BOARD MEETING DATE: December 5, 2025 AGENDA NO. 31

PROPOSAL: Receive and File 2024 Annual Report on AB 2588 Program and Approve Updates to Facility Prioritization Procedure for the AB 2588 Program, Public Notification Procedures, and AB 2588 and Rule 1402 Supplemental Guidelines

SYNOPSIS: The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) requires local air pollution control districts to prepare an annual report and present it at a Public Hearing. This report provides information regarding South Coast AQMD's implementation of AB 2588 through Rule 1402 – Control of Toxic Air Contaminants from Existing Sources. This annual update describes the various activities including quadrennial emissions reporting and prioritization, preparation and review of Air Toxics Inventory Reports, Health Risk Assessments, Voluntary Risk Reduction Plans, Risk Reduction Plans, and additional South Coast AQMD activities related to air toxics. Staff is also seeking approval of updates to the Facility Prioritization Procedure for the AB 2588 Program, Public Notification Procedures, and the AB 2588 and Rule 1402 Supplemental Guidelines to provide additional information and clarification. These actions are to receive and file the 2024 Annual Report on the AB 2588 Air Toxics "Hot Spots" Program and approve revisions to the Facility Prioritization Procedure for the AB 2588 Program, Public Notification Procedures, and AB 2588 and Rule 1402 Supplemental Guidelines

COMMITTEE: Reviewed: Stationary Source, October 17, 2025

RECOMMENDED ACTIONS:

1. Receive and File:
    a. 2024 Annual Report on the AB 2588 Program;

2. Approve updates to the following guidance documents:
    a. Facility Prioritization Procedure for the AB 2588 Program;
    b. Public Notification Procedures; and
    c. AB 2588 and Rule 1402 Supplemental Guidelines.

Wayne Nastri
Executive Officer

SR:SE:VM

Introduction

The California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) enacted in 1987, is a statewide program implemented by local air districts to address health risks from air emissions associated with existing facilities. One of the main goals of AB 2588 is to provide the public with information regarding potential health effects from toxic air contaminants emitted from existing facilities, and to develop plans to reduce associated risks above specific thresholds. South Coast AQMD implements AB 2588 requirements through Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, which includes additional requirements beyond state law, including a program to encourage facilities to voluntarily reduce risk and expedited timelines for high-risk facilities to reduce health risks.

The AB 2588 Program as implemented under Rule 1402 is only one part of South Coast AQMD's comprehensive program for regulating air toxics. Other elements include South Coast AQMD's permitting program and Rule 1401 – New Source Review of Toxic Air Contaminants requirements, rules adopted to address air toxic emissions from certain equipment and processes, enforcement efforts to ensure facilities comply with all applicable air quality requirements, and MATES, which is a measurement and modeling study of regional toxic air contaminant levels and their risks throughout the region. South Coast AQMD has also performed ambient air monitoring in many neighborhoods. This monitoring along with other monitoring campaigns has helped to identify facilities with elevated health risks. Risk reductions at facilities with elevated health risks have occurred through Rule 1402 Risk Reduction Plans (RRPs), voluntary measures, enforcement actions, Orders for Abatement, and rule development.

As required under the California Health and Safety Code Section 44363, staff has prepared the 2024 Annual Report on the AB 2588 Program (2024 Annual Report), which summarizes South Coast AQMD's air toxics program activities in 2024, including AB 2588 activities and other air toxic related programs. The 2024 Annual Report will be available on South Coast AQMD's website and distributed to county boards of supervisors, city councils, and local health officers.

AB 2588 Program
The AB 2588 Program, combined with implementation of Rule 1402, includes requirements for toxic emissions inventories, categorization and prioritization of facilities, and review and approval of detailed Air Toxic Inventory Reports (ATIRs), HRAs, public notifications, Voluntary Risk Reduction Plans (VRRPs) and RRPs. From the beginning of the AB 2588 Program in 1987 through the end of 2024, staff has audited emissions data and prioritized risk from hundreds of facilities on a quadrennial basis, and reviewed and approved 365 HRAs from 345 facilities. Of these, 66 facilities were required to perform public notification activities, and 33 facilities were required to implement risk reduction measures.

Rule 1402 includes provisions to designate a facility as a Potentially High Risk Level (PHRL) facility if South Coast AQMD staff has emissions data, ambient data, or data from a previously approved HRA demonstrating the facility may pose a significant health risk to the community. PHRL facilities must implement Early Action Reduction Plans to immediately reduce the health risk and submit ATIRs, HRAs and RRPs under expedited timelines. Prior to 2024, three facilities in Paramount (Anaplex Corporation, Aerocraft, Inc. and Lubeco, Inc.), one facility in Garden Grove (Coastline High Performance Coatings), one facility in Vernon (Sterigenics) and another facility in Ontario (Sterigenics), have been designated as PHRL facilities under Rule 1402.

2024 Accomplishments
The 2024 Annual Report summarizes staff activities in 2024 for the AB 2588 Program, implementation of Rule 1402, air toxic monitoring performed in conjunction with the AB 2588 Program and Rule 1402, and future activities.

Summary of Activities for Specific AB 2588 Program Facilities
Of the 451 facilities in South Coast AQMD's core AB 2588 Program (larger facilities), 118 facilities were required to submit quadrennial air toxic emissions reports in 2024 for reporting year 2023. Staff conducted audits for the 118 facilities with 14 of those facilities being categorized as high priority. Additionally, the facilities listed in Table 1 were subject to AB 2588 review in 2024. These include facilities that were notified in 2024 or prior calendar years and are in various stages of review in 2024. Staff reviewed seven Initial Information submittals for ATIRs, ten ATIRs (3 of those leading to revised priority scores), eleven HRAs, two RRPs, one VRRP, and one VRRP progress report, and conducted public notification for two facilities. The attached Annual Report provides detailed information regarding the AB 2588 Program activities at each facility.

Table 1 – AB 2588 Facilities Under Review in 2024

Facility Name	Facility ID	County
Ag-Fume Services Inc	106897	Los Angeles
Ag-Fume Services, Inc	205376	Los Angeles
All American Asphalt	114264	Los Angeles
All American Asphalt	148146	Riverside
Arconic Global Fasteners & Rings Inc	134943	Los Angeles
Bowman Plating Co Inc	18989	Los Angeles
California Steel Industries Inc	46268	San Bernardino
Carlton Forge Works	22911	Los Angeles
Carpenter Co	7730	Riverside
Coastline Metal Finishing Inc	175222	Orange
Demenno-Kerdoon Dba World Oil Recycling	800037	Los Angeles
Embee Processing	186519	Orange
Flare Group Dba Aviation Equip Process	164581	Orange
Harbor Fumigation Inc	100145	Los Angeles
La City, Bureau of Street Maintenance	116480	Los Angeles
La Co. Sanitation Dist	800236	Los Angeles
Long Beach City, Serrf Project	44577	Los Angeles
Los Angeles By-Products	60384	Los Angeles
Pac Foundries-Industry	126544	Los Angeles
Pacific Clay Products Inc	17953	Riverside
R J. Noble Company	19167	Orange
Schlosser Forge Company	15504	San Bernardino
SFPP, L.P.	800129	San Bernardino
Snow Summit, LLC.	185352	San Bernardino
So Cal Holding, LLC	169754	Orange
Southern California Edison	160437	San Bernardino
SPF Terminals, Inc	205451	Los Angeles
Sterigenics US, Inc	126191, 126197	Los Angeles
Sterigenics US, LLC	126060	San Bernardino
Sully Miller Contracting Co.	4988	Los Angeles
Tesoro Refining and Marketing Co, LLC	800436, 174655, 174694, 174703	Los Angeles
The Gas Co./ Sempra Energy	11119	Los Angeles

Program Impacts from New or Revised Health Risk Values for Air Toxics

OEHHA develops guidelines for conducting HRAs under the AB 2588 Program. In implementing this requirement, also OEHHA develops new, revised, or proposed risk factors for toxic air contaminants. OEHHA did not adopt or revise risk values for any toxic air contaminants in 2024.

