/air/hot_spots/hotspots2015.html

² <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/forms>

2. OVERVIEW OF THE AB2588 PROGRAM

In 1987, the California legislature adopted the Air Toxics "Hot Spots" Information and Assessment Act; also known as Assembly Bill 2588 (or AB2588). The goals of the Act are to collect emissions data, identify facilities having localized impacts to determine health risks, and notify affected individuals. In 1992, the California legislature added a risk reduction component, the Facility Air Toxic Contaminant Risk Audit and Reduction Plan (or SB 1731), which requires facilities to develop and implement measures to reduce impacts if risks are found above thresholds specified by SCAQMD. There are five important components to the AB2588 program as follows:

- *Emission Reporting* – Facilities subject to AB2588 submit an air toxics inventory every four years through the Annual Emissions Reporting Program.
- *Prioritization* - From the reported toxic emissions, SCAQMD staff prioritizes facilities, using a procedure approved by the Governing Board, into three categories: high, intermediate, and low priority. High priority facilities are then asked to prepare and Air Toxics Inventory Report (ATIR)
- *Risk Assessment* - High priority facilities must prepare a Health Risk Assessment (HRA)
- *Public Notice* - If the risk reported in the HRA exceeds specific thresholds, then the facility is required to provide public notice to the affected community.
- *Risk Reduction* - Facilities with health risks above the action risk levels in Rule 1402 must reduce their risks below the action risk levels.

Figure 1 below provides an overview of the AB2588 program and the two paths by which a facility becomes subject to AB2588 requirements.

2.1 Background

There are four steps involved in the risk assessment process; 1) hazard identification, 2) exposure assessment, 3) dose-response assessment, and 4) risk characterization. Each step is briefly discussed below.

Hazard Identification

For air toxics sources, hazard identification involves determining the type of adverse health effect associated with exposure of the pollutant of concern emitted by a facility, including whether a pollutant is considered human carcinogen or a potential human carcinogen.

Exposure Assessment

The purpose of exposure assessment is to estimate the extent of public exposure to emitted substances for potential cancer, noncancer health hazards for chronic and acute, and repeated 8-hour exposures. This involves estimation of long-term (annual), short-term (1-hour maximum), and 8-hour average exposure levels.

Dose-Response Assessment

Dose-response assessment is the process of characterizing the relationship between exposure to a chemical by its modeled concentration. Dose can be calculated as follows:

Dose = Concentration x Exposure

Risk Characterization

This is the final step of the risk assessment in which the information from exposure assessment and dose-response assessment are combined to assess total risk to the surrounding community.

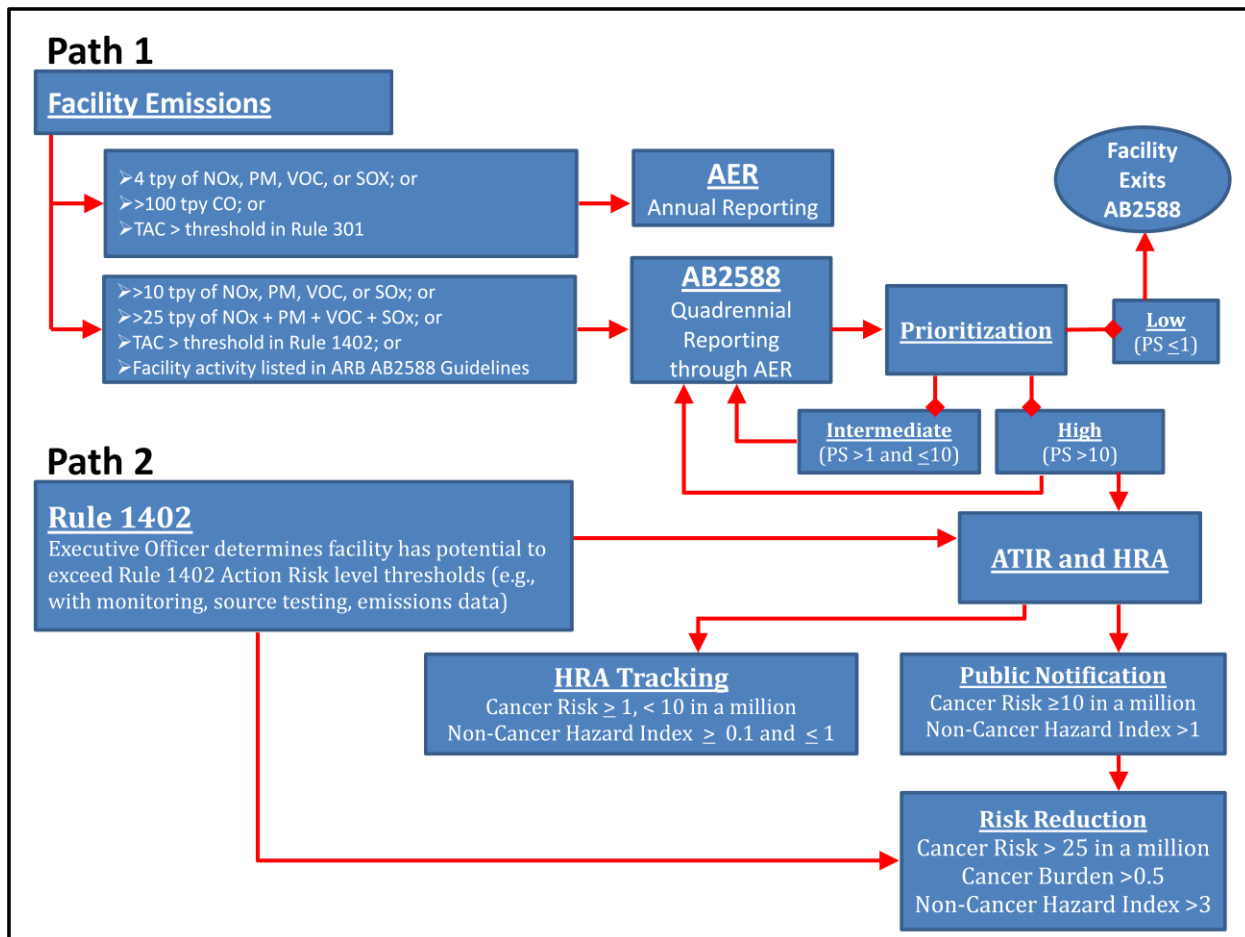


Figure 1. Overview of the AB2588 Program and illustration of the two paths by which a facility becomes subject to AB2588 requirements.

2.2 Revisions

The major revisions to this document include incorporation of updated risk assessment methodologies pursuant to OEHHA's 2015 update of its Guidance Manual. These include:

- Increased risk to children from cancer causing substances;
- Higher breathing rates for children;
- Lower exposure durations for residents and workers;
- Different multipathway calculation methodologies;
- Incorporation of AERMOD air dispersion model into HARP2 in place of the previously used ISCST3 model;
- Inclusion of the 8-hr chronic non-cancer risk estimate;
- Calculation of risk in individual age bins (e.g., third trimester, 0-2 years, etc..) rather than a single lifetime calculation;

These items are described in greater detail in the following sections. The first three come from the recent revisions to OEHHA's Guidance Manual. The last one is unique to the SCAQMD and these procedures.

3. GUIDELINES

Guidance and procedures are provided for various aspects of the AB2588 program in this section.

3.1. Initial Toxics Inventory

The Annual Emissions Reporting (AER) software is used to:

- Satisfy the quadrennial (once in four year) reporting requirements of the AB2588 Program, and
- Get an initial inventory of air toxics from facilities new to the AB2588 Program.

Facilities in the AB2588 Program are required to report their toxic emissions to the SCAQMD once every four years. Toxics emission reporting for the AB2588 Program is incorporated into the SCAQMD's AER Program. Under the AER Program, facilities which have the potential to emit: 1) four tons per year (tpy) or more of VOC, NO_x, SO_x, PM, or 100 tpy or more of CO; or 2) any one of 24 toxic air contaminants (TACs) and ozone depleting compounds (ODCs) listed in Table 2, are required to report their emissions annually to the SCAQMD. Facilities subject to the AER Program calculate and report their emissions based on their throughput data (e.g., fuel usage, material usage, etc.), appropriate emission factors, and control efficiency (if applicable). The software used for reporting emissions is available on the SCAQMD website.³ There are approximately 2,000 facilities in the AER Program.

Table 1. Reported TACs and ODCs under the AER Program.

Ammonia	Chlorinated dioxins & dibenzofurans	Lead
Asbestos	Chlorofluorocarbons	Methylene chloride
Arsenic (inorganic)	1,4-Dioxane	Nickel
Benzene	Ethylene dibromide	Perchloroethylene
Beryllium	Ethylene dichloride	Polynuclear aromatic hydrocarbons (PAH)
1,3-Butadiene	Ethylene oxide	1,1,1-Trichloroethane
Cadmium	Formaldehyde	Trichloroethylene
Carbon tetrachloride	Hexavalent chromium	Vinyl chloride

Currently, the data collected over the years in the AER program is used to determine candidates for the AB2588 Program. Facilities that meet one of the following conditions are required to prepare a comprehensive toxics inventory if:

- They emit 10 tpy or more of VOC, NO_x, SO_x, or PM;
- They emit 25 tpy or more of a combination of VOC, NO_x, SO_x, and PM;
- They emit less than 10 tpy of VOC, NO_x, SO_x, or PM, but the facility activity is listed in ARB's Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program⁴;
- Their emissions exceed one or more of the reporting thresholds in Table 3a-2a or 3b2b; or
- The Executive Officer of SCAQMD determines that emissions levels from the facility have the potential to cause an exceedance of risk reduction thresholds.

Facilities must report emissions of over 170 substances (Appendix A), provide the distances to the

³ <http://www.aqmd.gov/home/regulations/compliance/annual-emission-reporting>

⁴ <http://www.arb.ca.gov/ab2588/2588guid.htm>

nearest residential and commercial receptors, and note the facility operating conditions (e.g., operating hrs/day, operating days/week, operating weeks/yr) using the AER software. It is critical that facilities estimate their toxic emissions as precisely and accurately as possible. These reported emissions are used to prioritize the facility as discussed in the next section. A facility's prioritization score determines its fees and if it is necessary to prepare a HRA.

Table 2a. Emissions Reporting Thresholds for Any Industry*

Toxic Air Contaminant (Any Industry)	Threshold (lbs/yr)
1,3 Butadiene	2
Benzene	14
Cadmium	0.09
Formaldehyde	67
Hexavalent Chromium	0.002
Methylene Chloride	400
Nickel	1.5
Perchloroethylene	67

Table 2b. Emission Reporting Thresholds for Specific Industries*

Industry	TAC	Threshold (lbs/yr)
Biomedical Sterilization	Ethylene Oxide	4.5
Dry Cleaning	Perchloroethylene	67
	Methylene Chloride	400
Gas Stations	Benzene	14
Metal Finishing	Hexavalent Chromium	0.002
	Cadmium	0.09
	Nickel	1.5
	Copper	500
Motion Picture Film Processing	Perchloroethylene	67
Rubber	Chlorinated Dibenzofurans, Benzene, Xylenes, Toluene, Phenol, and Methylene Chloride	1,000 lbs of rubber product processed per year
Wood Stripping	Methylene Chloride	400
	DEHP	32
	Glycol Ether and their acetates + EGME + EGEEA	500
	EGBE + EGEE	2,000
	EGMEA + EGME	1,000

* The emission levels are back-calculated from cancer risks of 25 in one million and/or a hazard index of 3 using the risk assessment procedures for Rule 1401 and 212.

3.2. Prioritization

AB2588 requires the SCAQMD staff to designate high, intermediate, and low priority categories and include each facility within the appropriate category based on its individual priority. Per the requirements of AB2588, the SCAQMD’s prioritization procedure considers the potency, toxicity, and quantity of hazardous materials released from the facility; the proximity of the facility to potential receptors, including, but not limited to, hospitals, schools, daycare centers, worksites and residences; and any other factors that the SCAQMD determines that the facility may pose a significant risk to receptors. The SCAQMD procedures also include adjustment factors for exposure period, averaging times, and the treatment of multi-pathway pollutants. The prioritization procedures are available at the SCAQMD’s web site.⁵

A facility receives two scores: one for carcinogenic effects and the other for non-carcinogenic effects. The facility is then ranked based on the higher of the two scores. Three categories are used in the ranking: high priority (Category A), intermediate priority (Category B), and low priority (Category C). Facilities designated as high priority are required to submit health risk assessments to determine the risk to their surrounding community once they have been notified by SCAQMD staff of their priority score. Facilities ranked as intermediate priority are considered to be “District Tracking” facilities, which are then required to submit complete toxics inventories once every four years, using the AER software. Facilities ranked as low priority are exempt from reporting. Priority scores are re-calculated each time a facility updates its toxic emission inventory. Table 4 summarizes the priority score categories and the actions required by each category.

Table 3. Priority Score Categories

Category	Facility Priority Score (PS)	Actions
High Priority (Category A)	$PS > 10$	Prepare HRA; update emissions quadrennially
Intermediate Priority (Category B)	$1 < PS \leq 10$	Update emissions quadrennially
Low Priority (Category C)	$PS \leq 1$	Exempt from AB2588 Program

The SCAQMD staff considers requests from Category A facilities to be reprioritized after detection of errors or other problems with their initial inventory report. The following sections discuss the criteria used for evaluating requests to reprioritize a facility.

The facility is informed, in writing, if their category status has been changed. If a Category A facility has not been informed in writing of a change in category, a health risk assessment must be prepared and submitted to the SCAQMD.

3.2.1. Receptor Distance

One of the factors considered when prioritizing facilities into Category A, B or C is the receptor distance. All facilities must report the distances to the nearest residential and commercial receptors as part of their AER submittal. If receptor distances are not provided, then default values (conservative receptor distances) are used by the SCAQMD staff to prioritize that

⁵ <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/prioritization>

facility. If a facility operator believes that their facility was incorrectly categorized due to an incorrect or default receptor distance, then the facility must prepare and submit a signed copy of the Receptor Proximity Form which can be downloaded from the website.⁶

3.2.2. Computational Errors

If computational errors or conservative assumptions were made in the initial inventory report that overestimated emissions and resulted in Category A classification, the facility may correct the errors and submit the corrected estimates and supporting documentation to the AB2588 staff. In order to be considered, the facility must include in their submission the nature of the error and calculations showing how the original emission estimate was determined and how the correction changes this value.

Please note that the SCAQMD must use process rates and emissions from the initial reporting year to prioritize a facility. Changes in emissions estimates due to changes in process rates submitted for the update cannot be used to re-categorize a facility.

3.2.3. New Source Test Results

If new source test results are available and have been previously submitted to and approved by SCAQMD, then the approved source test results may be used with the process rates in the initial inventory report to recalculate emissions and the priority score of Category A facilities.

3.2.4. Equipment/Process Shutdowns or Process Modifications

If equipment or processes with toxic emissions have been shut down prior to Category A classification and the permits have been surrendered, then these emission reductions may be used to recalculate the priority score of Category A facilities. Evidence for these emission reductions must include copies of letters sent to the SCAQMD requesting emission reduction credits and/or termination of SCAQMD permits.

If a process has been modified since the initial inventory report and the equipment or process emits a different quantity of a toxic substance, and the facility has applied for and received a permit modification reflecting this change, then the emission reduction for that substance may be used to recalculate the priority score.

All supporting documentation regarding equipment shutdowns and process modifications must be received by the AB2588 Section.

3.2.5. Facility Closures

If the entire facility is closed prior to Category A classification or if a facility is scheduled for complete closure, this information must be reported to the AB2588 Section. Upon review, the SCAQMD staff will make a decision whether the facility should submit a risk assessment. Factors that must be considered include the status of permits granted to the facility by the SCAQMD and the nature of any ongoing activities at the facility. Unless a facility is informed by

⁶ <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/forms>

the SCAQMD in writing that an AB2588 health risk assessment is no longer required, the facility operator must submit a health risk assessment by the date required.

3.2.6. Change of Ownership/Operator

If there has been a change in ownership or operator, the new owner/operator must submit a health risk assessment unless the facility no longer emits any substances required to be reported under AB2588. In such case, the new facility owner/operator must provide the SCAQMD staff the necessary documentation to be exempt from reporting requirements of AB2588.

3.3. Emission Estimates Approved for Health Risk Assessment

Facilities subject to the submittal of health risk assessments under AB2588 Program must estimate and submit their detailed toxic emissions using ARB's Hotspots Analysis and Reporting Program version 2 (HARP2)-⁷, or the latest approved version of the program. This detailed Air Toxics Inventory Report (ATIR) should include, at a minimum, the elements outlined in Appendix B. OEHHA has grouped the substances to be reported into three groups as shown in Appendix A of the OEHHA Guidelines.⁸ There are distinct reporting requirements for the three groups as follows:

Appendix A-I Substances – All emissions of these substances must be quantified in the HRA including those calculated in the inventory report as below the degree of accuracy or below detection limits.