Staff continues to monitor OEHHA's progress in adopting new health values as well as

monitoring developments in revising health values for new or existing substances that are listed in Appendix A of the Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program. Further, permitting impacts will be evaluated in an amendment to Rule 1401 – New Source Review of Toxic Air Contaminants.

Air Toxics Screening Assessment (AirToxScreen)
AirToxScreen is U.S. EPA's screening tool to provide state, local and tribal air agencies information, and to help identify which pollutants, emission sources and places that may require further analysis to better understand any possible risks to public health from toxic air contaminants. AirToxScreen can also provide communities with information regarding health risks from toxic air contaminants.

In 2024, South Coast AQMD staff conducted a review of the 2022 AirToxScreen point source inventory and preliminary analysis and provided necessary corrections. The 2022 AirToxScreen analysis is based on U.S. EPA's 2022 National Emissions Inventory, which is updated to address any corrections identified by South Coast AQMD staff. An accurate AirToxScreen inventory is important since South Coast AQMD utilizes the inventories to further refine and prioritize pollutants and emission source types, identify locations for further study, establish a starting point for local assessments, guide community efforts, and inform monitoring programs for reducing toxic emissions.

Ethylene Oxide (EtO) NESHAP Rulemaking
Amendments to the Miscellaneous Organic Chemical Manufacturing NESHAP were proposed by U.S. EPA in December 2019 and made final in August 2020. Amendments to the NESHAP for EtO Commercial Sterilizers was finalized on April 4, 2024. This amendment along with the South Coast AQMD Rule 1405, which addresses EtO from commercial sterilizers, will further reduce EtO emissions from applicable AB 2588 facilities and nearby health risks.

South Coast AQMD Commodity Fumigation Facility Activities
Methyl Bromide (MeBr) is a colorless, odorless pesticide commonly used to fumigate agricultural commodities to meet international import and export standards. In 2023, the CARB initiated ambient air monitoring near Hudson Elementary School in West Long Beach and detected elevated MeBr concentrations. In response, CARB formed an interagency working group in 2024 to evaluate potential health risks and identify and mitigate emission sources. In October 2024, South Coast AQMD launched an investigation near facilities within the South Coast Air Basin known to emit MeBr. Two facilities near the monitoring site were identified for further review along with three other facilities in South Los Angeles County, prompting on-site inspections by South Coast AQMD staff to assess equipment and operational practices. To foster transparency and community engagement, CARB hosted a public meeting on January 30, 2025, and South Coast AQMD hosted a follow-up public meeting on March 20, 2025, to share updates, respond to questions, and address concerns about MeBr emissions.

In parallel with these efforts, South Coast AQMD began issuing notification letters to all commodity fumigation facilities in the South Coast AQMD jurisdiction in November 2024, ensuring their participation in the AB 2588 program and informing them of reporting requirements outlined in the Emissions Inventory Criteria and Guidelines (EICG). Facilities with usage levels high enough to potentially cause offsite health impacts were required to submit an ATIR, which will support an HRA and potentially mitigation with an RRP, if deemed necessary.

Future Activities

In addition to routine AB 2588 Program implementation activities, staff plans to:

- Update the list of toxic air contaminants in the Facility Prioritization Procedures for the AB 2588 Program;
- Collaborate with CARB to develop guidance and outreach material supporting the implementation of CARB's Emission Inventory Criteria and Guidelines regulation. This effort will also focus on aligning reporting requirements under South Coast AQMD's AB 2588 program and CARB's Emission Inventory Criteria and Guidelines with other regulatory programs, specifically CARB's Criteria and Toxics Reporting regulation and South Coast AQMD's Annual Emissions Reporting program, to ensure a streamlined and efficient reporting process;
- Continue coordination with U.S. EPA and CARB staff to ensure AirToxScreen incorporates the best available local emissions data;
- Continue working with CARB to develop or update HRA guidance for Industry-wide Sources (i.e., autobody shops, diesel internal combustion engines);
- Continue monitoring risk reduction progress for ethylene oxide sterilization facilities;
- Track revisions by OEHHA on health risk values, including potential revisions to the cancer risk from EtO;
- Continue ambient air monitoring near large sterilization facilities; and
- Continue addressing commodity fumigation facilities through the AB2588 process.

Updates to the Facility Prioritization Procedure, Public Notification Procedures, and the AB 2588 & Rule 1402 Supplemental Guidelines

AB 2588 staff frequently reviews these guidance documents to ensure they contain updated information and additional clarification on the requirements and procedures of the AB 2588 Program.

<u>Facility Prioritization Procedures</u>

Staff is proposing to update the Facility Prioritization Procedure to update the annual and hourly receptor proximity adjustment factors using the most current meteorological data as well as updating the multipathway factors used for prioritization. This follows a long history of periodically updating the Facility Prioritization Procedure with Board approval to align with the best available science.

<u>Public Notification Procedures</u>

Staff is proposing to update the Public Notification Procedures to enhance clarity and readability throughout the document. The revisions also introduce more precise language to define trade secrets, affirm the agency's discretion to implement alternative public noticing when fewer stakeholders are impacted, eliminate hardcopy submission requirements, and introduce flexibility for virtual meeting formats.

AB 2588 & Rule 1402 Supplemental Guidelines

To ensure that the AB2588 and Rule 1402 Supplemental Guidelines documents remain current and clearly outline program requirements and procedures, AB 2588 regularly reviews and updates its guidance. Staff proposes additional updates to improve the implementation of the AB 2588 Program and Rule 1402. Key revisions include distinguishing OEHHA Tier 1 HRAs from South Coast AQMD Tier 1 screening analyses, incorporating risk assessment guidelines into the HRA Review Checklist, and updating links and references throughout the document.

Attachments

1. Annual Report on AB 2588 Air Toxics "Hot Spots" Program
2. Facility Prioritization Procedure for the AB 2588 Program
3. Public Notification Procedures
4. AB 2588 and Rule 1402 Supplemental Guidelines
5. Board Presentation

Attachment 1

South Coast Air Quality Management District

2024 Annual Report on AB 2588 Air Toxics "Hot Spots" Program

December 2025

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Annual Report on AB 2588 Air Toxics "Hot Spots" Program

December 2025

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Table of Contents

Executive Summary **1**

1. California's Air Toxics "Hot Spots" Program **1-1**

Background 1-1

Emissions Reporting 1-1

Prioritization 1-1

Health Risk Assessments 1-2

Hazard Identification 1-2

Exposure Assessment 1-2

Dose Response 1-2

Risk-Characterization 1-3

Public Notification 1-3

Risk Reduction Plans 1-3

Industrywide Sources 1-3

Periodic Updates to the AB 2588 Guidelines 1-4

2. South Coast AQMD Air Toxics "Hot Spots" Program **2-1**

Background 2-1

Program Implementation Elements 2-2

Progress in Implementation the AB 2588 Program 2-7

Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2024 2-8

3. South Coast AQMD AB 2588 Implementation Tools **3-1**

Background 3-1

South Coast AQMD Guidelines and Procedures for AB 2588 3-1

Consolidated Emissions Reporting 3-1

Prioritization Procedures 3-1

Hotspots Analysis and Reporting Program (HARP) 3-1

General Supplemental Guidelines 3-2

Voluntary Risk Reduction Program 3-2

Air Dispersion Modeling 3-2

Modeling Guidance 3-2

Meteorological Data 3-3

Other Implementation Tools and Programs 3-3

Rule 1401 Guidance 3-3
Web Tools 3-3
Small Business Assistance 3-4
Public Assistance 3-4
Rules Adopted or Amended in 2024 3-4
State Level Air Toxics Related Activities 3-5
OEHHA Updates 3-5
Ambient Air Monitoring 3-5
Assembly Bill 617 (AB 617) 3-5
Federal Toxics Activities 3-6
Air Toxics Screening Assessment (AirToxScreen) 3-6
Ethylene Oxide (NESHAP Rulemaking) 3-6
South Coast AQMD EtO Activities 3-7
Ethylene Oxide (EtO) Emissions Investigation 3-7
Initial Inspections 3-8
Air Monitoring 3-8
Enforcement Action 3-16
AB 2588 Air Toxics Hot Spot Program Efforts for EtO Facilities 3-17
Engineering and Permitting Activity 3-19
Rule 1405 Development 3-20
Next Steps 3-20
South Coast AQMD Commodity Fumigation Facility Activities 3-20
4. Future Activities 4-1
AB 2588 Activities 4-1
Other Activities 4-1
Rulemaking 4-1
Appendix A – Description of Active AB 2588 Related Projects A-1
Appendix B – Health Risks from Facilities with an Approved HRA B-1
Appendix C – Approved Risk Reduction Plans and Voluntary Risk Reduction Plans C-1
Facilities with an Approved Rule 1402(f) Risk Reduction Plan C-1
Facilities with an Approved Rule 1402(h) Voluntary Risk Reduction Plan C-2
Appendix D – List of Acronyms and Abbreviations D-1

List of Figures

Figure 2-1 Trends in Residential Cancer Risks in the Basin (1998-2018) 2-1
Figure 2-2 Trends in Residential Chronic Hazard Index in the Basin (1998-2018) 2-2
Figure 2-3: Overview of the AB 2588 Program 2-7
Figure 2-4: Distribution of Risks for AB 2588 Facilities with an Approved HRA 2-8
Figure 3-1: Map of South Coast AQMD Grab Samples 3-9
Figure 3-2: Map of South Coast AQMD 24-Hour Sampling Locations 3-9
Figure 3-3: Plot of South Coast AQMD 24-Hour Time Integrated Sample Concentrations 3-10
Figure 3-4: Plot of South Coast AQMD 24-Hour Time Integrated Sample Concentrations 3-11
Figure 3-5: Map of South Coast AQMD Grab Samples 3-12
Figure 3-6: Map of South Coast AQMD 24-Hour Sampling Locations 3-13
Figure 3-7: Plot of South Coast AQMD 24-Hour Time Integrated Sample Concentrations 3-13
Figure 3-8: Map of South Coast AQMD 24-Hour Integrated Sample Locations 3-14
Figure 3-9: Plot of South Coast AQMD 24-Hour Near Source Samples 3-15
Figure 3-10: Plot of South Coast AQMD 24-Hour Community Samples 3-16

List of Tables

Table 2-1: AB 2588 Core Facilities by Industry 2-4
Table 2-2: Rule 1402 Risk Reduction Categories 2-6
Table A-1: Facilities Prioritized in 2024 ..... A-1
Table A-2: Active ATIR Project A-5
Table A-3: Active HRA Projects A-6
Table A-4: Active VRRP Project A-6
Table A-5: Active RRP Project A-6
Table B-1: Risks from Facilities with an Approved HRA B-2
Table B-2: Health Risks from Facilities with an Approved HRA B-18
Table C-1: Status of Risk Reduction Plans C-1
Table C-2: Facilities with Approved Voluntary Risk Reduction Plans C-2

Executive Summary

South Coast AQMD implements the California Air Toxics "Hot Spots" Information Act through Rule 1402 and includes requirements beyond the state law. The AB 2588 Program as implemented under Rule 1402 is only one part of South Coast AQMD's comprehensive program in regulating air toxics. Other elements include permitting, rule development, enforcement efforts, and the Multiple Air Toxic Exposure Study.

Executive Summary

The California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in 1987. AB 2588 is a key statewide program implemented by local air districts to address health risks from toxic air emissions associated with existing permitted facilities. One of the main goals of AB 2588 is to provide the public with information regarding potential health effects from toxic air contaminants emitted from existing permitted facilities, and to develop plans to reduce associated risks. South Coast Air Quality Management District (South Coast AQMD) implements AB 2588 requirements through Rule 1402, which includes additional requirements beyond the state law, including a program to encourage facilities to voluntarily reduce risk, and to compel high risk facilities to reduce toxic air emissions much more quickly than the state law requires.

The AB 2588 Program, as implemented under Rule 1402, is only one part of South Coast AQMD's comprehensive program to regulate toxic air contaminants. Other elements include South Coast AQMD's permitting program and Rule 1401 requirements; over 25 additional rules to reduce emissions of toxic air contaminants, enforcement efforts to ensure facilities comply with all applicable air quality requirements; and the Multiple Air Toxics Exposure Study (MATES), a study measuring the toxic air contaminant levels and their risks throughout the region. In addition, South Coast AQMD has performed ambient air monitoring in many neighborhoods over a number of years, which has resulted in the identification of toxic air contaminant hot spots in certain areas. This monitoring has helped identify high risk facilities, thereby requiring them to implement risk reduction measures under Rule 1402. Monitoring is also an important component for implementation of the AB 617 program that targets air pollution reductions in environmental justice communities.

Under state law, South Coast AQMD is required to prepare an Annual Report of AB 2588 activities. This report fulfills that requirement and describes South Coast AQMD's ongoing efforts to regulate and reduce toxic air emissions.

The following summaries highlight key AB 2588 activities in 2024:

AB 2588 and Rule 1402 Implementation Activities	Prioritized and initiated audits for 118 facilities based on their quadrennial toxic emission inventory updates
	Reviewed 7 Air Toxics Inventory Report (ATIR) Initial Information submittals, 10 ATIRs, 11 Health Risk Assessments (HRAs), 2 Risk Reduction Plans (RRP), 1 Voluntary Risk Reduction Plan (VRRPs), 1 VRRP progress report and approved 3 priority score revisions from 22 total facilities
	Conducted public notification meetings for two facilities
Streamlining and Program Improvement Activities	Provided support to rulemaking efforts

Chapter 1

California's Air Toxics "Hot Spots" Program

The California Air Toxics "Hot Spots" Information Act was adopted in 1987 under Assembly 2588. This chapter will cover the elements and requirements of the program including emissions reporting, prioritization, health risk assessments, public notification, risk reduction plans, and industry wide sources.

1. California's Air Toxics "Hot Spots" Program

Background

In 1987, the California legislature adopted the Air Toxics "Hot Spots" Information and Assessment Act. The "Hot Spots Act" was proposed under Assembly Bill 2588 and therefore is commonly referred to as AB 2588. Since exposure to toxic air contaminants may produce various adverse health impacts, AB 2588 incorporated specific activities such as collecting emissions data of toxic air contaminants from stationary sources, identifying facilities having localized impacts, determining potential health risks, and notifying affected individuals. California Air Resources Board (CARB) has developed some components of the AB 2588 Program requirements of the "Hot Spots" Act; however, local air districts are required to implement and enforce the requirements. This chapter describes the state requirements of the AB 2588 Program.

Emissions Reporting

Facilities are subject to AB 2588 reporting requirements if they emit any toxic air contaminants listed by CARB in the *Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program* (EICG).[1] Under the AB 2588 Program, larger facilities (core facilities) are subject to individual reporting requirements while facilities that are generally small businesses are grouped into industrywide source categories, which are described later in this chapter. CARB's EICG provides both criteria and direction for facilities to compile and submit emission data of toxic air contaminants. The requirements within the EICG have been incorporated by reference into Title 17 of the California Code of Regulations and thus are enforceable.

Prioritization

Core facilities in the AB 2588 Program submit an air toxics inventory once every four years. The AB 2588 Program requires air districts to categorize each facility using the reported emissions as either high, intermediate, or low priority to determine if a facility is required to conduct an ATIR and HRA, and to determine appropriate program fees. The California Air Pollution Control Officers Association (CAPCOA) *Facility Prioritization Guidelines* (CAPCOA Prioritization Guidelines) provides state-wide guidance to local air districts for prioritizing facilities.[2]

The CAPCOA Prioritization Guidelines[3] presents two procedures for prioritizing facilities. The emission and potency procedure relies on three parameters to prioritize facilities: emissions, potency or toxicity, and the proximity of potential receptors. The dispersion adjustment procedure relies on four parameters: emissions, potency or toxicity, dispersion, and receptor proximity. While there are two procedures, both are similar and involve calculating screening-level scores for separate health effects in order to derive a final score.