Appendix A-II Substances – Emissions of these substances do not need to be quantified in the HRA; however, facilities must report whether the substance is used, produced, or otherwise present on-site. These substances can be simply listed in a table in the HRA.

Appendix A-III Substances – These substances only need to be reported in a table in the HRA if they are manufactured by the facility.

The intent of the AB2588 program is that facilities perform risk assessments using the process rates and emissions data submitted in their initial inventory report (see Section 3.1). The SCAQMD receives requests from facilities to use process rates and emissions data other than those reported in their initial inventory report. As a general policy, the SCAQMD will allow emission changes only if (1) the changes conform to one of the situations discussed in the following sections and (2) any emission increases are also included.

3.3.1. Computational Errors

Computational errors in the air toxics inventory report must be reported to the SCAQMD as soon as detected. Written requests to correct errors for inclusion in the risk assessment must include documentation of the nature of the error and calculations to show how the original emission value was determined and how correcting the computational error changes this value.

⁷ <http://www.arb.ca.gov/toxics/harp/harp.htm>

⁸ http://oehha.ca.gov/air/hot_spots/hotspots2015.html

3.3.2. Emission Reductions

Emissions reductions must be verified to be considered as an allowable change. Verified emission reductions are those which are permanent, can be substantiated, and must be enforceable. Verification requirements include specifications in the SCAQMD permit issued to the facility, a surrender of the existing SCAQMD permit, or reductions as required by SCAQMD rule(s). Letters of intent or internal memos mandating new company policy are not considered verifiable emission reductions.

Examples of verifiable emission reductions include:

- A previously operating permitted source has been shut down and therefore has no emissions. In order for this to be considered as a verified emissions reduction, the facility must have surrendered the permit to the SCAQMD. If a facility chooses to retain the permit for possible use of the equipment in the future, that source cannot be considered a permanent verified emissions reduction. Please send a copy of the letter requesting inactivation of the permit and any other supporting documentation to the AB2588 Section of Planning.
- A listed substance is no longer used and therefore not emitted in a process at the facility. The permit conditions have previously been modified to reflect this change. A copy of the modified permit or, if not yet available, a copy of the 400A application form requesting a change of permit conditions and a copy of the check for filing fee submitted to the SCAQMD must be sent to the AB2588 Section.
- Pollution control equipment which has been issued a permit-to-construct, has been installed, and is now in operation. Provide a copy of the permit-to-construct (and permit-to-operate, if issued), and show calculations for emission reductions. Provide the references for any emission factors used in the calculations. If source testing data was used to calculate the emissions, provide a copy of the source test protocol and all documentation relating to the results.
- Requirements of new SCAQMD rules have resulted in permanent and enforceable reductions. Provide documentation on how reductions are or will be achieved by a specified date.

If the facility wishes to use verified emission reductions in their risk assessment, documentation of these verified changes must be provided. Note that new emissions or emission increases, due to process changes or new equipment, must also be quantified and included in any risk assessment which incorporates emission reductions since the initial inventory was prepared.

3.3.3. Modifications in Progress

Any modifications to reduce risk must be in place and verifiable in order to be considered in calculating allowable emissions reductions. Documentation of the reductions must be submitted to the SCAQMD along with the health risk assessment. Examples of such modifications include the following:

- A permit to construct has been granted for control equipment but the equipment is not yet in place and/or a permit to operate has not been issued. In order to be considered, a copy of the permit and a letter indicating intent to construct must be provided to the AB2588 Section.

- A listed substance will be replaced or substituted. The facility must apply for a change in permit conditions, if applicable, and have the change in place. A copy of the 400A application form submitted requesting a change of permit conditions and a copy of the check for the filing fee must also be sent to the AB2588 Section.

For these "reductions in progress", the facility should contact the AB2588 Section to obtain approval and determine if the intended changes can be considered as verifiable emission reductions. Upon approval, the facility must estimate cancer risk, cancer burden, and hazard indices for both the initial emissions and for the estimated emissions after the proposed future reductions are complete. The two risk estimates must be presented separately in the HRA submitted to the SCAQMD. The dual estimate provides a "back up" in case reductions proposed by the facility are not implemented as planned.

3.3.4. New Source Testing Data

Data from new or yet to be completed source tests will not be approved for use in the preparation of the required risk assessment. However, if a facility has already conducted and completed the source test with an SCAQMD-approved source test protocol, and all supporting documentation is provided to the AB2588 Section, it may be considered for approval. The SCAQMD will notify the facility in writing if new source test results are approved for use in the AB2588 HRA. Otherwise, the facility cannot use the new source testing data. Please call the AB2588 section if you submit a request and have not been notified regarding approval before submitting the HRA.

If a facility wishes to provide unapproved source test data for informational purposes only, it must be presented in an alternate HRA (i.e., as an appendix to the HRA). The alternate HRA must be presented with separate findings and discussion of cancer risk and hazard indices. Failure to completely separate the alternate HRA from the required analysis is grounds for rejection of the HRA.

3.3.5. Diesel Particulate Matter Emissions

Diesel particulate matter emissions were identified as a toxic air contaminant (TAC) by California Air Resources Board (CARB) in 1998, and were added to SCAQMD Rule 1401 list of compounds on March 7, 2008. Under the current AB2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines Regulation, amended on August 27, 2007, facility operators are required to include health risk impacts of any diesel exhaust particulate emissions from stationary emergency and prime compression ignition internal combustion engines, as well as portable diesel engines. Please clearly identify emergency diesel internal combustion engines (DICEs) and their corresponding emissions. This is essential because, on January 5, 2007, the SCAQMD Governing Board adopted separate public notification procedures for emergency DICEs.⁹

3.4. Uncertainty Analyses and Alternative Health Risk Assessments

The OEHHA guidelines describe uncertainty analyses (or risk assessments with alternate assumptions) that may be provided at the discretion of the SCAQMD. The SCAQMD staff will allow such analyses to be included as one of the appendices to the facility's risk assessment

⁹ <http://www3.aqmd.gov/hb/2007/January/070128a.html>

document. This analysis would be a supplement to the primary risk assessment that is carried out using the assumptions presented in the OEHHA guidelines and the guidance given here. Deviations from the OEHHA Tier-1 point estimate methodology must be described in detail at the beginning of the appendix and the reasons for the alternative assumptions must also be described in detail with supporting documentation.

All analyses and discussion relating to an alternative analysis must appear under a separate title such as "Alternative Analysis" in an appendix to the risk assessment document. If an alternative risk analysis is mixed together with the Tier-1 analysis and not presented in a separate appendix of the document as required by OEHHA and SCAQMD guidelines, the risk assessment document will be considered unacceptable and returned to the facility owner/operator for revision.

3.5. Reporting Format

The reporting format for the HRA must follow the detailed outline presented in Appendix C. A completed Health Risk Assessment Summary must be included in the executive summary of all health risk assessments submitted to the SCAQMD; a sample of the form can be downloaded from the SCAQMD's AB2588 website.¹⁰ The detailed HRA outline provided in Appendix C lists the HARP2 computer files to be included in a CD with the HRA. Three (3) copies of the HRA and three (3) copies of CD(s) should be sent to SCAQMD staff. The HRA, in electronic form (i.e., pdf format), should also be included on the CD.

Cancer risk values should be reported to the nearest tenth and should be rounded up from 5 (e.g., 5.05 in a million is rounded up to 5.1 in a million). Non-cancer risk values should be reported to the nearest hundredth and should be rounded up from 5 (e.g., a hazard index of 0.105 is rounded to 0.11)

3.6. Notification and Risk Reduction Levels

The SCAQMD Governing Board has adopted risk levels for purposes of notification pursuant to the AB2588 program. In addition, SCAQMD Rule 1402 establishes action risk levels that require risk reduction; the levels are summarized in Table 5. Additional information regarding the SCAQMD's notification procedures are available on the web site.¹¹

Table 4. Public Notification and Risk Reduction Levels.

Risk Variable	Public Notification Levels	Risk Reduction Levels
Cancer risk	≥ 10 in a million	≥ 25 in a million
Non-cancer risk	Hazard index > 1	Hazard index ≥ 3
Cancer burden	--	≥ 0.5 excess cancer cases

¹⁰ <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/forms>

¹¹ <http://www.aqmd.gov/home/about/public-notice/ab-2588-notice>

3.7. Maximum Exposed Individual

To identify the location of the maximum exposed individual, it is necessary to examine current land use and allowable land use in the vicinity of the point of maximum impact (residential, commercial/industrial or mixed use). Currently, the use of block group or census tract centroids as surrogates for the maximum exposed individual does not provide sufficient spatial resolution and will not be approved.

Cancer risk and non-cancer chronic hazard indices (HIs) must be provided for both the most exposed residential and the most exposed commercial/industrial receptors. The non-cancer acute HI must be provided for the offsite point of maximum impact (PMI). Additionally, cancer risk and hazard index values at each sensitive receptor located within the zone of impact must be presented in a table. The zone of impact is discussed in the next section.

3.8. Zone of Impact

In any risk assessment, it is necessary to define a zone of impact or a method to set boundaries on the analysis. For AB2588 purposes, the SCAQMD requires that the risk assessment must encompass the area subject to an added lifetime cancer risk (all pathways) of one in one million or greater ($\geq 1.0 \times 10^{-6}$). For non-carcinogens the analysis must bound the area subject to a hazard index of greater than or equal to one half (≥ 0.5).

3.9. Land Use Considerations

Risk estimates are sensitive to land uses (e.g. residential, commercial, vacant) since these factors can affect exposure assumptions. If residential or worker risks are not calculated at the point of maximum impact because the land is currently vacant, the location, zoning and potential future land uses must be discussed. Updated information on current land uses is requested when updated emission estimates are reported to the SCAQMD.

3.10. Maps

Maps showing the location of the source in relation to the zone of impact must be submitted. Dispersion modeling for sources should be conducted with receptors defined in terms of Universal Transverse Mercator (UTM) coordinates. For carcinogen impacts, total risk isopleths for facilities should be plotted on the street map provided through HARP2 at cancer risk intervals of 1, 10, 25, and 100 in a million. Isopleths for non-carcinogens must include levels corresponding to a HI of 0.5, 1, 3, and 5.

Separate maps should be provided for each of the three risk variables: cancer risks, non-cancer acute risks, and non-cancer chronic risks. The maps must contain an accurate scale for measuring distances and a legend. The map scale that can accommodate the isopleths and show the greatest level of detail must be used. The names of streets and other locations must be presented and be legible.

The location of schools, hospitals, day-care centers, other sensitive receptors, residential areas and work-sites within the zone of impact must be identified on the map. If the area of the zone of impact is very large, then more detail should be devoted to higher concentration/risk areas versus lower risk areas. The land uses in the vicinity of the point of maximum impact (off-site) must be

shown in detail. This may require a separate map. If sensitive receptors are located within the zone of impact, then risk and hazard index values must also be presented in the form of a table including all the sensitive receptors.

3.11. Air Dispersion Modeling

Air dispersion modeling is performed for the exposure assessment of the health risk assessment. A basic understanding of dispersion modeling is presumed. For a more detailed overview of regulatory modeling procedures, the reader is referred to the U.S. Environmental Protection Agency's "Guideline on Air Quality Models"¹² and/or the OEHHA guidelines.

3.11.1. Facility Description and Source Information

The HRA report should contain a brief description of the facility and its activities as shown in the detailed HRA report outline provided in Appendix C. Table 6 lists the information on the facility and its surroundings that must be provided in the modeling analysis. The facility location is used to determine the most representative meteorological data for the analysis. The nearby land use is needed to properly label receptors as residential, commercial, sensitive, etc.

The facility plot plan (including a length scale) is needed to determine all source locations including their elevations above sea level, building dimensions, and the property boundary. The operating schedule, the hourly emission rates, the annual average emission rates, and the source parameters listed in Table 6 are necessary to accurately characterize the source emissions. The reader is referred to the detailed outline provided in Appendix C for additional information and guidance.

¹² http://www.epa.gov/ttn/scram/guidance/guide/appw_05.pdf

Table 5. Required Source Information.

<p><u>Information on the Facility and Its Surroundings</u></p> <ul style="list-style-type: none">• Location (i.e., address and UTM coordinates in WGS84)• Local land use (within 20 km)• Local topography (within 20 km)• Facility plot plan<ul style="list-style-type: none">– Property boundaries– Horizontal scale– Building heights (for building downwash calculations)– Source locations including elevations <p><u>Point Source Information (stacks, vents, etc.)</u></p> <ul style="list-style-type: none">• Maximum and average hourly emission rates• Annual emissions• Stack location (in UTM coordinates in WGS84) on plot plan including elevation• Stack height• Stack gas exit velocity• Stack gas exit temperature• Building dimensions, heights, and location <p><u>Fugitive Source Information (area and volume sources)</u></p> <ul style="list-style-type: none">• Maximum and average hourly emission rates• Annual emissions• Source location (in UTM coordinates in WGS84) on plot plan including elevations• Source height• Area or volume dimensions

3.11.2. Model Selection and Model Options

All AB2588 risk assessments prepared for the SCAQMD must use the most recent version of Hotspots Analysis and Reporting Program (currently HARP2).^{13[7]} The U.S. Environmental Protection Agency (U.S. EPA) air quality dispersion model, called AERMOD is used by HARP2 for the exposure assessment. AERMOD is a Gaussian plume model capable of estimating pollutant concentrations from a wide variety of sources that are typically present in an industrial source complex. Emission sources are categorized into four basic types: point, area, volume, and open pit sources. AERMOD estimates hourly concentrations for each source/receptor pair and calculates concentrations for user-specified averaging times, including an average concentration for the complete simulation period. AERMOD includes atmospheric dispersion options for both urban and rural environments and can address flat, gently rolling, and complex terrain situations. AERMOD documentation is available on the U.S. EPA website.¹⁴ Table 7 summarizes the dispersion modeling assumptions required by the SCAQMD. AERMOD-ready meteorological data are available on the SCAQMD website.

¹³ <http://www.arb.ca.gov/toxics/harp/harp.htm>

¹⁴ http://www.epa.gov/scram001/dispersion_prefrec.htm

Table 6. Summary of SCAQMD Dispersion Modeling Guidance

Parameter	Assumption
Model Control Options	
<ul style="list-style-type: none"> • Use Regulatory Default? 	Yes
<ul style="list-style-type: none"> • Urban or Rural? 	Urban
Source Options	
<ul style="list-style-type: none"> • Include Building Downwash? 	Yes
Meteorology Options	
<ul style="list-style-type: none"> • Meteorological Data 	AERMOD-ready data available on SCAQMD website. See section 3.11.3.

AERMOD should be executed using the urban dispersion parameters (i.e., URBAN), which is SCAQMD policy for all air quality impact analyses in its jurisdiction. The U.S. EPA regulatory defaults options should be implemented for all projects.

3.11.3. Meteorological Data

The SCAQMD has AERMOD-ready meteorological data from 27 stations in the South Coast Air Basin, as shown in Figures 2 and 3, and listed in Tables 8 and 9.

This data is in a format which can be directly read by U.S. EPA’s dispersion model, AERMOD and by ARB’s health risk assessment tool, HARP2. The nearest representative meteorological station should be chosen for modeling. Usually this is simply the nearest station; however, an intervening terrain feature may dictate the use of an alternate station. Modelers should contact the AB2588 Section regarding the most representative meteorological station if necessary. The data are available on the following SCAQMD website.¹⁵

¹⁵ <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/aermod-table-1>



Figure 2. Locations of Meteorological Stations with AERMOD-ready data in the South Coast Air Quality Management District

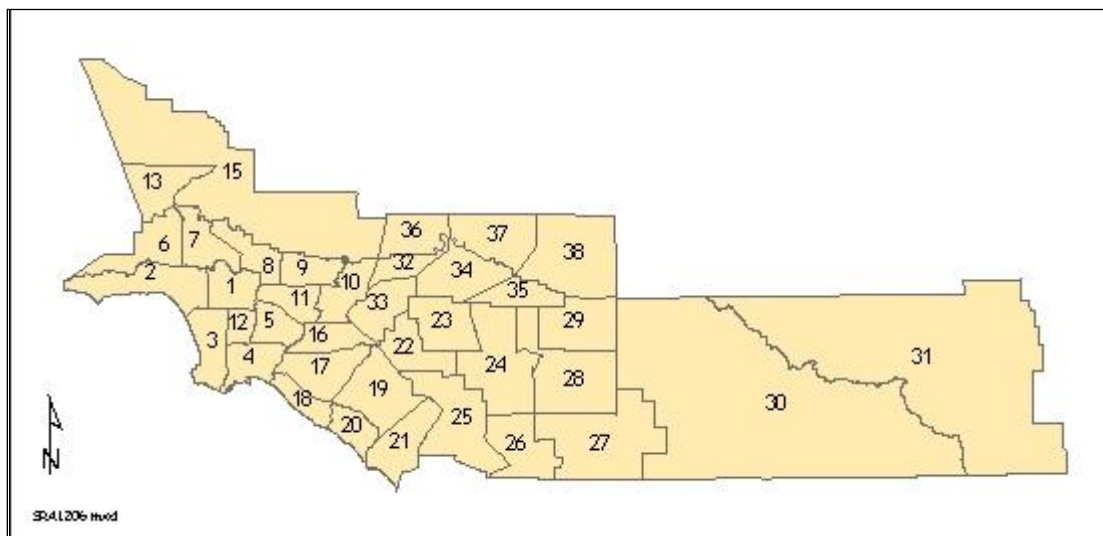


Figure 3. Source Receptor Areas (SRAs) in the South Coast Air Quality Management District. Refer to Table 9 to find the appropriate meteorological station to use for each SRA.