Using the procedures, a facility first receives separate scores for carcinogenic (cancer) effects and non-cancer chronic and acute effects. The facility is then given a Total Facility Score (TS), which is the higher of these scores. The Total Facility Scores are separated into three categories: high priority represents TS greater than 10, intermediate priority for less than or equal to 10 but greater than one, and low priority for TS less than or equal to one. Once a facility is designated as high

[1] *Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program*, March 21, 2022, California Air Resources Board https://ww2.arb.ca.gov/sites/default/files/2022-10/EICG%20Report.pdf

[2] *Facility Prioritization Guidelines*, August 2016, California Air Pollution Control Officers Association https://capcoa.org/capcoa-prioritization-guidelines/

[3] South Coast AQMD utilizes its own Prioritization Procedure, described in the next chapter.

priority, they may be required to submit a Health Risk Assessment to assess the risk to their surrounding community. Facilities ranked with intermediate priority are considered District Tracking facilities and must continue to submit emissions reports of toxic air contaminants on a quadrennial basis. Facilities ranked with low priority may be eligible to be exempted from the AB 2588 Program altogether.

Table 1-1: Priority category and actions required as defined in the CAPCOA Prioritization Guidelines

Priority Score	Category	Action
TS > 10	High Priority	Submit HRA
1 < TS ≤ 10	Intermediate Priority	No HRA required; continue toxic air emissions reports
TS ≤ 1	Low Priority	May be eligible to be exempt from the AB 2588 Program

Health Risk Assessments

AB 2588 requires that the Office of Environmental Health Hazard Assessment (OEHHA) develop risk assessment guidelines for the program. The most recent version of these guidelines is the February 2015 version of *The Guidance Manual for Preparation of Health Risk Assessments*[4] (OEHHA HRA Guidelines). The 2015 OEHHA HRA Guidelines incorporated age sensitivity factors which resulted in increased cancer risk estimates by approximately three times. The OEHHA HRA Guidelines contain a description of the algorithms, recommended exposure variates, cancer and non-cancer health values, and the air modeling protocols needed to perform a HRA in accordance with the state AB 2588 Program. The entire risk assessment process can be characterized in four steps described below:

Hazard Identification

Hazard Identification involves identifying all toxic air contaminants emitted from a facility and whether these pollutants are potential human carcinogens or non-carcinogens with other types of adverse health effects. A facility must identify all substances that are listed in the EICG.

Exposure Assessment

The purpose of the exposure assessment is to estimate extent of public exposure of emitted toxic air contaminants and estimate exposures for which potential health effects will be evaluated. Evaluating exposure involves emission quantification, air dispersion modeling, and identifying exposure routes and exposure durations.

Dose Response

Dose-response assessment is the process of characterizing the relationship between exposure to a toxic air contaminant and the incidence of an adverse health effect in exposed populations. For dose-response, OEHHA has compiled cancer potency factors and non-cancer reference exposure levels (RELs) for certain toxic air contaminants. By using these factors along with the estimated

[4] https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

exposure information for the toxic air contaminants identified during the hazard identification process, potential cancer and non-cancer risks can be evaluated during risk characterization.

Risk-Characterization

Risk characterization is the final step of the risk assessment process. Modeled concentrations and exposure information determined through the exposure assessment process are used with cancer potency factors and non-cancer RELs to assess total cancer risk and noncarcinogenic health effects. An HRA shows the combined cancer risk and non-cancer risk for all toxic air contaminants emitted from a specific facility.

Public Notification

Public notification is a core element of the AB 2588 Program requirements. California Health and Safety Code (H&S Code), Section 44362(b) requires the operator of the facility to provide notice to all exposed persons regarding the results of the HRA if the local air district finds there is significant health risk from the facility. The public notification procedures are specified by the local air districts.

Risk Reduction Plans

In 1992, the California legislature added a risk reduction component, the Facility Air Toxic Contaminant Risk Audit and Reduction Plan (SB 1731), which required each air district to specify a risk threshold that would trigger risk reduction requirements. The requirements of SB 1731 are found in California H&S Code, Sections 44390 through 44394. The requirements are for facilities to audit and identify the source of toxic air emissions and risk, then develop and carry out a plan to reduce emissions and risk. This state law also presents an implementation timeline for risk reduction plans; however, local air districts may create more stringent timelines in their respective programs.

Industrywide Sources

Under the AB 2588 Program, individual air districts may designate separate industrywide source (IWS) categories. Facilities falling into this category are generally small businesses where individual compliance would impose economic hardship. The advantage to IWS categories is that compliance may be handled collectively for each category rather than each individual facility. For each IWS category, a district may prepare an industrywide emission inventory and HRA. CAPCOA, in cooperation with OEHHA and CARB develop IWS risk assessment guidelines.[5] These guidelines provide a cost-effective and uniform method for calculating facility emissions and estimating toxic risks for these facilities under each air district's jurisdiction.

The requirements for designating individual IWS categories are:

- facilities must emit less than 10 tons per year of criteria pollutants;
- facilities share a common Standard Industrial Classification (SIC) code;
- the majority of the class are small businesses;
- individual compliance would impose severe economic hardships; and

[5] Three IWS risk assessment guidelines have been published: autobody shops (updated document in progress), non-vehicular diesel engines, and gasoline service stations.
https://ww3.arb.ca.gov/ab2588/riskassess.htm

- emissions are easily and generically characterized.

Periodic Updates to the AB 2588 Guidelines

The EICG provides direction and outlines the requirements for quantifying and reporting toxic air emissions required by the "Hot Spots" Program. The EICG regulation was previously approved by the Office of Administrative Law on August 27, 2007. CARB proposed amendments to the EICG on September 29, 2020, which included an expanded chemical list required to be reported based on a phased-in schedule and strengthened source testing requirements. South Coast AQMD falls under District Group A, which requires expanded reporting starting with the 2022 inventory year. Additional chemicals are required to be reported starting with inventory year 2026. CARB staff was directed to consider additional modifications to the regulation based on public comments received. This included revising criteria pollutant thresholds and adjusting the phase-in schedule. CARB also proposed to establish a Sector Phase 3B including wastewater, landfills, composters, and metal recyclers. This group will not be required to report the expanded chemical list until inventory year 2028. CARB staff incorporated these revisions through a 15-day public process. The final 2022 EICG rulemaking package was approved by the Office of Administrative Law and filed with the Secretary of State on March 21, 2022. The revised EICG effective date was March 21, 2022.

Chapter 2

South Coast AQMD's Air Toxics "Hot Spots" Program

South Coast AQMD's Air Toxics "Hot Spots" Program incorporates the requirements of the state AB 2588 program through Rule 1402. South Coast AQMD has achieved significant reductions in air toxics in the Basin. This chapter covers the elements and requirements of the South Coast AQMD Air Toxics "Hot Spots" Program and outlines the AB 2588 staff activities in 2023.

2. South Coast AQMD Air Toxics "Hot Spots" Program

Background

South Coast AQMD's Air Toxics "Hot Spots" Program incorporates the requirements of the state AB 2588 Program, as well as additional and/or more stringent requirements. Despite being one of the most polluted urban areas in the U.S., South Coast AQMD has achieved significant reductions in toxic air contaminants within its jurisdiction. For example, monitoring studies have shown that cancer risks have decreased by more than 50 percent between MATES III and MATES IV, and another 40 percent reduction between MATES IV and MATES V.[6] While these reductions have been primarily attributable to reductions in diesel particulate matter, there has also been a significant reduction in risks from stationary source facilities. The AB 2588 Program as implemented by South Coast AQMD has played a significant role in achieving those reductions by improving public awareness thereby leading many businesses to voluntarily reduce their emissions of toxic air contaminants and through mandatory risk reductions triggered by facilities exceeding health risk thresholds. Figures 2-1 and 2-2 below demonstrate the reductions in cancer and non-cancer risks that have been achieved despite the substantial number of facilities and extensive industrial activity in the region. These reductions have taken place even with increases in human and vehicle populations, vehicle miles traveled, and fuel consumption within the South Coast Air Basin (Basin). To ensure consistent representation of health risk estimates over time, the MATES V report applies the most current methodologies outlined in the 2015 OEHHA Guidance Manual for estimating health risks from prior MATES campaigns. Additional information about the health studies can be found online at http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v.

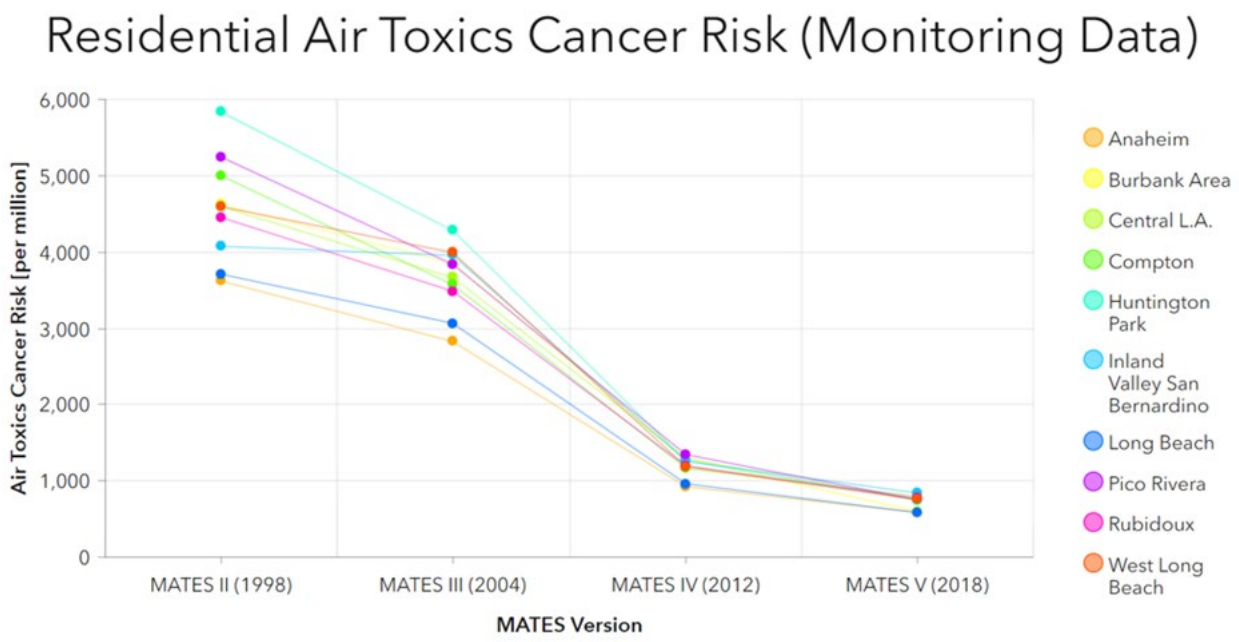

Figure 2-1 Trends in Residential Cancer Risks[7] in the Basin (1998-2018)

[6] https://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf
[7] Calculated with 2015 OEHHA Risk Assessment Guidelines.

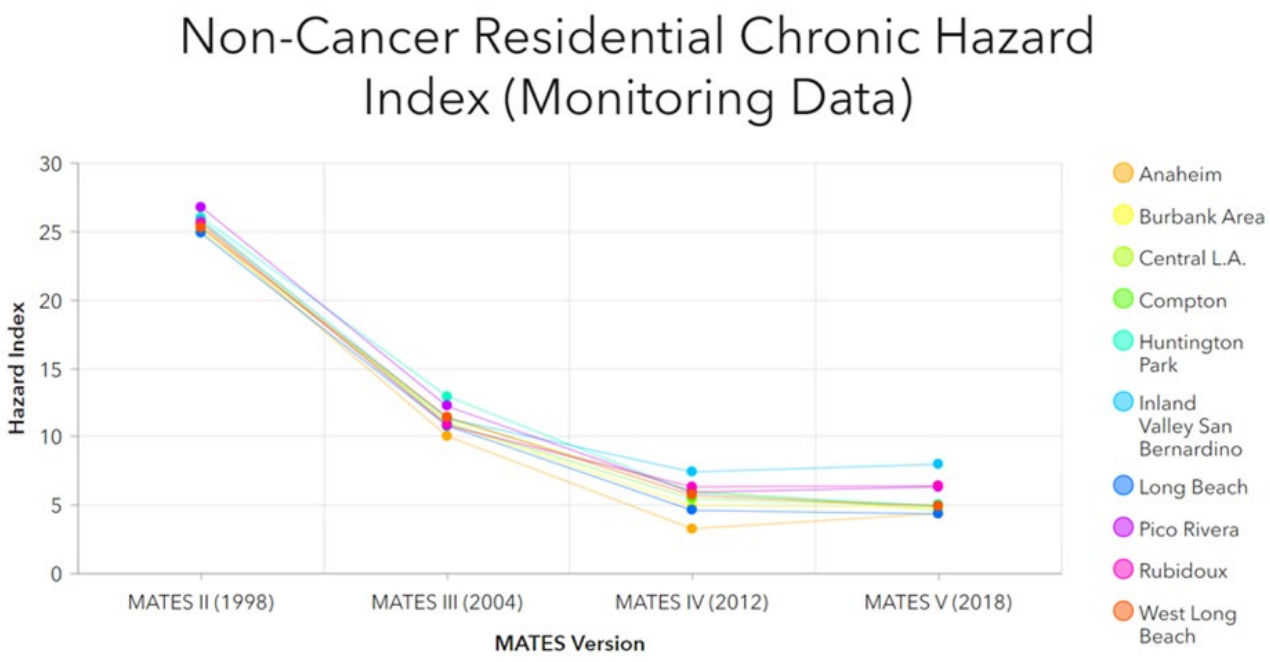

Figure 2-2 Trends in Residential Chronic Hazard Index in the Basin (1998-2018)

South Coast AQMD *Rule 1402 – Control of Toxic Air Contaminants from Existing Sources* implements various aspects of AB 2588 and SB 1731 including public notification and risk reduction requirements for facilities. Rule 1402 adopts health risk thresholds and implementation schedules that are more stringent than those specified in AB 2588 and SB 1731. Rule 1402 was amended in October 2016. This amendment included a new provision beyond what is required under state law—a Voluntary Risk Reduction Program that allows facilities to implement early risk reduction measures that go beyond the normal risk reduction thresholds in exchange for an alternative public notification process. At the same time, a Potential High Risk Level facility category was also created. Facilities designated under the Potential High Risk Level category must comply with expedited schedules for submitting an Air Toxics Inventory Report (ATIR), HRA reports, and for reducing risk. Both the Voluntary Risk Reduction Program and the Potential High Risk Level category result in facilities evaluating and reducing their associated air toxics risks faster than would occur under the state AB 2588 Program alone.

Program Implementation Elements

Under South Coast AQMD's AB 2588 Program, core facilities are categorized into four groups, or phases. Phases are assigned to discrete reporting years with each phase reporting once every four years. Currently, there are over 450 core facilities as categorized by industry in Table 2-1. These core facilities go through the process illustrated in Figure 2-3 which is how South Coast AQMD implements AB 2588 through Rule 1402. The main components that make up this process include the following:

- **Emissions Reporting** – Since the fiscal year 2000-01 reporting cycle, toxic air contaminant emissions reporting for the AB 2588 Program was incorporated into South Coast AQMD's Annual Emissions Reporting (AER) Program. Core facilities must report emissions of any toxic air contaminants or ozone depleting compounds (ODC) specified in

South Coast AQMD's Rule 301 (e) through the AER Program. The AER Program was modified to implement CARB's Criteria and Toxics Reporting (CTR) regulation reporting requirements. The CTR regulation identifies several hundred toxic air contaminants, which are also included in the revised 2022 EICG. Consequently, many AB 2588 facilities are also subject to CTR. There are four reporting phases in AB 2588, with each core facility required to submit a more detailed inventory by reporting detailed toxic air contaminants during the quadrennial reporting year. This detailed inventory serves as a foundation for an ATIR, if required. CTR required reporting for Sector Phase 1 facilities beginning with the 2022 data year and Sector Phase 2 facilities beginning with the 2024 data year. Sector Phase 1 and 2 each consist of 16 sectors identifying several permitted processes. CTR reporting for Sector Phase 3 will begin with the 2025 data year.