Table 7. Locations of Meteorological Stations

Station	Latitude/Longitude		UTM Coordinates	
	Latitude	Longitude	East (km)	North (km)
Anaheim	33:49:50	117:56:19	413.14	3743.57
Azusa	34:08:11	117:55:26	414.81	3777.47
Banning Airport	33:55:15	116:51:30	513.10	3753.19
Burbank	34:10:33	118:19:01	378.62	3782.24
Central LA	34:03:59	118:13:36	386.79	3770.00
Compton	33:54:05	118:12:18	388.59	3751.88
Costa Mesa	33:40:26	117:55:33	414.16	3726.19
Crestline	34:14:29	117:16:32	474.62	3788.76
Fontana	34:06:01	117:29:31	454.62	3773.19
Indio	33:42:30	116:12:57	572.67	3729.90
La Habra	33:55:31	117:57:08	411.98	3754.08
Lake Elsinore	33:40:35	117:19:51	469.33	3726.13
LAX	33:57:15	118:25:49	367.83	3757.80
Long Beach	33:49:25	118:11:19	389.99	3743.04
Lynnwood	33:55:44	118:12:39	388.07	3754.73
Mission Viejo	33:37:49	117:40:30	437.39	3721.17
Palm Springs	33:51:10	116:32:28	542.46	3745.73
Perris	33:47:20	117:13:40	478.91	3738.58
Pico Rivera	34:00:37	118:04:07	401.31	3763.61
Pomona	34:04:00	117:45:00	430.78	3769.61
Redlands	34:03:32	117:08:52	486.36	3768.50
Reseda	34:11:57	118:31:58	358.76	3785.11
Riverside	34:00:02	117:24:55	461.64	3762.10
San Bernardino	34:06:24	117:16:25	474.76	3773.82
Santa Clarita	34:23:00	118:31:42	359.48	3805.52
Upland	34:06:14	117:37:45	441.96	3773.66
West LA	34:03:02	118:27:24	365.54	3768.52

Table 8. Meteorological Stations for Each Source Receptor Area

Meteorological Station	Source/ Receptor Area	Meteorological Station	Source/ Receptor Area
Anaheim	17	Compton/Lynwood	12
Azusa	8, 9	Mission Viejo	19, 21
Banning	29	Perris	24, 28
Burbank	7	Palm Springs	30, 31
Central LA	1	Pico Rivera	5, 11
Crestline	37	Pomona	10
Costa Mesa	18, 20	Redlands	35, 38
Fontana	34	Reseda	6
Indio	30	Riverside	22, 23
La Habra	16	Santa Clarita	13, 15
Lake Elsinore	25, 26, 27	San Bernardino	34
LAX	3	Upland	32, 33, 36
Long Beach	4	West LA	2

3.11.4. Receptor Grid

Air dispersion modeling is required to estimate (a) annual average concentrations to calculate the Maximum Individual Cancer Risk (MICR), the maximum chronic HI, the zones of impact, and excess cancer burden and (b) peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, the receptor grid should begin at the facility fence line and extend to cover the zone of impact. In addition, the receptor grid should be fine enough to identify the points of maximum impact.

To identify the maximum impacted receptors (i.e., peak cancer risk and peak hazard indices) a grid spacing of 100 meters or less must be used. All receptors should be identified in UTM coordinates. Receptor grid points outside of the facility boundary with grid spacing of 100 meters or more must be placed so that individual grid points are placed at UTM coordinates ending in “00” (e.g., grid point UTM East 572300 and UTM North 3731000). Receptor grids with less than 100 meter spacing must include grid points at UTM coordinates ending in “00”.

Receptors on the facility boundary must be placed along the boundary following the maximum

spacing requirements shown in Table 9. Sensitive receptors must be identified by exact UTM coordinates. Elevations must be provided for all receptors.

Table 9. Maximum Receptor Spacing Requirements for Fenceline Receptors.

Area of Facility	Maximum Receptor Spacing
Area < 4 acres	20 meters
4 acres ≤ Area < 10 acres	30 meters
10 acres ≤ Area < 25 acres	50 meters
25 acres ≤ Area < 100 acres	75 meters
Area ≥ 100 acres	100 meters

3.11.5. Stacks with Raincaps and Area Sources

Emission release points with raincaps or which are oriented so that the exhaust is vented downward or horizontally may not use the velocity inside the stack as the vertical velocity of the point source in the model. However, as a point source must be modeled with some vertical velocity, these stacks may be modeled with a positive vertical velocity of no more than 0.01 meters per second. In general, if there is uncertainty on how to represent sources in a model, SCAQMD staff in the AB2588 Section should be consulted before proceeding with modeling.

According to U.S. EPA guidance for area sources in AERMOD, the aspect ratio (i.e., length/width for area sources should be less than 10 to 1. If this is exceeded, then the area should be subdivided to achieve a 10 to 1 or less aspect ratio for all sub-areas.

3.12. Risk Assessment

The SCAQMD requires that all AB2588 HRAs be prepared in accordance with OEHHA and ARB guidance¹⁶ and using the ARB computer program: HotSpots Analysis and Reporting Program (HARP2), or the latest approved version of the program. OEHHA guidance requires at least a Tier-1 evaluation, which allows for Derived Risk Calculations. The Derived method uses high end exposure parameters for the top two exposure pathways and mean exposure parameters for the remaining pathways for cancer risk estimates. For chronic non-cancer assessments, the Derived method uses high end exposures for the top three exposure pathways. ARB is developing an updated Risk Management Policy that includes recommendations for inhalation exposures.¹⁷ Preliminary discussions have indicated that they will recommend using high end breathing rates (95th percentile) for children from the 3rd trimester through age 2, and 80th percentile breathing rates for all other ages for residential exposures. In accord with these guidelines, OEHHA and SCAQMD will allow Derived Risk Calculations using ARB's Risk Management Policy to be prepared and presented in an AB2588 HRA. ARB prepared HARP2 to facilitate the preparation and transmittal of a compliant ATIR and HRA. The details are provided below.

¹⁶ http://oehha.ca.gov/air/hot_spots/hotspots2015.html

¹⁷ Information regarding ARB's Risk Management policy can be located at: <http://www.arb.ca.gov/toxics/toxics.htm>

3.12.1. OEHHA Guidance

OEHHA guidance is contained in the Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments (OEHHA February 2015). This guidance manual has undergone public and peer review, was endorsed by the California Scientific Review Panel (SRP), and approved by OEHHA. The guidance manual is available from the web.¹⁸

OEHHA Guidance recognizes four types of evaluations.

Tier-1: point estimate, using standard assumptions

Tier-2: point estimate, using site-specific details

Tier-3: stochastic risk, using standard assumptions

Tier-4: stochastic risk, using site-specific details

The details are described in the Guidance Manual.

“Tier-1 is a standard point-estimate approach using the recommended point-estimates presented in this document. [...] Tier-1 evaluations are required for all HRAs prepared for the Hot Spots Program.” (see Section 2.5.3. of reference [1]; boldface added)

“[T]he Tier-1 evaluation is useful in comparing risks among a large number of facilities and must be included in all HRAs.” (see Section 8.2.5.C. of reference [1]; boldface added)

As such, the SCAQMD requires that all AB 2588 HRAs contain at least a Tier-1 evaluation. The results of the Tier-1 evaluation are used for comparative and regulatory purposes (i.e., risk status, fee category, public notice, and risk reduction).

The Executive Summary and main body of the HRA shall contain only statements regarding the results of the Tier-1 evaluation. Tier-2, Tier-3, and Tier-4 evaluations may be prepared and presented as an appendix to the main document. The results of the Tiers 2-4 evaluations should not be in the Executive Summary and main document. Site specific details for either a Tier-2 or Tier-4 evaluation may require review and approval by OEHHA, ARB, or SCAQMD.

3.12.3. HARP2

To facilitate the preparation and submittal of ATIRs and HRAs, CARB prepared and distributes HARP2 for free. The program and documentation are available from the web.¹⁹

HARP2 is “designed to meet the programmatic requirements of the Hot Spots Program.” (page 10-1 of reference 7). HARP2 will calculate all four OEHHA Tiers and both the Derived Risk Calculations (as designed by OEHHA) and ARB’s Risk Management Policy Inhalation Rates for Residential Cancer Risk Calculations.

The outline for an HRA is contained in Appendix C. The list of files that must be submitted with an AB2588 HRA are included in Table 10 below. Any emissions factor development, emission

¹⁸ http://oehha.ca.gov/air/hot_spots/hotspots2015.html

¹⁹ <http://www.arb.ca.gov/toxics/harp/harp.htm>

rates calculations, or approved source test protocol and reports must be submitted in electronic format (e.g., in Microsoft Excel) along with the facility CD. If these items have been attached to Annual Emissions Report (AER), you may refer to it in the cover letter and avoid a redundant submittal.

Table 10. Files that must be provided with HRA submittals

File Type	Notes
HRA Input	All files created by ARB’s ADMRT
HRA Output	
Dispersion Modeling Input	All AERMOD and BPIP files used in the HRA including terrain data. All meteorological data files including any AERMET files if default SCAQMD meteorological data is not used.
Dispersion Modeling Output	
Emission Inventory Input	All files created by ARB’s EIM
Emission Inventory Output	
Emission Calculations	Provided in electronic format (e.g., Excel) and documented references
Source Tests	Source tests can only be used if approved by SCAQMD staff
Air Monitoring Data	Any monitoring data used in the HRA should be provided.

3.12.4. SCAQMD Health Risk Assessment Guidance

All HRAs prepared for the SCAQMD must include an OEHHA Tier-1 evaluation. All SCAQMD risk management decisions are based on the Tier-1 risk assessment. Tier-2, Tier-3, and Tier-4 evaluations may be prepared but must be included in an appendix of the HRA. The results of the Tier-2, Tier-3, and/or Tier-4 evaluations must not be included in the Executive Summary or main body of the HRA. Table 11 summarizes the risk assumptions required by the SCAQMD. Deviations from these defaults must be approved by SCAQMD staff prior to their use. These requirements are discussed in more detail next.

Residential cancer risks assume a 30-year exposure (cancer burden assumes a 70-year exposure) and must include, at a minimum, the following pathways: home grown produce, dermal absorption, soil ingestion, and mother’s milk. A deposition velocity of 0.02 m/s should be assumed for the non-inhalation pathways. The HRA should assume default values in HARP2 for all pathways with the exception of the dermal pathway which should assume a ‘warm’ climate. The other pathways of fish ingestion; dairy milk ingestion; drinking water consumption; and meat (i.e., beef, pork, chicken, and egg) ingestion should be included only if the facility impacts a local fishable body of water, grazing land, dairy, or water reservoir. The “RMP Using the Derived Method” risk calculation option should be used for estimating cancer risks at residential receptors. To estimate chronic non-cancer risks at residential receptors the “OEHHA Derived Method” risk calculation option should be used. The 8-hour chronic non-cancer risk should also be calculated for residential receptors for any source that operates at least 8 hours per day and 5 days per week.

Table 11. Summary of SCAQMD Health Risk Assessment Guidance.

Parameter	Assumptions
Multi-Pathway	
• Inhalation	Required for residential & worker receptors
• Dermal	Required for residential & worker receptors
• Soil	Required for residential & worker receptors
• Homegrown Produce	Required for residential receptors
• Mother’s Milk	Required for residential receptors
• Beef/Dairy	Site specific; see note #1 below
• Pigs, chickens, and/or eggs	Site specific; see note #1 below
• Deposition Velocity	0.02 meters per second
• MP Exposure Assumptions	Use HARP2 defaults except for dermal pathway which uses ‘warm’ climate
Residential Cancer Risk Assumptions	
• Exposure Duration	30 years for individual receptors 70 years for cancer burden
• Analysis Option	RMP Using the Derived Method
Worker Cancer Risk Assumptions	
• Exposure Duration	25 years
• Analysis Option	OEHHA Derived Method
Residential and Worker Non-Cancer Risk Assumptions	
• Analysis Option	OEHHA Derived Method

Worker cancer risks assume a 25-year exposure and must include the pathways of dermal absorption and soil ingestion. A deposition velocity of 0.02 m/s should be assumed for these pathways and the dermal pathway should assume a ‘warm’ climate. The “OEHHA Derived Method” risk calculation option should be used for estimating cancer and non-cancer chronic risks at worker receptors.

The air concentration that the neighboring workers breathe when present at work is different than the annual average concentration calculated by the dispersion model, AERMOD. The annual average estimated by the dispersion model is a 24 hours per day, 7 days per week, 365 days per year average, regardless of the actual operating schedule of the emitting facility. It is assumed the off-site worker is impacted by the toxic emissions only during work hours. Thus, the model-predicted concentrations must be adjusted by a multiplying factor to reflect the pollutant concentration that the worker breathes. For example, suppose that the off-site worker and the emitting facility have the same operating schedule, perhaps 8 hours per day, 5 days per week,

and 52 weeks per year. The annual average concentrations predicted by AERMOD must be adjusted by a factor of 4.2 (i.e., $7/5 \times 24/8$). The reader is referred to the OEHHA guidelines for further detail on this issue.

The adjustment factors for all possible operating schedules are given in Table 12. These factors are entered into HARP2 by activating the WAF option in the Inhalation Pathway and entering the appropriate factor from Table 12.

The adjustments in Table 12 should only be applied when estimating worker cancer risks for facilities that do not operate continuously. The adjustments are not applicable to residential cancer risks and to residential and worker chronic non-cancer risks.

Table 12. Adjustment Factors for Off-site Worker Ground-level Concentrations.*

Hours of Operation per Day	Days of Operation per Week		
	1 to 5	6	7
1 to 8	4.2	3.5	3.0
9	3.7	3.1	2.7
10	3.4	2.8	2.4
11	3.1	2.5	2.2
12	2.8	2.3	2.0
13	2.6	2.2	1.8
14	2.4	2.0	1.7
15	2.2	1.9	1.6
16	2.1	1.8	1.5
17	2.0	1.6	1.4
18	1.9	1.6	1.3
19	1.8	1.5	1.3
20	1.7	1.4	1.2
21	1.6	1.3	1.1
22	1.5	1.3	1.1
23	1.5	1.2	1.0
24	1.4	1.2	1.0

* These adjustment factors should only be used when calculating worker cancer risks. The adjustment factors should not be used when calculating chronic non-cancer risks.

Appendix A AB2588

List of Toxics

Table A-1 contains the list of compounds to be reported by AB2588 facilities preparing their quadrennial emissions inventory under the AER Program. The table provides the compound name, its TAC code and CAS number, and the degree of accuracy for each toxic. The table is alphabetically sorted by name. Multiple compounds within a TAC code group are listed in alphabetical order and shown in italics. The degree of accuracy is nothing more than a de minimis emission level for reporting. As a result, facility-wide emissions of toxics greater than one-half of their corresponding degree of accuracy must be inventoried and reported. Conversely, total facility toxic emissions less than one-half of the degree of accuracy do not need to be reported for TAC Codes 24 through 73. The degree of accuracy in the Draft version of this document provides the values listed in the Emission Inventory Criteria and Guidelines for the Air Toxics “Hot Spots” Program developed by CARB dated September 26, 2007. To be consistent with the updated risk assessment methodologies pursuant to OEHHA’s 2015 update, SCAQMD has revised the degree of accuracy reporting thresholds in Table A-1.

Table A-1 lists the family name and the individual species within the family for the following toxic air contaminants (TACs):

- Chlorinated dioxins and dibenzofurans (TAC code #7)
- Fluorocarbons (chlorinated) (TAC code #22)
- Glycol ethers and their acetates (TAC code #41)
- Hexachlorocyclohexanes (TAC code #43)
- Isocyanates and diisocyanates (TAC code #48)
- Mercury and mercury compounds (TAC code #50)
- PAHs (TAC code #19)
- Phosphorous compounds (TAC code #60)
- POMS and PAH-derivatives (TAC code #61)
- Selenium and compounds (TAC code #64)
- Sulfuric acid and oleum (TAC code #67)
- Xylenes (TAC code #70)

Table A-1. DeMinimis Reporting Limits for Toxics.

TAC Code	CAS Number	Substance	Degree of Accuracy (lbs/yr)
29	75070	Acetaldehyde	1720
30	107028	Acrolein	0.05
31	107131	Acrylonitrile	0.1
32	7664417	Ammonia	200
14	7440382	Arsenic and Compounds (inorganic)	0.01 <u>0.0015</u>
1	1332214	Asbestos	0.0004 <u>2.3E-6</u>
2	71432	Benzene	21.7
3	7440417	Beryllium	0.001
4	106990	Butadiene [1,3]	0.1
5	7440439	Cadmium	0.01
6	56235	Carbon tetrachloride	1
33	463581	Carbonyl sulfide	100
34	7782505	Chlorine	0.5
35	67663	Chloroform	409
13	18540299	Chromium, hexavalent (and compounds)	1E-40 <u>0.0004</u>
36	7440508	Copper	0.1
37	7631869	Crystalline silica	0.1
38	117817	Di(2-ethylhexyl) phthalate {DEHP}	3.920
7	1080	Chlorinated dioxins and dibenzofurans	0.000004 <u>7.3E-8</u>
	67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]	1E-60 <u>0.000004</u>
	55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]	1E-60 <u>0.000004</u>
	35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM]	1E-60 <u>0.000004</u>
	70648269	1,2,3,4,7,8-Hexachlorodibenzofuran [POM]	7.3E-70 <u>0.000004</u>
	57117449	1,2,3,6,7,8-Hexachlorodibenzofuran [POM]	7.3E-70 <u>0.000004</u>
	72918219	1,2,3,7,8,9-Hexachlorodibenzofuran [POM]	7.3E-70 <u>0.000004</u>
	60851345	2,3,4,6,7,8-Hexachlorodibenzofuran [POM]	7.3E-70 <u>0.000004</u>
	39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]	5.1E-70 <u>0.000004</u>
	57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]	5.1E-70 <u>0.000004</u>
	19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]	5.1E-70 <u>0.000004</u>
	39001020	1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]	0.000004 <u>1E-6</u>
	3268879	1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin [POM]	1E-60 <u>0.000004</u>
	57117416	1,2,3,7,8-Pentachlorodibenzofuran [POM]	1E-60 <u>0.000004</u>
	57117314	2,3,4,7,8-Pentachlorodibenzofuran [POM]	2.4E-70 <u>0.000004</u>
	40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]	5.1E-80 <u>0.000004</u>
51207319	2,3,7,8-Tetrachlorodibenzofuran [POM]	7.2E-70 <u>0.000004</u>	
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM]	5.1E-80 <u>0.000004</u>	
27	78875	1,2-Dichloropropane {Propylene dichloride}	20
28	542756	1,3-Dichloropropene	10
72	9901	Diesel exhaust particulates	0.1
39	131113	Dimethyl phthalate	50
8	123911	1,4-Dioxane	5
40	100414	Ethyl benzene	20200
9	106934	Ethylene dibromide {1,2-Dibromoethane}	0.5
10	107062	Ethylene dichloride {1,2-Dichloroethane}	2
11	75218	Ethylene oxide	0.5

(continued)
Table A-1. (continued)

TAC Code	CAS Number	Substance	Degree of Accuracy (lbs/yr)
22	1104	Fluorocarbons (chlorinated)	1
	76131	Trichlorotrifluoroethane {CFC-113}	1
	75434	Dichlorofluoromethane {Freon 21}	1
	75694	Trichlorofluoromethane {Freon 11}	1
12	50000	Formaldehyde	5
41	1115	Glycol ethers and their acetates	100
	111466	Diethylene glycol	100
	111966	Diethylene glycol dimethyl ether	100
	112345	Diethylene glycol monobutyl ether	100
	111900	Diethylene glycol monoethyl ether	100
	111773	Diethylene glycol monomethyl ether	100
	25265718	Dipropylene glycol	100
	34590948	Dipropylene glycol monomethyl ether	100
	629141	Ethylene glycol diethyl ether	100
	110714	Ethylene glycol dimethyl ether	100
	111762	Ethylene glycol monobutyl ether	200
	110805	Ethylene glycol monoethyl ether	50
	111159	Ethylene glycol monoethyl ether acetate	100
	109864	Ethylene glycol monomethyl ether	10
	110496	Ethylene glycol monomethyl ether acetate	200
2807309	Ethylene glycol monopropyl ether	100	
107982	Propylene glycol monomethyl ether	200	
108656	Propylene glycol monomethyl ether acetate	100	
112492	Triethylene glycol dimethyl ether	100	
42	118741	Hexachlorobenzene	0.0960 1
43	608731	Hexachlorocyclohexanes	0.0080 05
	319846	alpha-Hexachlorocyclohexane	0.0080 1
	319857	beta-Hexachlorocyclohexane	0.0080 1
	58899	Lindane {gamma-Hexachlorocyclohexane}	0.030 1
44	110543	Hexane	200
45	302012	Hydrazine	0.01
46	7647010	Hydrochloric acid	20
73	7664393	Hydrogen fluoride (hydrofluoric acid)	50 20
47	7783064	Hydrogen sulfide	5
48	1125	Isocyanates and diisocyanates	0.05
	822060	Hexamethylene-1,6-diisocyanate	0.05
	624839	Methyl isocyanate	1
	101688	Methylene diphenyl diisocyanate {MDI} [POM]	0.1
	1204	Toluene diisocyanates	0.1
	584849	Toluene-2,4-diisocyanate	0.1
91087	Toluene-2,6-diisocyanate	0.1	
15	7439921	Lead compounds (inorganic)	0.360 5
49	7439965	Manganese	0.1

(continued)
Table A-1. (continued)

TAC Code	CAS Number	Substance	Degree of Accuracy (lbs/yr)
50	7487947	Mercury and mercury compounds	
	7439976	Mercuric chloride	40.9
	593748	Mercury	40.9
		Methyl mercury {Dimethylmercury}	1
51	67561	Methanol	200
52	74873	Methyl chloride {Chloromethane}	20
23	71556	Methyl chloroform {1,1,1-Trichloroethane}	1
53	78933	Methyl ethyl ketone {2-Butanone}	200
54	108101	Methyl isobutyl ketone {Hexone}	20
55	1634044	Methyl tert-butyl ether	96200
16	75092	Methylene chloride {Dichloromethane}	5049.1
17	7440020	Nickel	0.1
57	106467	p-Dichlorobenzene {1,4-Dichlorobenzene}	4.35
19	1151	PAHs, total, w/o individ. components reported [PAH, POM]	0.2
	83329	Acenaphthene [PAH, POM]	1
	208968	Acenaphthylene [PAH, POM]	1
	120127	Anthracene [PAH, POM]	1
	56553	Benz[a]anthracene [PAH, POM]	0.020.5
	50328	Benzo[a]pyrene [PAH, POM]	0.0020.05
	205992	Benzo[b]fluoranthene [PAH, POM]	0.020.5
	192972	Benzo[e]pyrene [PAH, POM]	0.5
	191242	Benzo[g,h,i]perylene [PAH, POM]	0.5
	205823	Benzo[j]fluoranthene [PAH, POM]	0.020.5
	207089	Benzo[k]fluoranthene [PAH, POM]	0.020.5
	218019	Chrysene [PAH, POM]	0.24
	53703	Dibenz[a,h]anthracene [PAH, POM]	0.0050.1
	192654	Dibenzo[a,e]pyrene [PAH, POM]	0.0020.05
	189640	Dibenzo[a,h]pyrene [PAH, POM]	0.00020.001
	189559	Dibenzo[a,i]pyrene [PAH, POM]	0.00020.001
	191300	Dibenzo[a,l]pyrene [PAH, POM]	0.00020.001
	206440	Fluoranthene [PAH, POM]	0.5
	86737	Fluorene [PAH, POM]	0.5
193395	Indeno[1,2,3-cd]pyrene [PAH, POM]	0.020.5	
91576	2-Methyl naphthalene [PAH, POM]	1	
91203	Naphthalene [PAH, POM]	0.1	
198550	Perylene [PAH, POM]	0.5	
85018	Phenanthrene [PAH, POM]	0.5	
129000	Pyrene [PAH, POM]	0.5	
56	1336363	PCBs (Polychlorinated biphenyls) [POM]	0.00020.01
58	87865	Pentachlorophenol	9.640
18	127184	Perchloroethylene {Tetrachloroethene}	5
59	7723140	Phosphorus	0.1

(continued)
Table A-1. (continued)

TAC Code	CAS Number	Substance	Degree of Accuracy (lbs/yr)
60		Phosphorous compounds	
	7803512	Phosphine	0.01
	7664382	Phosphoric acid	50
	10025873	Phosphorus oxychloride	0.1
	10026138	Phosphorus pentachloride	0.1
	1314563	Phosphorus pentoxide	0.1
	7719122	Phosphorus trichloride	0.1
	126738	Tributyl phosphate	100
	78400	Triethyl phosphine Trimethyl phosphate Triorthocresyl	100
	512561	phosphate [POM] Triphenyl phosphate [POM] Triphenyl phosphite [POM]	100
	78308		0.5
	115866		100
101020		100	
61		POMS and PAH-derivatives	
	226368	Dibenz[a,h]acridine [POM]	0.02 _{0.5}
	224420	Dibenz[a,j]acridine [POM]	0.02 _{0.5}
	194592	7H-Dibenzo[c,g]carbazole	0.002 _{0.05}
	57976	7,12-Dimethylbenz[a]anthracene [PAH-Derivative, POM]	9E-50.0001
	42397648	1,6-Dinitropyrene [PAH-Derivative, POM]	2E-40.001
	42397659	1,8-Dinitropyrene [PAH-Derivative, POM]	0.002 _{0.05}
	56495	3-Methylcholanthrene [PAH-Derivative, POM]	9.8E-40.001
	3697243	5-Methylchrysene [PAH-Derivative, POM]	0.002 _{0.05}
	101779	4,4'-Methylenedianiline (and its dichloride) [POM]	0.015 _{0.1}
	602879	5-Nitroacenaphthene [POM]	0.174
	7496028	6-Nitrochrysene [PAH-Derivative, POM]	2E-40.00020.001
	607578	2-Nitrofluorene [PAH-Derivative, POM]	0.25
	5522430	1-Nitropyrene [PAH-Derivative, POM]	0.02 _{0.5}
57835924	4-Nitropyrene [POM]	0.02 ₄	
62	75569	Propylene oxide	10
63	91225	Quinoline	100
64		Selenium and compounds	
	7783075	Hydrogen selenide	0.1
	7782492	Selenium	0.5
	7446346	Selenium sulfide	0.1
65	1310732	Sodium hydroxide	2
66	100425	Styrene	100
24	79345	1,1,2,2-Tetrachloroethane	0.86 ₄
67		Sulfuric acid and oleum	
	8014957	Oleum	2 ₁₀₀
	7664939	Sulfuric acid	2
	7446719	Sulfur trioxide	2 ₁₀₀
68	108883	Toluene	200
25	79005	1,1,2-Trichloroethane {Vinyl trichloride}	4 ₃
20	79016	Trichloroethylene	20
26	95636	1,2,4-Trimethylbenzene	5

(continued)

Table A-1. (concluded)

TAC Code	CAS Number	Substance	Degree of Accuracy (lbs/yr)
69	51796	Urethane {Ethyl carbamate}	0.1
21	75014	Vinyl chloride	0.5
70	1330207	Xylenes	200
	108383	m-Xylene	200
	95476	o-Xylene	200
	106423	p-Xylene	200
71	75456	Chlorodifluoromethane {Freon 22}	200

Appendix B
Elements of Air Toxics Inventory Report

1. Report Summary (hard copy)

- Facility name, ID, and location
- Facility plot plan identifying: emission source location, property line, horizontal scale, building heights and dimensions
- Facility total emission rate by substance for all emittants including the following information (OEHHA Guidelines Appendix A-I Substances must be quantified in the inventory report):
 - substance name and CAS number
 - annual average emission for each substance (lb/yr & g/s)
 - maximum one-hour emissions for each substance (lbs/hr & g/s)
- Supporting documentation such as source test report and approval letter if emissions are measured

2. Use the EIM software from HARP2 to provide facility, device, process, emissions, and stack data in a HARP2 database, including but not limited to the following information:

- Source identification number used by the facility
- Source name
- SCAQMD permit number, if available
- Source location using UTM coordinates (in meters) be sure to use a WGS84 projection
- Source base elevation (m)
- Source height (m)
- Source dimensions (e.g., stack diameter, building dimensions, area/volume size, etc.) (m)
- Stack gas exit velocity (m/s) if applicable
- Stack gas volumetric flow rate (ACFM) if applicable
- Stack gas exit temperature (K)
- Number of operating hours per day
- Number of operating days per week
- Number of operating weeks per year
- Report emission control equipment and efficiency by source and by substance. The description should be brief.
- Report annual average and maximum hourly emission rates for each toxic substance for each source
- Report emission inventory methods indicating whether emissions are measured or estimated

Appendix C
Outline for the Health Risk Assessment Report

I. Table of Contents

- Section headings with page numbers indicated.
- Tables and figures with page numbers indicated.
- Definitions and abbreviations. Must include a definition of acute, 8-hour chronic, chronic, and cancer health impacts.
- Appendices with page numbers indicated.

II. Executive Summary

- Name of facility and the complete address.
- Facility ID number
- Description of facility operations and a list identifying emitted substances, including a table of maximum 1-hour and annual emissions in units of lbs/hr and lbs/yr, respectively.
- List the multipathway substances and their pathways.
- Text presenting overview of dispersion modeling and exposure assessment.
- Text defining dose-response assessment for cancer and noncancer health impacts and a table showing target organ systems by substance for noncancer impacts.
- Summary of results (See Attachment A to this Appendix). Potential cancer risks for residents must be based on 30- year, Tier-1 analysis and potential cancer risks for workers must be based on 25- year, Tier-1 analysis. Cancer burden results must be based on 70-year, Tier-1 analysis.
 - Location (address or UTM coordinates) and description of the off-site point of maximum impact (PMI), maximum exposed individual resident (MEIR), and maximum exposed individual worker (MEIW). See Attachment A for the required summary form.
 - Location (address or UTM coordinates) and description of any sensitive receptors that are above a cancer risk of ten in one million or above a noncancer health hazard index of one.
 - Text presenting an overview of the total potential multipathway cancer risk at the PMI, MEIR, MEIW, and sensitive receptors (if applicable). Provide a table of cancer risk by substance for the MEIR and MEIW. Include a statement indicating which of the substances appear to contribute to (i.e., drive) the potential health impacts. In addition, identify the exposure pathways evaluated in the HRA.
 - Provide a map of the facility and surroundings and identify the location of the MEIR, MEIW, and PMI.
 - Provide a map of 30-year lifetime cancer risk zone of impact (i.e., 1 in one million risk contour), if applicable. Also show the 10, 25, and 100 in one million risk contours, if applicable. If the cancer burden is greater than 0.5, then a map showing the 1 in one million risk contour based on a 70-year

lifetime should also be presented.

- Text presenting an overview of the acute and chronic noncancer hazard quotients or the (total) hazard indices for the PMI, MEIR, MEIW, and sensitive receptors. Include separate statements (for acute, 8-hour chronic, and annual chronic exposures) indicating which of the substances appear to drive the potential health impacts. In addition, clearly identify the primary target organ(s) that are impacted from acute and chronic exposures.
- Identify any subpopulations (e.g., subsistence fishers) of concern.
- Table and text presenting an overview of estimates of population exposure.
- Version of the Risk Assessment Guidelines and computer program(s) used to prepare the risk assessment.

III. Main Body of Report

A. Hazard Identification

- Table and text identifying all substances emitted from the facility. Include the CAS number of substance and the physical form of the substance if possible. The complete list of the substances to be considered is contained in Appendix A of The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2015).
- Table and text identifying all substances that are evaluated for cancer risk and/or noncancer acute and chronic health impacts. In addition, identify any substances that present a potential cancer risk or chronic noncancer hazard via noninhalation routes of exposure.
- Describe the types and amounts of continuous or intermittent predictable emissions from the facility that occurred during the reporting year. As required by statute, releases from a facility include spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping (fugitive), leaching, dumping, or disposing of a substance into ambient air. Include the substance(s) released and a description of the processes that resulted in long-term and continuous releases.