In 2024, 118 facilities were required to report their quadrennial toxic emission inventory updates. Based on emissions inventory submittals, South Coast AQMD staff calculated priority scores for these facilities.

- **Prioritization** – South Coast AQMD uses a refined method for prioritizing facilities based on CAPCOA Guidelines. The current South Coast AQMD Procedure incorporates local meteorological data and revised risk calculation methodologies from the 2015 OEHHA HRA Guidelines. The South Coast AQMD Prioritization Procedure is described in more detail in the *Streamlining Activities* chapter. Facilities are categorized as High, Intermediate, and Low Priority based on the priority scores consistent with Table 1-1. Facilities that were prioritized in 2024 are listed in Table A-1 of Appendix A.
- **Health Risk Assessment** – High priority facilities (those with priority scores greater than ten), including those that qualify for the Voluntary Risk Reduction Program, are required to prepare an ATIR, a complete and detailed inventory of approximately 900 toxic air contaminants, along with detailed information about the processes and release points using the Emissions Inventory Module from the latest CARB Hotspots Analysis and Reporting Program (HARP). For facilities required to assess risk via an HRA or VRRP, the facility must prepare an HRA that conforms to the OEHHA HRA Guidelines. Specific instructions for South Coast AQMD are also available in the *AB 2588 and Rule 1402 Supplemental Guidelines (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act),* September 2024.[8] This document is commonly referred to as the AB 2588 Supplemental Guidelines.
- **Public Notification** – If the health risk reported in the HRA exceeds the Notification Risk Levels of Rule 1402, then the facility is required to provide public notice to the affected community. The Notification Risk Levels of Rule 1402 are triggered when cancer risk from the facility exceeds 10 chances in-one-million, or when the acute or chronic hazard indices are greater than 1. The requirements for public notification are described in the *South Coast AQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402*, October 2016 (South Coast

[8] https://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/ab-2588-supplemental-guidelines.pdf

AQMD Public Notification Procedure).[9] These requirements emphasize transparency in communicating risk to the affected community in the following ways:

- The notice must clearly identify the area above the notification thresholds.
- The notice must be distributed to all addresses (individual residences and workplaces), and to parents of children attending school in the area of impact.
- The approved HRA must also be provided to all schools in the area of impact.
- South Coast AQMD conducts a public meeting to describe the HRA results to the affected community and to answer questions from community members.

- **Risk Reduction** – Rule 1402 adopts stringent health risk thresholds and aggressive implementation schedules that are beyond the traditional AB 2588 and SB 1731 state requirements (see Table 2-2). Under state requirements, facilities exceeding a significant risk threshold must reduce risk within five years. Under Rule 1402, Potential High Risk Level facilities must submit an Early Action Reduction Plan to immediately reduce risk, followed by a detailed Risk Reduction Plan (RRP) designed to comprehensively reduce risk. The RRP under Rule 1402 must be implemented as quickly as feasible, but no later than two years after approval. Facilities exceeding the Action Risk Level under Rule 1402 must also implement risk reduction plans no later than two and a half years after risk reduction plan approval.[10] Rule 1402 also includes an optional Voluntary Risk Reduction Program (VRRP) provision that is designed to achieve risk reductions that are not otherwise required under state program requirements. In order to qualify for the Voluntary Risk Reduction Program, a facility must have a previously approved HRA and must not be designated as a Potentially High Risk Level facility.
- **Fees** – State and local costs of implementing AB 2588 are recovered through annual fees. As described previously, AB 2588 requires each district to recover state and district program costs. These fees are specified in South Coast AQMD Rules 307.1.

Table 2-1: AB 2588 Core Facilities by Industry

Facility Categories	Number of Facilities
Aerospace	40
Airports	1
Amusement Parks	2
Building / Construction / Mineral Products	46
Bulk Plants	17
Chemical Plants	11
Dairy / Poultry Farms	6
Electricity Generation	25
Electronic	4

[9] http://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/public_notification_procedures.pdf

[10] Rule 1402 allows extensions, but only for those facilities that meet certain requirements. Extensions are not allowed for facilities exceeding the Significant Risk Level. Even with extensions, the implementation timelines are shorter than state requirements.

Facility Categories	Number of Facilities
Entertainment	6
Fermentation and Brewing (Breweries/Distilleries/Wineries)	1
Food flavoring manufacturing	1
Furniture / Household Products	3
Glass Production	1
Harbors	1
Hospitals and Health-Related	29
Hydrogen Production	3
Iron and Steel Production	6
Landfill - Industrial Waste	1
Landfill - Municipal Solid Waste	20
Metal and Alloys Products	27
Military Base	3
Office Buildings	1
Oil & Gas Production	31
Other Agricultural Processing	15
Other Industrial / Manufacturing	38
Other Institutional / Commercial	12
Other Service/ Commercial	3
Other Utilities	12
Other Waste Disposal	2
Petroleum Refinery	11
Pharmaceuticals	5
Plastic Manufacturing	6
Printing / Publishing	2
Pulp and Paper Manufacturing	5
Schools and Educational Institutions	16
Terminal Depots	15
Wastewater Treatment - Municipal	19
Water Supply	8

Table 2-2: Rule 1402 Risk Reduction Categories

Rule 1402 Levels	Thresholds	Requirements	RRP Implementation Timeline
Notification Risk Level	• Cancer risk of 10 chances in-one-million or greater • Acute or chronic HI of 1.0 or greater • Exceeding lead National Ambient Air Quality Standard (NAAQS)	Public notification	No risk reduction required
Voluntary Risk Level	• Cancer risk of 10 chances in-one-million or greater • Acute or chronic HI of 1.0 or greater • Exceeding lead National Ambient Air Quality Standard (NAAQS)	Public notification (modified) and implement VRRP	No later than 2.5 years after approval of plan (an additional 2.5 years extension may be requested)
Action Risk Level	• Cancer risk greater than 25 chances in-one-million • Cancer burden of 0.5 or more • Acute or chronic HI of 3.0 or more • Exceeding lead NAAQS	Public notification and implement RRP	No later than 2.5 years after approval of plan (an additional 2.5 years extension may be requested)
Significant Risk Level	• Cancer risk of 100 chances in-one-million or greater • Acute or chronic HI of 5.0 or more	Public notification and implement RRP	No later than two years after approval of plan for facilities designated as Potentially High Risk Facilities