B. Exposure Assessment

This section describes the information related to the air dispersion modeling process that should be reported in the risk assessment. In addition, doses calculated by pathway of exposure for each substance should be included in this section. The educated reader should be able to reproduce the risk assessment without the need for clarification. The location of any information that is presented in appendices, on electronic media, or attached documents that supports information presented in this section, must be clearly identified by title and page number in this section's text and in the document's table of contents.

B.1. Facility Description

Report the following information regarding the facility and its surroundings:

- Facility name
- Facility ID
- Facility location (i.e., address)
- Local topography
- Facility plot plan identifying: emission source locations, property line, horizontal scale, building heights and dimensions
- Description of the site/route dependent exposure pathways. Provide a summary of the site-specific inputs used for each pathway (e.g., water or grazing intake assumptions). This information may be presented in the appendix with the information clearly presented and cross-referenced to the text.

B.2. Emissions Inventory

Report the following information regarding the facility's sources and emissions in table format; see Appendix K of OEHHA Guidelines (2015). Depending on the number of sources and/or pollutants, this information may be placed in the main body of the report or in an appendix.

- Source identification number used by the facility
- Source name
- Source location using UTM coordinates (in meters); be sure to use a WGS84 projection
- Source base elevation (m)
- Source height (m)
- Source dimensions (e.g., stack diameter, building dimensions, area/volume size, etc.) (m)
- Stack gas exit velocity (m/s) if applicable
- Stack gas volumetric flow rate (ACFM) if applicable
- Stack gas exit temperature (K)
- Number of operating hours per day and per year
- Number of operating days per week
- Number of operating days or weeks per year
- Report emission control equipment and efficiency by source and by substance. The description should be brief.

- Report emission inventory methods indicating whether emissions are measured or estimated
- Report emission rates for each toxic substance, grouped by source, in table form including the following information (see Appendix K of OEHHA Guidelines, 2015). Depending on the number of sources and/or pollutants, this information may be placed in the main body of the report or in an appendix.
 - Source name
 - Source identification number
 - Substance name and CAS number
 - Annual average emissions for each substance (lbs/yr & g/s). Radionuclides are reported in Curies/yr.
 - Maximum one-hour emissions for each substance (lbs/hr & g/s). Radionuclides are reported in millicuries/yr.
- Report facility total emission rates by substance for all emittants including the following information (see Appendix K of OEHHA Guidelines, 2015). This information should be in the main body of the report.
 - Substance name and CAS number
 - Annual average emissions for each substance (lbs/yr & g/s). Radionuclides are reported in Curies/yr.
 - Maximum one-hour emissions for each substance (lbs/hr & g/s). Radionuclides are reported in millicuries/yr.

B.3. Air Dispersion Modeling

- The HRA should indicate the source and time period of the meteorological data used. Include the meteorological data electronically with the HRA. The SCAQMD has AERMOD-ready meteorological data at 27 stations in the South Coast Air Basin. This data can be downloaded from the SCAQMD web site.
- Include proper justification for using the meteorological data. The nearest representative meteorological station should be chosen for modeling. Usually this is simply the nearest station to the facility; however, an intervening terrain feature may dictate the use of an alternate site.
- HARP2 or the latest approved version of the program should be used for all health risk assessments prepared for the AB2588 Program. Make sure that the latest version of the program is used.
- Table and text that specifies the following information:
 - Selected model options and parameters
 - Receptor grid spacing
- For the PMI, MEIR, MEIW, and any sensitive receptors required by the SCAQMD, include tables that summarize the annual average concentrations calculated for all substances.

- For the PMI, MEIR, MEIW, and any sensitive receptors required by the SCAQMD, include tables that summarize the maximum one-hour; chronic 8-hour; and 90-day rolling average (lead only) concentrations.

C. Risk Characterization

HARP2 generates the risk characterization data needed for the outline below. Any data needed to support the risk characterization findings should be clearly presented and referenced in the text and appendices. A listing of HARP2 files that meet these HRA requirements are provided in Section DV of the main body of the AB2588 Supplemental Guidance. All HARP2 files should be included in the HRA. Ideally, the HRA report and a summary of data used in the HRA should be on paper and all data and model input and output files should be provided electronically (i.e., CD).

The potential cancer risk for the PMI, MEIR, and sensitive receptors of interest must be presented in the HRA's text, tables, and maps using a residential 30-year exposure period. MEIW location should use appropriate exposure periods. For the AB2588 Program, the 30-year exposure duration should be used as the basis for residential public notification and risk reduction audits and plans. All HRAs must include the results of a Tier-1 exposure assessment. If persons preparing the HRA would like to present additional information (i.e., exposure duration adjustments or the inclusions of risk characterizations using Tier-2 through Tier-4 exposure data), then this information should be presented in separate, clearly titled, sections, tables, and text.

The following information should be presented in this section of the HRA. If not fully presented here, then by topic, clearly identify the section(s) and pages within the HRA where this information is presented.

- Description of receptors to be quantified.
- Identify the site/route dependent exposure pathways (e.g., water ingestion) for the receptor(s), where appropriate (e.g., MEIR). Provide a summary of the site-specific inputs used for each exposure pathway (e.g., water or grazing intake assumptions). In addition, provide reference to the appendix (section and page number) that contains the modeling (i.e., HARP2/dispersion modeling) files that show the same information.
- Tables and text providing the following information regarding the potential multipathway cancer risks at the PMI, MEIR, MEIW, and any sensitive receptors of concern:
 - Location in UTM coordinates
 - Contribution by substance
 - Contribution by source
 - 9- and 70-year cancer risks
- Tables and text providing the following information regarding the acute noncancer hazard quotient at the PMI, MEIR, MEIW, and any sensitive receptors of concern:
 - Location in UTM coordinates

- Target organ(s)
- Contribution by substance
- Contribution by source
- Tables and text providing the following information regarding the chronic noncancer (inhalation and oral) hazard quotient at the PMI, MEIR, MEIW, and any sensitive receptors of concern:
 - Location in UTM coordinates
 - Target organ(s)
 - Contribution by substance
 - Contribution by source
- Table and text presenting estimates of population exposure. Tables should indicate the number of persons exposed to a total cancer risk greater than 10^{-6} , 10^{-5} , 10^{-4} , etc. and total hazard quotient or hazard index greater than 0.5, 1.0, 3.0, and 5.0. Total excess cancer burden should also be provided.
- Provide maps that illustrate the HRA results as noted below. The maps should be an actual street map of the area impacted by the facility with UTM coordinates and facility boundaries clearly labeled. This should be a true map (i.e., one that shows roads, structures, etc.), drawn to scale, and not just a schematic drawing. Color aerial photos are usually the most appropriate choice. The following maps are required:
 - Locations of the PMI, MEIR, MEIW, and sensitive receptors for the cancer and noncancer acute and chronic risks. Also show the facility emission points and property boundary.
 - Total multipathway cancer risk contours for the following risk levels: 100, 25, 10, and 1 in a million. Maps should be provided for the minimum exposure pathways (i.e., inhalation, soil ingestion, dermal exposure, and breast-milk consumption) and for all applicable exposure pathways (i.e., minimum exposure pathways plus additional site/route specific pathways). Include the facility location on the maps.
 - Noncancer acute and chronic hazard index contours for the following levels: 5.0, 3.0, 1.0 and 0.5. Include the facility location.
- The risk assessor may want to include a discussion of the strengths and weaknesses of the risk analyses and associated uncertainty directly related to the facility HRA.
- If appropriate, comment on the possible alternatives for control or remedial measures.
- If possible, identify any community concerns that influence public perception of risk.

D. References

IV. Appendices

The appendices should contain all data, sample calculations, assumptions, and all modeling and risk assessment files that are needed to reproduce the HRA results. Ideally, a summary of data used in the HRA will be on paper and all data and model input and

output files will be provided electronically (e.g., CD). All appendices and the information they contain should be referenced, clearly titled, and paginated. The following are potential appendix topics unless presented elsewhere in the HRA:

- List of all receptors in the zone of impact and their associated risks.
- Emissions by source.
- Census data.
- Maps and facility plot plan.
- All calculations used to determine emissions, concentrations, and potential health impacts at the PMI, MEIR, MEIW, and sensitive receptors.
- Presentation of alternate risk assessment methods (e.g., alternate exposure durations, or Tier-2 to Tier-4 evaluations with supporting information).

V. Computer Files

The list of computer files that must be submitted on CD with the HRA are included in the table below:

File Type	Notes
HRA Input	All files created by ARB's ADMRT
HRA Output	
Dispersion Modeling Input	All AERMOD and BPIP files used in the HRA including terrain data. All meteorological data files including any AERMET files if default SCAQMD meteorological data is not used.
Dispersion Modeling Output	
Emission Inventory Input	All files created by ARB's EIM
Emission Inventory Output	
Emission Calculations	Provided in electronic format (e.g., Excel) and documented references
Source Tests	Source tests can only be used if approved by SCAQMD staff
Air Monitoring Data	Any monitoring data used in the HRA should be provided.

Attachment A to Appendix C

HRA Summary

This summary form should accompany all HRAs and be presented at the beginning of the Executive Summary.



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4182

(909) 396-2000 • www.aqmd.gov

HEALTH RISK ASSESSMENT SUMMARY FORM

(Required in Executive Summary of HRA)

Facility Name : _____

Facility Address: _____

Type of Business: _____

SCAQMD ID No.: _____

A. Cancer Risk

(One in a million means one chance in a million of getting cancer from being constantly exposed to a certain level of a chemical over a period of time)

1. Inventory Reporting Year : _____

2. Maximum Cancer Risk to Receptors : *(Offsite and residence = 30-year exposure, worker = 25-year exposure)*

- a. Offsite _____ in a million Location: _____
- b. Residence _____ in a million Location: _____
- c. Worker _____ in a million Location: _____

3. Substances Accounting for 90% of Cancer Risk: _____
Processes Accounting for 90% of Cancer Risk: _____

4. Cancer Burden for a 70-yr exposure: *(Cancer Burden = [cancer risk] x [# of people exposed to specific cancer risk])*

- a. Cancer Burden _____
- b. Number of people exposed to >1 per million cancer risk for a 70-yr exposure _____
- c. Maximum distance to edge of 70-year, 1×10^{-6} cancer risk isopleth (meters) _____

B. Hazard Indices

*[Long Term Effects (chronic) and Short Term Effects (acute)]
(non-carcinogenic impacts are estimated by comparing calculated concentration to identified Reference Exposure Levels, and expressing this comparison in terms of a "Hazard Index")*

- 1. Maximum Chronic Hazard Indices:
 - a. Residence HI: _____ Location: _____ toxicological endpoint: _____
 - b. Worker HI : _____ Location: _____ toxicological endpoint: _____

2. Substances Accounting for 90% of Chronic Hazard Index: _____

3. Maximum 8-hour Chronic Hazard Index:
8-Hour Chronic HI: _____ Location: _____ toxicological endpoint: _____

4. Substances Accounting for 90% of 8-hour Chronic Hazard Index: _____

5. Maximum Acute Hazard Index:
PMI: _____ Location: _____ toxicological endpoint: _____

6. Substances Accounting for 90% of Acute Hazard Index: _____

C. Public Notification and Risk Reduction

1. Public Notification Required? Yes No
a. If 'Yes', estimated population exposed to risks > 10 in a million for a 30-year exposure, or an HI >1

2. Risk Reduction Required? Yes No

Appendix D

HRA Review Check List

The check list contained here is used by SCAQMD staff to standardize the review of HRAs. It is being provided to assist facilities and consultants in their risk assessment preparation.

Facility Name: _____ Facility ID: _____
 Street Address: _____
 City: _____ Zip Code: _____
 HRA Consultant: _____ Reviewer: _____

Dispersion Modeling

1. AERMOD Files

a. Meteorology Input File _____

Using Figure 2 and Table 8 the meteorological site should be the one closest to the facility.

- i. Closest to facility Yes ___ No ___
- ii. If not, is there a valid justification? Yes ___ No ___

2. Control

a. Pollutant

- i. Pollutant ID (should be “Other”) Yes ___ No ___

b. Model Options

- i. Use regulatory default (should be “Yes”) Yes ___ No ___
- ii. Rural or Urban (should be “Urban”) Yes ___ No ___

c. Building Downwash

- i. Include building downwash? (should be “Yes”) Yes ___ No ___

d. Terrain

- i. Run with elevations Yes ___ No ___

e. Averaging times

- i. 1-Hour (should be “Yes”) Yes ___ No ___
- ii. 3-Hour Yes ___ No ___
- iii. 8-Hour Yes ___ No ___
- iv. 24-Hour Yes ___ No ___
- v. Monthly Yes ___ No ___
- vi. Period (should be “Yes”) Yes ___ No ___
- vii. Annual Yes ___ No ___

3. Sources

- a. Source and building locations agree with the plot plan Yes ___ No ___
- b. Stack heights are reasonable Yes ___ No ___
- c. Volume/area source dimensions are reasonable Yes ___ No ___
- d. Stack parameters are consistent with those provided in the report Yes ___ No ___

4. Receptors
 - a. Grid receptors
 - i. Included (should be “Yes”) Yes ___ No ___
 - ii. Spacing (should be no greater than 100 meters) Yes ___ No ___
 - Assumed spacing _____ meters
 - iii. Elevations included (should be “Yes”) Yes ___ No ___
 - b. Property boundary receptors
 - i. Included (should be “Yes”) Yes ___ No ___
 - ii. Spacing follows guidance in Table 2 Yes ___ No ___
 - Assumed spacing _____ meters
 - iii. Elevations included (should be “Yes”) Yes ___ No ___
 - c. Sensitive receptors
 - i. Included (should be “Yes” if cancer risks >1 in a million) Yes ___ No ___
 - ii. Elevation included (should be “Yes”) Yes ___ No ___
 - iii. Verified from review of Thomas Guide or other source Yes ___ No ___
 - d. Census block receptors
 - i. Included (should be “Yes” if cancer risks >1 in a million) Yes ___ No ___
 - ii. Elevation included (should be “Yes”) Yes ___ No ___
 - e. Pathway receptors included (should be “No”) Yes ___ No ___
5. Emission Rates
 - a. Include rate factors (should be “No”) Yes ___ No ___
6. Deposition and Depletion
 - a. Include deposition (should be “No”) Yes ___ No ___
 - b. Dry depletion (should be “No”) Yes ___ No ___
 - c. Wet depletion (should by “No”) Yes ___ No ___
7. Duplication of AERMOD Results
 - a. Independently ran AERMOD Yes ___ No ___
 - b. Average χ/Q first high values for each source group reproduced (not required; useful if diagnosing discrepancies) Yes ___ ___
 - c. Maximum 1-hour χ/Q first high values for each source group reproduced (not required; useful if diagnosing discrepancies) Yes ___

Residential Risk Assessment

1. Enabled Pathways and Related Variables
 - a. Drinking water (not required) Yes ___ No ___
 - b. Fish water (not required) Yes ___ No ___
 - c. Beef/dairy (pasture) (not required) Yes ___ No ___
 - d. Home grown produce (required; should be “Yes”) Yes ___ No ___
 - e. Pigs, chickens, and/or eggs (not required) Yes ___ No ___
 - f. Dermal absorption (required; should be “Yes”) Yes ___ No ___
 - g. Soil Ingestion (required; should be “Yes”) Yes ___ No ___
 - h. Mother’s milk (required; should be “Yes”) Yes ___ No ___
 - i. Deposition velocity (should be 0.02 meters per second) Yes ___ No ___

- k. Exposure duration (should be 30 years) Yes ___ No ___
- l. Cancer analysis method; (should be “RMP with OEHHA Derived”) Yes ___ No ___
- m. Chronic non-cancer analysis method; should be “OEHHA Derived” No ___
Yes ___
- 2. Duplication of HARP2 Results
 - a. Independently performed residential risk assessment Yes ___ No ___
 - b. PMI (i.e., maximum off-site cancer risk) reproduced Yes ___
 - i. Facility value _____ AQMD value _____
 - ii. Facility location _____ AQMD location _____
 - iii. Explanation if necessary _____
 - c. Cancer MEIR reproduced Yes ___ No ___
 - i. Facility value _____ AQMD value _____
 - ii. Facility location _____ AQMD location _____
 - iii. Explanation if necessary _____
 - d. Independently verified the cancer risk isopleth map Yes ___ No ___
 - e. Non-cancer chronic hazard index (i.e., chronic HI) reproduced Yes ___ No ___
 - i. Facility value _____ AQMD value _____
 - ii. Facility location _____ AQMD location _____
 - iii. Explanation if necessary _____
 - f. Independently verified the chronic HI isopleth map Yes ___ No ___
 - g. Non-cancer acute hazard index(i.e., acute HI) reproduced Yes ___ No ___
 - i. Facility value _____ AQMD value _____
 - ii. Facility location _____ AQMD location _____
 - iii. Explanation if necessary _____
 - h. Independently verified the acute HI isopleth map Yes ___ No ___

Worker Risk Assessment

- 1. Enabled Pathways and Related Variables
 - a. Drinking water (not required) Yes ___ No ___
 - b. Fish water (not required) Yes ___ No ___
 - c. Beef/dairy (pasture) (not required) Yes ___ No ___
 - d. Home grown produce (not appropriate; should be “No”) Yes ___ No ___
 - e. Pigs, chickens, and/or eggs (not required) Yes ___ No ___
 - f. Dermal absorption (required; should be “Yes”) Yes ___ No ___
 - g. Soil Ingestion (required; should be “Yes”) Yes ___ No ___
 - h. Mother’s milk (not appropriate; should be “No”) Yes ___ No ___
 - i. Deposition velocity (should be 0.02 meters per second) Yes ___ No ___
 - j. Exposure duration (should be 25 years) Yes ___ No ___
 - k. Cancer analysis method; should be “OEHHA Derived” Yes ___ No ___



South Coast Air Quality Management District

**DRAFT Facility Prioritization Procedures
For
AB 2588 Program**

~~March-June~~ 2015

DRAFT

TABLE OF CONTENTS

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I. INTRODUCTION

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (commonly known as AB 2588) established a statewide program for the inventory of air toxics emissions from individual facilities as well as requirements for risk assessment and public notification of potential health risks. AB 2588 requires the South Coast Air Quality Management District (SCAQMD) to designate high, intermediate, and low priority categories and include each facility within the appropriate category based on its individual priority. In establishing priorities, the SCAQMD is to consider the potency, toxicity, quantity and volume of hazardous materials released from the facility; the proximity of the facility to potential receptors, including, but not limited to, hospitals, schools, daycare centers, worksites and residences; and any other factors that the SCAQMD finds and determines may indicate that the facility may pose a significant risk to receptors.

II. FACILITY PRIORITIZATION PROCEDURE

This document describes the facility prioritization procedure utilized by the SCAQMD. The procedure is based on the upcoming 2015 version of the Emissions and Potency Procedure recommended by the Facility Prioritization Guidelines of the AB 2588 Risk Assessment Committee of the California Air Pollution Control Officers Association (CAPCOA Procedures). The 2015 version of the CAPCOA procedure is expected to use the same methodology as the previous version of the CAPCOA procedures adopted in 1990, with the exception that a normalization factor has been updated to reflect updates to OEHHA's 2015 update to its Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (OEHHA Guidance Manual).

The CAPCOA Procedures primarily rely on three parameters to prioritize facilities: emissions, potency or toxicity, and the proximity to potential receptors. In September 1990, the SCAQMD refined the original CAPCOA Procedures to include adjustment factors for receptor proximity, exposure period, and averaging times in addition to the treatment of multi-pathway pollutants. In August 2004, SCAQMD revised its Procedures to accommodate the use of cancer potency factors (instead of unit risk factors) to allow for daily breathing rate and body weight variations as well as revised multi-pathway factors for resident and workers. In March 2011, the SCAQMD Procedures were revised to include updated toxicity criteria. This document supersedes the March 2011 Version to accommodate new risk calculation methodologies laid out in the 2015 OEHHA Guidance Manual.

For prioritization, a facility receives two scores: one for carcinogenic (cancer) effects and the other for non-cancer effects. The facility is then ranked based on the higher of these two scores. Three categories are used in the ranking: high priority (Category A), intermediate priority (Category B) and low priority (Category C). Based on the Total Facility Score (TS), facilities designated as high priority are required to submit Health Risk Assessments to assess the risk to their surrounding community. Facilities ranked with intermediate priority are considered to be District tracking facilities, which are then required to submit complete toxics inventory once every four years. Facilities ranked with low priority are exempt from reporting. Due to the very conservative nature of the screening risk assessment used for prioritization, and consistent with

CAPCOA’s Procedures, a priority score of 10 is equivalent to a calculated cancer risk of 100 per million or a HI of 10. The following table summarizes thresholds used to prioritize facilities:

Table 1

Total Facility Score (TS)	Category
TS > 10	High Priority
1 < TS ≤ 10	Intermediate Priority
TS ≤ 1	Low Priority

Facilities subject to AB2588 are required to submit a detailed list of their toxic emissions every four years (referred to as a quadrennial update). Based on their level of toxic and criteria pollutant emissions, each year a different group of facilities will report a detailed list of its toxic emissions. Upon initial prioritization of facilities, the SCAQMD staff conducts further analyses to verify the Priority Score such as confirming the distance to the sensitive receptors and workers, reviewing emissions trends and facility changes such as new or modified permitted equipment or pollution controls, and comparing the Priority Score results with the last Health Risk Assessment submittal or Risk Reduction Plan, if applicable. This additional information obtained through Priority Score auditing will often negate the need to ask for a Health Risk Assessment. If, however, the Prioritization Score remains high, the facility is asked to prepare an Air Toxics Inventory Report and Health Risk Assessment.

A. Calculation of Cancer Score

The facility scores for residential and worker cancer effects are calculated as follows:

$$TS_r = \sum\{(E_c) (CP_c) (10^{-6}) (MP_{c,r})\}(RP) (676.63) (10^5), \text{ or}$$

$$TS_w = \sum\{(E_c) (CP_c) (10^{-6}) (MP_{c,w})\}(RP) (WAF) (56.26) (10^5)$$

Where;

- TS = Total facility score, the sum of scores for all carcinogens
- c = Specific carcinogen
- r = Residential Receptor
- w = Worker Receptor
- Ec = Annual emissions of carcinogen, c (lbs/year)
- CPc = Cancer potency of carcinogen substance, c (mg/kg-day)⁻¹
- 10⁻⁶ = Micrograms to milligrams conversion, liters to cubic meters conversion
- MPc = Multi-pathway adjustment factor of carcinogen, c; there are separate multi-pathway factors for residence and worker; see Table 4
- RP = Receptor proximity adjustment factor, χ/Q (($\mu\text{g}/\text{m}^3$)/(lbs/year))
- WAF = Worker Adjustment Factor (dimensionless)
- 676.63 = Residential Combined Exposure Factor that accounts for age-specific breathing rate, age specific factor, exposure duration, exposure frequency, and averaging time from 2015 OEHHA Guidance Manual
- 56.26 = Worker Combined Exposure Factor that accounts for age-specific breathing rate, age specific factor, exposure duration, exposure frequency, and averaging time from 2015 OEHHA Guidance Manual
- 10⁵ = Scalar to adjust priority score to 1-10 scale

Annual Emissions:

Annual emissions of carcinogens are taken from the TACS and TACS-O Facility Summary Forms of the Annual Emission Reporting (AER) Program. Each toxic substance has a degree of accuracy associated with them that is a de-minimis emission level for reporting. As a result, facility-wide toxic emissions greater than one-half of their corresponding degree of accuracy are inventoried and reported. Conversely, total facility toxic emissions less than one-half of their corresponding degree of accuracy levels are not considered in the prioritization. The substances and associated degree of accuracy levels are listed in Table 3.

Cancer Potency:

The Cancer Potency factor (CP) is a measure of the cancer potency of a carcinogen. The cancer potency factor is the estimated probability that a person will contract cancer as a result of a daily inhalation of 1 milligram of the carcinogen per kilogram of body weight continuously over a period of 70 years. The cancer potency factors used in these procedures are published by the Office of Environmental Health Hazard Assessment (OEHHA). The latest CP values can be obtained from the following website: <http://www.arb.ca.gov/toxics/healthval/healthval.htm>

Multi-pathway Adjustment Factor:

The multi-pathway (MP_c) adjustment factor is used for carcinogens that may contribute to risk from exposure pathways other than inhalation. These substances deposit on the ground in particulate form and contribute to risk through ingestion of soil or backyard garden vegetables or through other routes. This factor is used to account for additional risks from exposure through non-inhalation pathways. The MP_c adjustment factors for specific carcinogens have been developed by SCAQMD staff by using the Health Risk Assessment Standalone Tool (RAST) developed by California Air Resources Board (CARB).¹ The MP_c factors also satisfy the requirements of the SCAQMD Risk Assessment Procedures for Rules 1401 and 212. The substances and associated MP_c adjustment factors for worker and residents are listed in Table 4. For cancer causing compounds that only affect the inhalation pathway, the MP_c adjustment factor is set to one. The SCAQMD Risk Assessment Procedures for Rules 1401 and 212 (SCAQMD Rule 1401 HRA Procedures) can be obtained from the following web site: <http://www.SCAQMD.gov/home/permits/risk-assessment>

Receptor Proximity Adjustment Factor:

The Receptor Proximity (RP) adjustment factor is calculated based on the distances from the facility to the nearest receptor. Receptor locations are off-site, where persons may be exposed to toxic emissions from equipment. The receptor distance is defined as the closest distance between any source of air toxic emissions at the facility and the property boundary of any one of the receptor locations. A distance of 50 meters is assumed for a facility without specified receptor distances corresponding to the highest adjustment factor. Separate RP adjustment factors are developed to serve different patterns of annual and hourly averaged wind conditions. The RP formulas in Table 2 below were developed based on the dispersion factors (χ/Q) developed for the SCAQMD Rule 1401 HRA Procedures. The RP adjustment factor is calculated from the following table:

¹ <http://www.arb.ca.gov/toxics/harp/harp.htm>

Table 2

Distance to Receptor (R in m)	Emission Rate	Receptor Proximity Adjustment Factor (RP)
R =< 50	Annual Concentration	0.030850
	Hourly Concentration	0.167129
R > 50	Annual Concentration	105.4645 x R ^(-2.08)
	Hourly Concentration	176.6925 x R ^(-1.78)

Worker Adjustment Factor:

The modeled annual average air concentration should be adjusted to the air concentration that the worker is actually exposed to if the source does not operate continuously. The worker adjustment factor is calculated by following equation:

$$WAF = ([H_{res}]/[H_{source}]) \times ([D_{res}]/[D_{source}])$$

Where,

[H_{res}] = Number of hours per day the annual average residential air concentration is based on (always 24 hours)

[H_{source}] = Number of hours the source operates per day

[D_{res}] = Number of days per week the annual average residential air concentration is based on (always 7 days)

[D_{source}] = Number of days the source operates per week

B. Calculation of Non-Cancer Score

For a toxic substance, non-cancer health effects can occur via acute, 8-hour chronic, and/or annual chronic exposure. All of these non-cancer effects are used in the facility prioritization. For each substance associated with acute, 8-hour and chronic toxicity, the SCAQMD calculates separate scores using the formulas shown below.

Non-Cancer Chronic Score:

For a facility which emits pollutants with known non-cancer chronic health effects, its scores for non-cancer effects are calculated as follows:

$$TS_r^* = \sum\{(E_t) (MP_{t,r})/(REL_t)\}(RP_r), \text{ or}$$

$$TS_w^* = \sum\{(E_t) (MP_{t,w})/(REL_t)\}(WAF) (RP_w)$$

Where;

TS* = Total facility score, the sum of score for all substances with non-cancer effects

t = Toxic substance

r = Residential Receptor

w = Worker Receptor

E_t = Average hourly emissions of toxic substance, t (lbs/hr)

REL_t = Reference exposure level of toxic substance, t (µg/m³)

- MP_t = Multi-pathway adjustment factor of non-cancer chronic toxic substance, t; there are separate multi-pathway factors for residence and worker; see Table 4
 RP = Receptor proximity adjustment factor, χ/Q ($(\mu\text{g}/\text{m}^3)/(\text{lbs}/\text{year})$)
 WAF = Worker Adjustment Factor (dimensionless)

Non-Cancer 8-Hour Score:

For a facility which emits pollutants with known non-cancer 8-hour health effects, its scores for non-cancer effects are calculated as follows:

$$TS_r^* = \sum\{(E_t)/(\text{REL}_t)\}(WAF)(RP_r), \text{ or}$$

$$TS_w^* = \sum\{(E_t)/(\text{REL}_t)\}(WAF)(RP_w)$$

Where;

- TS^* = Total facility score, the sum of score for all substances with non-cancer effects
 t = Toxic substance
 r = Residential Receptor
 w = Worker Receptor
 E_t = Average annual emissions of toxic substance, t (lbs/hr)
 REL_t = Reference exposure level of toxic substance, t ($\mu\text{g}/\text{m}^3$)
 RP = Receptor proximity adjustment factor, χ/Q ($(\mu\text{g}/\text{m}^3)/(\text{lbs}/\text{year})$)
 WAF = Worker Adjustment Factor (dimensionless)

Non-Cancer Acute Score:

For a facility which emits pollutants with known non-cancer acute health effects, its score for non-cancer effects is calculated as follows:

$$TS^* = \sum\{(E_t)/(\text{REL}_t)\}(RP)$$

Where;

- TS^* = Total facility score, the sum of score for all substances with non-cancer effects
 t = Toxic substance
 E_t = Maximum hourly emissions of toxic substance, t (lbs/hr)
 REL_t = Reference exposure level of toxic substance, t ($\mu\text{g}/\text{m}^3$)
 RP = Receptor proximity adjustment factor for hourly concentration, χ/Q ($(\mu\text{g}/\text{m}^3)/(\text{lbs}/\text{year})$)

Average and Maximum Hourly Emissions:

Two different emissions rates are required for calculating the facility score for non-cancer health effects. The methodology for calculating the non-cancer score for chronic exposure requires average hourly emissions (lbs/hr) for each emitted pollutant whereas calculation of the non-cancer score for acute exposure requires maximum hourly emissions (lbs/hr) for each emitted pollutant. Average hourly emission is obtained by dividing the pollutant annual emissions (lbs/yr) by 8760 hours. Maximum hourly emissions are obtained by dividing the pollutant annual emissions (lbs/yr) by the facility's actual operating hours that are then multiplied by a maximum hourly emission adjustment factor of 1.25. Annual emissions are taken from the TACS and TACS-O Facility Summary Forms of the AER Program. As specified in Section II.A,

emissions of specified substances, which are below one-half of their corresponding degree of accuracy levels are neglected in the computation.

Reference Exposure Levels:

Reference Exposure Level (REL) is used as an indicator of potential adverse non-cancer health effects, and refers to a concentration level ($\mu\text{g}/\text{m}^3$) or dose (mg/kg-day) at which no adverse health effects are anticipated. The RELs used in these procedures are published by OEHHA. The latest REL values can be obtained from the following website:
<http://www.arb.ca.gov/toxics/healthval/healthval.htm>

Multi-Pathway Adjustment Factor:

The Multi-Pathway (MP_1) adjustment factor is used for chronic substances that may contribute to risk from exposure pathways other than inhalation. Similar to discussion in Section II.A, MP_1 adjustment factors only exist for selected chronic pollutants which can be found in Table 4. There are separate MP factors for worker and residents. For non-cancer chronic health effects compounds that only affect the inhalation pathway, the MP_1 adjustment factor is set to one (1.0).

Worker Adjustment Factor:

The modeled annual average air concentration should be adjusted to the air concentration that the worker is actually exposed to if the source does not operate continuously. This is the same adjustment factor used in the calculation of the facility cancer score discussed in Section II.A.

Receptor Proximity Adjustment Factor:

The Receptor Proximity (RP) adjustment factor is calculated based on the distances from the facility to the nearest residence and the nearest worksite. This is the same adjustment factor used in the calculation of the facility cancer score discussed in Section II.A.

C. Facility Ranking

From the computed scores for cancer and non-cancer effects, the total facility score is taken as the higher of the two scores, and serves as the basis for ranking a facility as follows:

- The facility is in the high category (Category A) if its highest score is greater than or equal to 10;
- The facility is in the intermediate category (Category B) if its highest score is greater than or equal to 1 but less than 10; and,
- The facility is in the low category (Category C) if its highest score is less than 1.