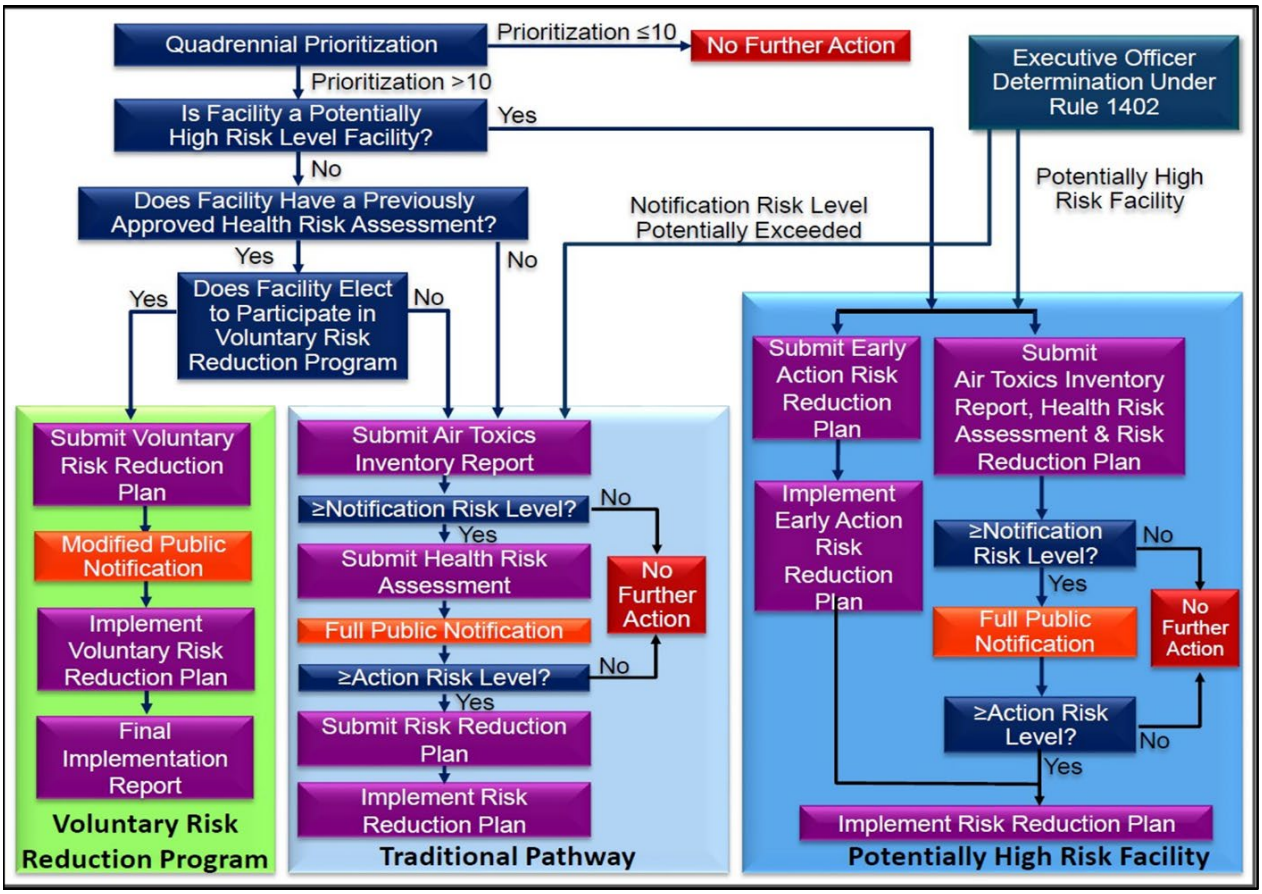

Figure 2-3: Overview of the AB 2588 Program

Progress in Implementation the AB 2588 Program

From the beginning of the AB 2588 Program in 1987 through the end of 2024, staff has reviewed and approved 365 HRAs from 345 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 345 facilities, 33 were required to implement risk reduction measures, 66 were required to perform public notification activities, while the remaining facilities were below the public notification threshold. As a result of the AB 2588 Program, about 95 percent of facilities that have been in the Program historically have HRAs demonstrating cancer risks below ten chances in-one-million and a hazard index (HI) of less than 1.0 for both non-cancer acute and non-cancer chronic, or their emissions have been low enough to not require an HRA.

The summary of risks from approved HRAs illustrated in Figure 2-4 is based on the information in Appendix B, which lists the core facilities and the health risks from their approved HRAs. It should be noted that the data presented in Appendix B represents the most recent HRA and in the cases where an RRP is required, the information represents residual risks if facilities have implemented their RRP. Table B-1 in Appendix B lists the facilities in order of their cancer risks, and Table B-2 in Appendix B lists the same facilities ordered by facility ID. Table C-1 in Appendix C lists facilities that have prepared an RRP for the AB 2588 Program and their corresponding health risks [H&S Code 44363(a) (2) and (3)], and Table C-2 in Appendix C lists facilities which have successfully participated in the Voluntary Risk Reduction Program. Appendix D contains a list of acronyms and abbreviations used in this report.

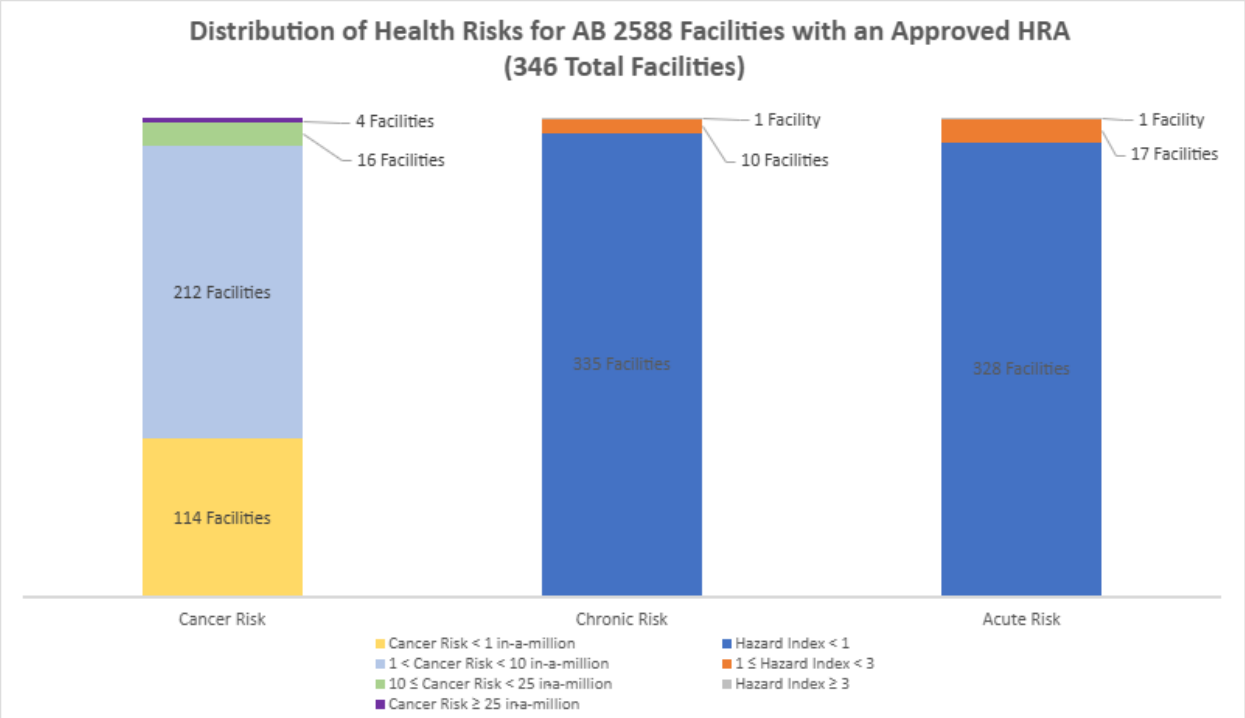

Figure 2-4: Distribution of Risks for AB 2588 Facilities with an Approved HRA

Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2024

In 2024, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on 118 facilities with 14 facilities being categorized as high priority. Key activities conducted include review of seven Initial Information submittals for ATIRs, nine ATIRs, three revised priority scores, eleven HRAs, two RRPs, one VRRP, and one VRRP progress report. Many of these key activities were for facilities that generally have more sources and are more complex such as refineries and other industrial facilities. Overall, a total of 34 documents were reviewed in 2024 from 22 facilities, with some facilities having multiple documents submitted for South Coast AQMD staff review.

Chapter 3

South Coast AQMD's Implementation tools

AB 2588 staff use various tools to implement the South Coast AQMD's AB 2588 program. AB 2588 staff also continually aim to improve South Coast AQMD's AB 2588 program and to help affected facilities comply with rule requirements.

3. South Coast AQMD AB 2588 Implementation Tools

Background

South Coast AQMD has undertaken several efforts to help affected facilities comply with rule requirements. South Coast AQMD also continues to communicate and interact with the public regarding general air quality-related issues. This chapter describes these efforts along with the services created to advance these efforts.