Table 3: De-Minimis Reporting Limits for Toxics

TAC Code	CAS	Substance	Degree of Accuracy (lbs/yr)
29	75070	Acetaldehyde	<u>2017</u>
30	107028	Acrolein	0.05
31	107131	Acrylonitrile	0.1
32	7664417	Ammonia	200
14	7440382	Arsenic and Compounds (inorganic)	0.01 <u>0.0015</u>
1	1332214	Asbestos	0.0001 <u>2.3E-6</u>
2	71432	Benzene	<u>21.7</u>
3	7440417	Beryllium	0.001
4	106990	Butadiene [1,3]	0.1
5	7440439	Cadmium	0.01
6	56235	Carbon tetrachloride	1
33	463581	Carbonyl sulfide	100
34	7782505	Chlorine	0.5
35	67663	Chloroform	10
13	18540299	Chromium, hexavalent (and compounds)	0.0001 <u>1E-4</u>
36	7440508	Copper	0.1
37	7631869	Crystalline silica	0.1
38	117817	Di(2-ethylhexyl) phthalate {DEHP}	<u>203.9</u>
7	1080	Chlorinated dioxins and dibenzofurans	0.000001 <u>7.3E-8</u>
	67562394	<i>1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]</i>	0.000001 <u>1E-6</u>
	55673897	<i>1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]</i>	0.000001 <u>1E-6</u>
	35822469	<i>1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM]</i>	0.000001 <u>1E-6</u>
	70648269	<i>1,2,3,4,7,8-Hexachlorodibenzofuran [POM]</i>	0.000001 <u>7.3E-7</u>
	57117449	<i>1,2,3,6,7,8-Hexachlorodibenzofuran [POM]</i>	0.000001 <u>7.3E-7</u>
	72918219	<i>1,2,3,7,8,9-Hexachlorodibenzofuran [POM]</i>	0.000001 <u>7.3E-7</u>
	60851345	<i>2,3,4,6,7,8-Hexachlorodibenzofuran [POM]</i>	0.000001 <u>7.3E-7</u>
	39227286	<i>1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]</i>	0.000001 <u>5.1E-7</u>
	57653857	<i>1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]</i>	0.000001 <u>5.1E-7</u>
	19408743	<i>1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]</i>	0.000001 <u>5.1E-7</u>
	39001020	<i>1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]</i>	0.000001 <u>1E-6</u>
	3268879	<i>1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin [POM]</i>	0.000001 <u>1E-6</u>
	57117416	<i>1,2,3,7,8-Pentachlorodibenzofuran [POM]</i>	0.000001 <u>1E-6</u>
	57117314	<i>2,3,4,7,8-Pentachlorodibenzofuran [POM]</i>	0.000001 <u>2.4E-7</u>
	40321764	<i>1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]</i>	0.000001 <u>5.1E-8</u>
51207319	<i>2,3,7,8-Tetrachlorodibenzofuran [POM]</i>	0.000001 <u>7.2E-8</u>	
1746016	<i>2,3,7,8-Tetrachlorodibenzo-p-dioxin [TCDD] [POM]</i>	0.000001 <u>5.1E-8</u>	
27	78875	1,2-Dichloropropane {Propylene dichloride}	20
28	542756	1,3-Dichloropropene	10
72	9901	Diesel exhaust particulates	0.1
39	131113	Dimethyl phthalate	50
8	123911	1,4-Dioxane	5
40	100414	Ethyl benzene	<u>20020</u>
9	106934	Ethylene dibromide {1,2-Dibromoethane}	0.5

Table 3: De-Minimis Reporting Limits for Toxics

TAC Code	CAS	Substance	Degree of Accuracy (lbs/yr)
10	107062	Ethylene dichloride {1,2-Dichloroethane}	2
11	75218	Ethylene oxide	0.5
22	1104	Fluorocarbons (chlorinated)	1
	76131	<i>Chlorinated fluorocarbon {CFC-113}</i>	1
	75434	<i>Dichlorofluoromethane {Freon 12}</i>	1
	75694	<i>Trichlorofluoromethane {Freon 11}</i>	1
12	50000	Formaldehyde	5
41	1115	Glycol ethers and their acetates	100
	111466	<i>Diethylene glycol</i>	100
	111966	<i>Diethylene glycol dimethyl ether</i>	100
	112345	<i>Diethylene glycol monobutyl ether</i>	100
	111900	<i>Diethylene glycol monoethyl ether</i>	100
	111773	<i>Diethylene glycol monomethyl ether</i>	100
	25265718	<i>Dipropylene glycol</i>	100
	34590948	<i>Dipropylene glycol monomethyl ether</i>	100
	629141	<i>Ethylene glycol diethyl ether</i>	100
	110714	<i>Ethylene glycol dimethyl ether</i>	100
	111762	<i>Ethylene glycol monobutyl ether</i>	200
	110805	<i>Ethylene glycol monoethyl ether</i>	50
	111159	<i>Ethylene glycol monoethyl ether acetate</i>	100
	109864	<i>Ethylene glycol monomethyl ether</i>	10
	110496	<i>Ethylene glycol monomethyl ether acetate</i>	200
	2807309	<i>Ethylene glycol monopropyl ether</i>	100
107982	<i>Propylene glycol monomethyl ether</i>	200	
108656	<i>Propylene glycol monomethyl ether acetate</i>	100	
112492	<i>Triethylene glycol dimethyl ether</i>	100	
42	118741	Hexachlorobenzene	0.10.096
43	608731	Hexachlorocyclohexanes	0.050.008
	319846	<i>alpha-Hexachlorocyclohexane</i>	0.10.008
	319857	<i>beta-Hexachlorocyclohexane</i>	0.10.008
	58899	<i>Lindane {gamma-Hexachlorocyclohexane}</i>	0.10.03
44	110543	Hexane	200
45	302012	Hydrazine	0.01
46	7647010	Hydrochloric acid	20
73	7664393	Hydrogen fluoride (hydrofluoric acid)	5020
47	7783064	Hydrogen sulfide	5
48	1125	Isocyanates and diisocyanates	0.05
	822060	<i>Hexamethylene-1,6-diisocyanate</i>	0.05
	624839	<i>Methyl isocyanate</i>	1
	101688	<i>Methylene diphenyl diisocyanate {MDI} [POM]</i>	0.1
	1204	<i>Toluene diisocyanates</i>	0.1
	584849	<i>Toluene-2,4-diisocyanate</i>	0.1
91087	<i>Toluene-2,6-diisocyanate</i>	0.1	
15	7439921	Lead compounds (inorganic)	0.50.36

Table 3: De-Minimis Reporting Limits for Toxics

TAC Code	CAS	Substance	Degree of Accuracy (lbs/yr)
49	7439965	Manganese	0.1
50	7487947	Mercury and mercury compounds <i>Mercuric chloride</i>	±0.9
	7439976	<i>Mercury</i>	±0.9
	593748	<i>Methyl mercury {Dimethylmercury}</i>	1
51	67561	Methanol	200
52	74873	Methyl chloride {Chloromethane}	20
23	71556	Methyl chloroform {1,1,1-Trichloroethane}	1
53	78933	Methyl ethyl ketone {2-Butanone}	200
54	108101	Methyl isobutyl ketone {Hexone}	20
55	1634044	Methyl tert-butyl ether	20096
16	75092	Methylene chloride {Dichloromethane}	5049.1
17	7440020	Nickel	0.1
57	106467	P-Dichlorobenzene {1,4-Dichlorobenzene}	54.3
19	1151	PAHs, total, w/o individ. components reported [PAH, POM]	0.2
	83329	<i>Acenaphthene [PAH, POM]</i>	1
	208968	<i>Acenaphthylene [PAH, POM]</i>	1
	120127	<i>Anthracene [PAH, POM]</i>	1
	56553	<i>Benz[a]anthracene [PAH, POM]</i>	0.50.02
	50328	<i>Benzo[a]pyrene [PAH, POM]</i>	0.050.002
	205992	<i>Benzo[b]fluoranthene [PAH, POM]</i>	0.50.02
	192972	<i>Benzo[e]pyrene [PAH, POM]</i>	0.5
	191242	<i>Benzo[g,h,i]perylene [PAH, POM]</i>	0.5
	205823	<i>Benzo[j]fluoranthene [PAH, POM]</i>	0.50.02
	207089	<i>Benzo[k]fluoranthene [PAH, POM]</i>	0.50.02
	218019	<i>Chrysene [PAH, POM]</i>	±0.2
	53703	<i>Dibenz[a,h]anthracene [PAH, POM]</i>	0.±0.005
	192654	<i>Dibenzo[a,e]pyrene [PAH, POM]</i>	0.05.0002
	189640	<i>Dibenzo[a,h]pyrene [PAH, POM]</i>	0.00±0.0002
	189559	<i>Dibenzo[a,i]pyrene [PAH, POM]</i>	0.00±0.0002
	191300	<i>Dibenzo[a,l]pyrene [PAH, POM]</i>	0.00±0.0002
	206440	<i>Fluoranthene [PAH, POM]</i>	0.5
	86737	<i>Fluorene [PAH, POM]</i>	0.5
	193395	<i>Indeno[1,2,3-cd]pyrene [PAH, POM]</i>	0.50.02
91576	<i>2-Methyl naphthalene [PAH, POM]</i>	1	
91203	<i>Naphthalene [PAH, POM]</i>	0.1	
198550	<i>Perylene [PAH, POM]</i>	0.5	
85018	<i>Phenanthrene [PAH, POM]</i>	0.5	
129000	<i>Pyrene [PAH, POM]</i>	0.5	
56	1336363	PCBs (Polychlorinated biphenyls) [POM]	0.0±0.0002
58	87865	Pentachlorophenol	±09.6
18	127184	Perchloroethylene {Tetrachloroethene}	5
59	7723140	Phosphorus	0.1

Table 3: De-Minimis Reporting Limits for Toxics

TAC Code	CAS	Substance	Degree of Accuracy (lbs/yr)
60	7803512	Phosphorous compounds <i>Phosphine</i>	0.01
	7664382	<i>Phosphoric acid</i>	50
	10025873	<i>Phosphorus oxychloride</i>	0.1
	10026138	<i>Phosphorus pentachloride</i>	0.1
	1314563	<i>Phosphorus pentoxide</i>	0.1
	7719122	<i>Phosphorus trichloride</i>	0.1
	126738	<i>Tributyl phosphate</i>	100
	78400	<i>Triethyl phosphine</i>	100
	512561	<i>Trimethyl phosphate</i>	100
	78308	<i>Triorthocresyl phosphate [POM]</i>	0.5
	115866	<i>Triphenyl phosphate [POM]</i>	100
	101020	<i>Triphenyl phosphite [POM]</i>	100
61	226368	POMS and PAH-derivatives <i>Dibenz[a,h]acridine [POM]</i>	0.50.02
	224420	<i>Dibenz[a,j]acridine [POM]</i>	0.50.02
	194592	<i>7H-Dibenzo[c,g]carbazole</i>	0.050.002
	57976	<i>7,12-Dimethylbenz[a]anthracene [PAH-Derivative, POM]</i>	0.00049E-5
	42397648	<i>1,6-Dinitropyrene [PAH-Derivative, POM]</i>	0.0012E-4
	42397659	<i>1,8-Dinitropyrene [PAH-Derivative, POM]</i>	0.050.002
	56495	<i>3-Methylcholanthrene [PAH-Derivative, POM]</i>	0.0019.8E-4
	3697243	<i>5-Methylchrysene [PAH-Derivative, POM]</i>	0.050.002
	101779	<i>4,4'-Methylenedianiline (and its dichloride) [POM]</i>	0.10.015
	602879	<i>5-Nitroacenaphthene [POM]</i>	20.17
	7496028	<i>6-Nitrochrysene [PAH-Derivative, POM]</i>	0.0012E-4
	607578	<i>2-Nitrofluorene [PAH-Derivative, POM]</i>	50.2
	5522430	<i>1-Nitropyrene [PAH-Derivative, POM]</i>	0.50.02
57835924	<i>4-Nitropyrene [POM]</i>	40.02	
62	75569	Propylene oxide	10
63	91225	Quinoline	100
64	7783075	Selenium and compounds <i>Hydrogen selenide</i>	0.1
	7782492	<i>Selenium</i>	0.5
	7446346	<i>Selenium sulfide</i>	0.1
65	1310732	Sodium hydroxide	2
66	100425	Styrene	100
24	79345	1,1,2,2-Tetrachloroethane	40.86
67	8014957	Sulfuric acid and oleum <i>Oleum</i>	1002
	7664939	<i>Sulfuric acid</i>	2
	7446719	<i>Sulfuric trioxide</i>	1002
68	108883	Toluene	200
25	79005	1,1,2-Trichloroethane {Vinyl trichloride}	43
20	79016	Trichloroethylene	20

Table 3: De-Minimis Reporting Limits for Toxics

TAC Code	CAS	Substance	Degree of Accuracy (lbs/yr)
26	95636	1,2,4-Trimethylbenzene	5
69	51796	Urethane {Ethyl carbamate}	0.1
21	75014	Vinyl chloride	0.5
70	1330207	Xylenes	200
	108383	<i>m</i> -Xylene	200
	95476	<i>o</i> -Xylene	200
	106423	<i>p</i> -Xylene	200
71	75456	Chlorodifluoromethane {Freon 22}	200

Table 4 Multi-pathway Adjustment Factor

CAS	Substance	Cancer Risk		Chronic Hazard	
		Residential	Worker	Residential	Worker
1080	Polychlorinated Dibenzo-p-Dioxins (PCDD) (as 2,3,7,8-Eqiv)	18.187	7.584	154.968	6.726
1151	Polycyclic Aromatic Hydrocarbon (PAHs)	23.116	6.619	1.000	1.000
50328	Benzo[a]pyrene	23.116	6.619	1.000	1.000
53703	Dibenz[a,h]anthracene	7.989	2.485	1.000	1.000
56495	Methylcholanthrene, 3-	7.989	2.485	1.000	1.000
56553	Benz[a]anthracene	23.116	6.619	1.000	1.000
57976	Dimethylbenz[a]anthracene, 7,12-	7.989	2.485	1.000	1.000
58899	Hexachlorocyclohexane, gamma- (lindane)	5.387	1.252	1.000	1.000
101779	Methylene dianiline, 4,4'- (and its dichloride)	7.220	2.472	1.000	1.000
117817	Bis(2-ethylhexyl)phthalate (DEHP)	5.221	1.048	1.000	1.000
189559	Dibenzo[a,i]pyrene	23.116	6.619	1.000	1.000
189640	Dibenzo[a,h]pyrene	23.116	6.619	1.000	1.000
191300	Dibenzo[a,l]pyrene	23.116	6.619	1.000	1.000
192654	Dibenzo[a,e]pyrene	23.116	6.619	1.000	1.000
193395	Indeno(1,2,3-C,D)pyrene	23.116	6.619	1.000	1.000
194592	Dibenzo[c,g]carbazole, 7H-	23.116	6.619	1.000	1.000
205823	Benzo[j]fluoranthene	23.116	6.619	1.000	1.000
205992	Benzo[b]fluoranthene	23.116	6.619	1.000	1.000
207089	Benzo[k]fluoranthene	23.116	6.619	1.000	1.000
218019	Chrysene	23.116	6.619	1.000	1.000
224420	Dibenz[a,j]acridine	23.116	6.619	1.000	1.000
226368	Dibenz[a,h,j]acridine	23.116	6.619	1.000	1.000
319846	alpha-Hexachlorocyclohexane	5.387	1.252	1.000	1.000
319857	beta-Hexachlorocyclohexane	5.387	1.252	1.000	1.000
602879	Nitroacenaphthene, 5-	7.989	2.485	1.000	1.000
607578	Nitrofluorene, 2-	23.116	6.619	1.000	1.000
608731	Hexachlorocyclohexane (technical grade)	5.387	1.252	1.000	1.000
1336363	Polychlorinated biphenyls (PCBs)	18.939	13.118	1.000	1.000
1746016	Tetrachlorodibenzo-p-dioxin, 2,3,7,8-	25.719	7.584	307.600	6.726
3268879	Octachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8,9-	25.719	7.585	302.952	6.640
3697243	Methylchrysene, 5-	23.116	6.619	1.000	1.000
5522430	Nitropyrene, 1-	23.116	6.619	1.000	1.000
7439921	Lead and lead compounds	11.415	5.826	1.000	1.000
7439976	Mercury and mercury compounds (inorganic)	1.000	1.000	3.861	2.109
7440382	Arsenic and arsenic compounds (inorganic)	9.712	4.519	88.029	28.374
7440439	Cadmium and cadmium compounds	1.000	1.000	1.976	1.201
7446346	Selenium sulfide	1.000	1.000	195.576	23.710
7487947	Mercuric chloride	1.000	1.000	3.861	2.109
7496028	Nitrochrysene, 6-	23.116	6.619	1.000	1.000
7664393	Hydrogen fluoride (hydrofluoric acid)	1.000	1.000	6.064	2.987

Table 4 Multi-pathway Adjustment Factor

CAS	SUBSTANCE	Cancer Risk		Chronic Hazard	
		Residential	Worker	Residential	Worker
7782492	Selenium and selenium compounds, other than hydrogen selenide	1.000	1.000	195.576	23.710
18540299	Chromium, hexavalent	1.597	1.023	2.436	1.000
19408743	Hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9-	25.719	7.584	307.600	6.726
35822469	Heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8-	25.719	7.584	307.600	6.726
39001020	Octachlorodibenzofuran, 1,2,3,4,6,7,8,9-	18.187	7.585	152.633	6.640
39227286	Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	25.719	7.584	307.600	6.726
40321764	Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	25.719	7.584	307.600	6.726
42397648	Dinitropyrene, 1,6-	23.116	6.619	1.000	1.000
42397659	Dinitropyrene, 1,8-	23.116	6.619	1.000	1.000
51207319	Tetrachlorodibenzofuran, 2,3,7,8-	18.187	7.584	154.968	6.726
55673897	Heptachlorodibenzofuran, 1,2,3,4,7,8,9-	18.187	7.584	154.968	6.726
57117314	Pentachlorodibenzofuran, 2,3,4,7,8-	18.187	7.585	152.633	6.640
57117416	Pentachlorodibenzofuran, 1,2,3,7,8-	18.187	7.585	152.633	6.640
57117449	Hexachlorodibenzofuran, 1,2,3,6,7,8-	18.187	7.584	154.968	6.726
57653857	Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-	25.719	7.584	307.600	6.726
57835924	Nitropyrene, 4-	23.116	6.619	1.000	1.000
60851345	Hexachlorodibenzofuran, 2,3,4,6,7,8-	18.187	7.584	154.968	6.726
67562394	Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	18.187	7.584	154.968	6.726
70648269	Hexachlorodibenzofuran, 1,2,3,4,7,8-	18.187	7.584	154.968	6.726
72918219	Hexachlorodibenzofuran, 1,2,3,7,8,9-	18.187	7.584	154.968	6.726

III. REFERENCES

OEHHA, 2015. **Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment.** Prepared by Office of Environmental Health Hazard Assessment OEHHA, February 2015.

OEHHA, 2015. **Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values.** Prepared by Office of Environmental Health Hazard Assessment OEHHA. <http://www.arb.ca.gov/toxics/healthval/contable.pdf>.

CAPCOA, 2015 (*In Preparation*). **Air Toxics “Hot Spots” Program - Facility Prioritization Guidelines.** Prepared by the AB2588 Risk Assessment Committee of the California Air Pollution Control Officers Association, 2015.

SCAQMD, 2015. **DRAFT Risk Assessment Procedures for Rules 1401 and 212.** Prepared by South Coast Air Quality Management District, www.AQMD.gov/permit/RiskAssessment.html.

SCAQMD, 2015. **Proposed Amended Rule 1401 - New Source Review of Toxic Air Contaminants.** Prepared by South Coast Air Quality Management District.

SCAQMD, 2015. **Proposed Amended Rule 212 - Standards For Approving Permits and Issuing Public Notice.** Prepared by South Coast Air Quality Management District.

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 29

PROPOSAL: Amend Rule 1148.1 – Oil and Gas Production Wells

(Staff is recommending that the public hearing on this item be continued to the July 10, 2015 Board Meeting.)

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BOARD MEETING DATE: June 5, 2015

AGENDA NO. 30

PROPOSAL: Amend Rule 1148.2 – Notification and Reporting Requirements for
Oil and Gas Wells and Chemical Suppliers

*(Staff is recommending that the public hearing on this item be continued to the
July 10, 2015 Board Meeting.)*

BOARD MEETING DATE: June 5, 2015

AGENDA NO. 31

PROPOSAL: Approve Three-Year Labor Agreement with South Coast Professional Employees Association

SYNOPSIS: SCAQMD management and representatives of the South Coast Professional Employees Association, representing the Professional bargaining unit, have reached agreement on a new three-year labor agreement. The bargaining unit members have ratified the agreement, and this action is to present the proposed agreement to the Board for consideration and approval.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:

Authorize the Executive Officer to sign the ratified three-year agreement for a successor 2015-2017 South Coast Professional Employees Association (SCPEA) MOU, representing the Professional bargaining unit employees. Changes to the 2015-2017 SCPEA MOU are shown in Attachment A. All other provisions remain unchanged from the previous 2011-14 MOU.

Barry R. Wallerstein, D.Env.
Executive Officer

WJ:tc

Background

Management has met and conferred with the representatives for the South Coast Professional Employees Association (SCPEA). The management negotiations team presented a Last, Best & Final Offer to SCPEA, and the SCPEA bargaining unit members have ratified the proposed agreement under the same terms as granted to the two other bargaining groups and unrepresented employees. This action is to present the proposed amendments to the 2015-2017 SCPEA MOU to the Board for final approval. The proposed SCPEA MOU changes are shown in Attachment A. All other provisions in the MOU remain the same.

Proposal

The proposed changes for a successor SCPEA MOU include a three-year term, from January 1, 2015 to December 31, 2017; annual salary increases 2%, 1.5%, and 1.5% effective the pay period encompassing January 1st of each year of the agreement; employee payment of the employee's share of the retirement contribution with offsetting increases to salary; and a reopener of the MOU in October 2015 and 2016 to discuss possible increases in health insurance premiums.

Resource Impacts

There is sufficient funding available for the first six months of the three-year agreement in the FY 2014-15 Budget. Funding for FY 2015-16 is available in the Board approved FY 2015-16 Budget. Funding for the remaining term of the labor agreement will be requested in future fiscal years' budgets.

Attachment

A - SCPEA MOU Changes

ATTACHMENT A

**SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT**

**MEMORANDUM
OF
UNDERSTANDING**

PROFESSIONAL UNIT

**July 1, 2011—December 31, 2014
January 1, 2015 – December 31, 2017**

ARTICLE 3

SALARIES

Section 1. Salaries during the term of this contract will be those in effect as of ~~July 14, 2008~~ the start of the pay period encompassing January 1st of 2015, 2016, and 2017, as listed in Appendix A.

ARTICLE 17

GROUP INSURANCE
(Health, Dental, Life and
Vision Insurance)

Section 7. No earlier than October 1, 201~~3~~5 and 2016, the parties agree to a reopener of Article 17, Section 2 of the MOU for purposes of discussing potential health insurance increases effective on or after January 1, 201~~4~~6 and 2017, respectively.

ARTICLE 21

RETIREMENT

Section 1.5

Effective the start of the pay period encompassing July 1, 2015, SCPEA bargaining unit members will contribute an additional 1.08% towards the employee retirement contribution rate and will receive a 1.08% increase to base salary. Effective the start of the pay period encompassing July 1, 2016, SCPEA bargaining unit members will contribute an additional 1.08% and will receive a 1.08% increase to base salary. Effective the start of the pay period encompassing July 1, 2017, SCPEA bargaining unit members will contribute an additional 1.08% and will receive a 1.08% increase to base salary. SCPEA bargaining unit members who have 30 years or more of retirement service credit with SBCERA, were hired on or after July 1, 2012, and those employees hired on or after the implementation of PEPRA are not eligible to receive these increases to base salary and are not required to make the additional contribution described above. At the time a SCPEA bargaining unit member reaches 30 years of SBCERA service credit, the salary increases to base salary previously received pursuant to this Section 1.5 shall be terminated and the employee's base salary will be adjusted accordingly.

ARTICLE 42

RENEGOTIATION

Section 1. The parties shall commence renegotiations under the terms of this Agreement, no later than October 1, 201~~4~~7, except as provided for in Section 2 of this Article.

ARTICLE 44

TERM OF MOU

Section 1. The term of this MOU shall commence on ~~July~~ January 1, 201~~4~~5, and shall continue for the period through December 31, 201~~4~~7.

ARTICLE 48

TELECOMMUTING
SUBCOMMITTEE

A joint labor-management telecommuting subcommittee shall be established within thirty (30) calendar days of the of the Governing Board's approval of this new article. The telecommuting subcommittee will consist of one (1) member appointed by each of the SCAQMD bargaining units as well as three (3) management representatives appointed by the Executive Officer or designee. The subcommittee will establish the eligibility criteria for participation and the criteria used to measure the effectiveness of the program. These criteria will be presented as a recommendation to the Executive Officer for consideration as part of a SCAQMD policy and program for telecommuting.

ARTICLE 489

RATIFICATION AND
EXECUTION

Section 1. SCAQMD and the Union acknowledge that this MOU shall not be in full force and effect until ratified by the Union and adopted by the SCAQMD Board. Subject to the foregoing, this MOU is hereby executed by the authorized representatives of SCAQMD and the Union and entered into this _____ day of _____, 20135.

APPENDIX A
PROFESSIONAL BARGAINING UNIT
EFFECTIVE JULY 14, 2008 WITH PAY PERIOD ENCOMPASSING JANUARY 1, 2015

		Approximate Annual 1 st Step		Approximate Annual 5 th Step	
AQ Analysis & Compliance Supv.	62F	<u>93,215</u>	<u>95,079</u>	<u>115,458</u>	<u>117,767</u>
AQ Chemist	53D	<u>72,738</u>	<u>74,193</u>	<u>90,083</u>	<u>91,885</u>
AQ Engineer I	53D	<u>72,738</u>	<u>74,193</u>	<u>90,083</u>	<u>91,885</u>
AQ Engineer II	55E	<u>77,039</u>	<u>78,580</u>	<u>95,437</u>	<u>97,346</u>
AQ Specialist	55E	<u>77,039</u>	<u>78,580</u>	<u>95,437</u>	<u>97,346</u>
Asst. AQ Chemist	46F	<u>60,555</u>	<u>61,766</u>	<u>74,991</u>	<u>76,491</u>
Asst. AQ Engineer	49E	<u>65,305</u>	<u>66,611</u>	<u>80,912</u>	<u>82,530</u>
Asst. AQ Specialist	49E	<u>65,305</u>	<u>66,611</u>	<u>80,912</u>	<u>82,530</u>
Meteorologist	54K	<u>75,899</u>	<u>77,417</u>	<u>94,012</u>	<u>95,892</u>
Principal AQ Chemist	62F	<u>93,215</u>	<u>95,079</u>	<u>115,458</u>	<u>117,767</u>
Program Supervisor	62F	<u>93,215</u>	<u>95,079</u>	<u>115,458</u>	<u>117,767</u>
Public Affairs Specialist	44H	<u>57,359</u>	<u>58,506</u>	<u>71,115</u>	<u>72,537</u>
Sr. AQ Chemist	56D	<u>78,975</u>	<u>80,555</u>	<u>97,829</u>	<u>99,786</u>
Sr. AQ Engineer	58D	<u>84,742</u>	<u>86,437</u>	<u>104,981</u>	<u>107,081</u>
Sr. Meteorologist	58B	<u>82,905</u>	<u>84,563</u>	<u>102,699</u>	<u>104,753</u>
Sr. Staff Specialist	58B	<u>82,905</u>	<u>84,563</u>	<u>102,699</u>	<u>104,753</u>
Sr. Transportation Specialist	58B	<u>82,905</u>	<u>84,563</u>	<u>102,699</u>	<u>104,753</u>
Staff Specialist	55E	<u>77,039</u>	<u>78,580</u>	<u>95,437</u>	<u>97,346</u>
Supv. AQ Engineer	62F	<u>93,215</u>	<u>95,079</u>	<u>115,458</u>	<u>117,767</u>
Tech. Info Center Librarian	46G	<u>60,435</u>	<u>61,644</u>	<u>74,874</u>	<u>76,371</u>

APPENDIX A
PROFESSIONAL BARGAINING UNIT
EFFECTIVE WITH PAY PERIOD ENCOMPASSING JANUARY 1, 2016

		<u>Approximate</u> <u>Annual</u> <u>1st Step</u>	<u>Approximate</u> <u>Annual</u> <u>5th Step</u>
<u>AQ Analysis & Compliance Supv.</u>	<u>62F</u>	<u>96,505</u>	<u>119,534</u>
<u>AQ Chemist</u>	<u>53D</u>	<u>75,306</u>	<u>93,263</u>
<u>AQ Engineer I</u>	<u>53D</u>	<u>75,306</u>	<u>93,263</u>
<u>AQ Engineer II</u>	<u>55E</u>	<u>79,758</u>	<u>98,806</u>
<u>AQ Specialist</u>	<u>55E</u>	<u>79,758</u>	<u>98,806</u>
<u>Asst. AQ Chemist</u>	<u>46F</u>	<u>62,693</u>	<u>77,638</u>
<u>Asst. AQ Engineer</u>	<u>49E</u>	<u>67,610</u>	<u>83,768</u>
<u>Asst. AQ Specialist</u>	<u>49E</u>	<u>67,610</u>	<u>83,768</u>
<u>Meteorologist</u>	<u>54K</u>	<u>78,578</u>	<u>97,331</u>
<u>Principal AQ Chemist</u>	<u>62F</u>	<u>96,505</u>	<u>119,534</u>
<u>Program Supervisor</u>	<u>62F</u>	<u>96,505</u>	<u>119,534</u>
<u>Public Affairs Specialist</u>	<u>44H</u>	<u>59,384</u>	<u>73,625</u>
<u>Sr. AQ Chemist</u>	<u>56D</u>	<u>81,763</u>	<u>101,282</u>
<u>Sr. AQ Engineer</u>	<u>58D</u>	<u>87,733</u>	<u>108,687</u>
<u>Sr. Meteorologist</u>	<u>58B</u>	<u>85,832</u>	<u>106,324</u>
<u>Sr. Staff Specialist</u>	<u>58B</u>	<u>85,832</u>	<u>106,324</u>
<u>Sr. Transportation Specialist</u>	<u>58B</u>	<u>85,832</u>	<u>106,324</u>
<u>Staff Specialist</u>	<u>55E</u>	<u>79,758</u>	<u>98,806</u>
<u>Supv. AQ Engineer</u>	<u>62F</u>	<u>96,505</u>	<u>119,534</u>
<u>Tech. Info Center Librarian</u>	<u>46G</u>	<u>62,568</u>	<u>77,517</u>

APPENDIX A
PROFESSIONAL BARGAINING UNIT
EFFECTIVE WITH PAY PERIOD ENCOMPASSING JANUARY 1, 2017

		<u>Approximate</u> <u>Annual</u> <u>1st Step</u>	<u>Approximate</u> <u>Annual</u> <u>5th Step</u>
<u>AQ Analysis & Compliance Supv.</u>	<u>62F</u>	<u>97,953</u>	<u>121,327</u>
<u>AQ Chemist</u>	<u>53D</u>	<u>76,436</u>	<u>94,662</u>
<u>AQ Engineer I</u>	<u>53D</u>	<u>76,436</u>	<u>94,662</u>
<u>AQ Engineer II</u>	<u>55E</u>	<u>80,955</u>	<u>100,288</u>
<u>AQ Specialist</u>	<u>55E</u>	<u>80,955</u>	<u>100,288</u>
<u>Asst. AQ Chemist</u>	<u>46F</u>	<u>63,633</u>	<u>78,803</u>
<u>Asst. AQ Engineer</u>	<u>49E</u>	<u>68,624</u>	<u>85,025</u>
<u>Asst. AQ Specialist</u>	<u>49E</u>	<u>68,624</u>	<u>85,025</u>
<u>Meteorologist</u>	<u>54K</u>	<u>79,757</u>	<u>98,791</u>
<u>Principal AQ Chemist</u>	<u>62F</u>	<u>97,953</u>	<u>121,327</u>
<u>Program Supervisor</u>	<u>62F</u>	<u>97,953</u>	<u>121,327</u>
<u>Public Affairs Specialist</u>	<u>44H</u>	<u>60,275</u>	<u>74,730</u>
<u>Sr. AQ Chemist</u>	<u>56D</u>	<u>82,989</u>	<u>102,802</u>
<u>Sr. AQ Engineer</u>	<u>58D</u>	<u>89,049</u>	<u>110,317</u>
<u>Sr. Meteorologist</u>	<u>58B</u>	<u>87,119</u>	<u>107,919</u>
<u>Sr. Staff Specialist</u>	<u>58B</u>	<u>87,119</u>	<u>107,919</u>
<u>Sr. Transportation Specialist</u>	<u>58B</u>	<u>87,119</u>	<u>107,919</u>
<u>Staff Specialist</u>	<u>55E</u>	<u>80,955</u>	<u>100,288</u>
<u>Supv. AQ Engineer</u>	<u>62F</u>	<u>97,953</u>	<u>121,327</u>
<u>Tech. Info Center Librarian</u>	<u>46G</u>	<u>63,507</u>	<u>78,680</u>