South Coast AQMD Guidelines and Procedures for AB 2588

Consolidated Emissions Reporting

As described earlier, core AB 2588 facilities are required to provide an update of their toxic air contaminant emissions inventory to South Coast AQMD on a quadrennial basis. Beginning with the fiscal year 2000-01 reporting cycle, toxic air emission reporting was incorporated into South Coast AQMD's AER Program. This was the first step towards streamlining emissions reporting between criteria pollutants and toxic air contaminants. In 2008, South Coast AQMD created a web-based reporting system for facilities. The reporting tool identifies if a facility is in the AB 2588 Program and also informs a facility if a particular year is subject to a quadrennial update. These upgrades and consolidation efforts have made for a much more efficient system that benefits both facilities and South Coast AQMD staff. This same system will be used to assist in implementing CARB's recently adopted Criteria and Toxics Reporting regulation and amended EICG regulation.

Prioritization Procedures

South Coast AQMD has taken various steps over the years in streamlining prioritization procedures for the AB 2588 Program while maintaining consistency with the CAPCOA guidelines. In 2016, South Coast AQMD adopted the use of local meteorological stations and evaluated risks at the actual closest receptor locations in addition to evaluating receptors in the worst-case wind direction. More recently, in July 2018, the procedures were updated to incorporate the most recent meteorological data set and to simplify the calculation of a facility's non-cancer acute priority score. By using South Coast AQMD's Prioritization Procedure, fewer facilities are incorrectly categorized as high priority.[11] This refinement enhances operational efficiency by reducing the number of facilities unnecessarily notified each year, enabling staff to concentrate resources on higher risk facilities. The AB 2588 group also conducts a detailed audit of the facilities that are initially categorized as high priority to ensure proper designation. Certain steps may include confirming the correct use of emission factors, control efficiencies, source test methods, and relative proportions of toxic air contaminants. Additionally, staff confirms the correct distances to residential and worker receptors as well as any modifications to any equipment for the given quadrennial year and contacts the facility as needed for additional clarification. This additional information obtained through priority score auditing will often negate the need to require an ATIR and HRA. This process and use of this refined priority scoring methodology serves to reduce the number of facilities that are required to be notified and overall reduces unnecessary workload for the facilities and for staff allowing staff to dedicate resources towards the highest priority facilities.

Hotspots Analysis and Reporting Program (HARP)

The Hotspots Analysis and Reporting Program, commonly known as HARP, is a software suite developed by CARB that assists with the technical requirements of the AB 2588 Program. HARP

[11] http://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/ab-2588-facility-prioritization-procedure.pdf

consists of three independent modules: the Emissions Inventory Module, Air Dispersion Modeling and Risk Tool, and Risk Assessment Standalone Tool. South Coast AQMD requires the use of HARP for Rule 1402 related work such as ATIRs, VRRPs, and HRAs. The use of HARP by facility operators, and other individuals promotes consistency and is a more efficient and cost-effective way to develop inventories and conduct HRAs.

General Supplemental Guidelines

The OEHHA HRA Guidance defers to local air districts for specific or additional requirements. The AB 2588 Supplemental Guidelines lists the specific instructions for preparing AB 2588 related documents in the South Coast AQMD jurisdiction. By clearly specifying facility requirements and periodically updating the document, South Coast AQMD ensures that facilities maintain a current and accurate understanding of all requirements. In 2024, the document was revised to address updates to terminology and include a more comprehensive list of required elements for submittals. These improvements are expected to reduce general inquiries and preliminary discussions, thereby streamlining the overall process.

Voluntary Risk Reduction Program

Another element streamlining South Coast AQMD's AB 2588 Program is the provision for the Voluntary Risk Reduction Program. Rule 1402 was amended to provide this option in response to industry interest in a mechanism to voluntarily reduce health risks from their facilities in return for modified public notification requirements. A facility may participate in the Voluntary Risk Reduction Program only if it has a previously approved HRA that is below the Action Risk Level and is not a Potentially High Risk Level facility. This program provides a more expeditious risk reduction program than the traditional pathway under state requirements, and also reduces notification requirements and other process for participating facilities. Under the traditional program, facilities are required to reduce cancer risk below 25 chances in-one-million. To successfully participate in the Voluntary Risk Reduction Program, risks from the participating facility must be reduced below 10 chances in-one-million, which is up to 60% reduction in cancer risk compared to the Action Risk Level. Guidelines that describe the requirements of a VRRP are available online.[12]

Air Dispersion Modeling

Modeling Guidance

The United States Environmental Protection Agency's (U.S. EPA) air quality dispersion model AERMOD is required for use to estimate concentrations of toxic air contaminants for risk assessments conducted pursuant to Rules 1401 and 1402. The AERMOD model is a steady-state Gaussian plume model capable of estimating pollutant concentrations from a wide variety of sources that are typically present at a facility. It is a stand-alone application but has also been incorporated into the CARB-developed HARP program as well as other programs from third party developers. South Coast AQMD has developed guidance regarding the use of AERMOD to assist modelers such as the use of regulatory defaults, averaging times, receptor grids and elevation data.[13] The AB 2588 Program staff has provided specific guidance regarding the required

[12] *South Coast AQMD Guidelines for Participating in the Rule 1402 Voluntary Risk Reduction Program*, September 2018. http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-vrrp-guidelines-201809.pdf

[13] South Coast AQMD modeling guidance is available at: http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

parameters in the HARP program. This guidance not only increases the quality of submissions but also decreases the amount of time spent by staff to answer basic questions.

Meteorological Data

South Coast AQMD has prepared meteorological data from 28 stations throughout the South Coast Air Basin for download. This data for each station includes the most recent five years of meteorological data with the most recent update occurring in late 2024 (i.e. Met11). This data can both be obtained and visualized on the South Coast AQMD website through the webtool discussed in the next section. This mapping tool can help users better select the meteorological station that best represents the facility's meteorological conditions (such as prevailing winds), terrain, and surrounding land use. In many cases, this would be the nearest located station, but South Coast AQMD staff are available to provide assistance to modelers to ensure the most representative station is used. Updated AERMOD guidelines were published in late 2024, along with the most recent meteorological data (i.e. Met11).

Other Implementation Tools and Programs

Rule 1401 Guidance

Rule 1401 requires any new, modified, or relocated permit units that emit toxic air contaminants to comply with certain allowable limits. South Coast AQMD has developed the Rule 1401 Risk Assessment Procedures[14] to assist applicants as well as staff to evaluate Rule 1401 and 1401.1 compliance. These procedures were most recently revised on October 31, 2024. The guidance document provides four tiers to determine health risk for Rule 1401 risk assessment, ranging from a quick look up table that uses very conservative health-protective values, to instructions to conduct detailed risk assessments involving air quality dispersion modeling analysis. By allowing permit applicants to utilize this tiered option to demonstrate compliance with risk limits, this often leads to an expedited analysis since detailed risk assessments often are not necessary for most permit applications. The document also provides detailed sample calculations and instructions for each tier, allowing facilities to have a more thorough understanding of the risk assessment process associated with Rule 1401.

South Coast AQMD developed an HRA Tool,[15] which was released on October 31, 2024. The HRA Tool is a new web-based program that simulates a Tier 1, Tier 2, and Tier 3 HRA; provides AERMOD-ready meteorological data from 28 meteorological stations for a Tier 4 HRA; and, supplies various meteorological data, such as wind roses from 28 meteorological stations, background concentrations of criteria pollutants measured at 38 locations, and hourly background ozone data at 14 sites. While the HRA webtool can be utilized for screening purposes related to permit applications or other evaluations, it cannot be used for the AB 2588 "Hot Spots" program.

Web Tools

South Coast AQMD has also developed web tools such as the Facility Information Detail (F.I.N.D) tool that allows a user to search for public information about South Coast AQMD-regulated facilities. Some of the facility information that can be found using F.I.N.D include: general facility details, equipment lists, compliance history, emissions inventory (including toxic air contaminants), and hearing board information. There are several existing web-based applications

[14] *Risk Assessment Procedures for Rules 1401, 1401.1 and 212, Version 9.0*, October 31, 2024, South Coast AQMD https://www.aqmd.gov/docs/default-source/permitting/hra-procedures/hraprocedures9-0_103124.pdf

[15] South Coast AQMD HRA Tool is available at: https://www.aqmd.gov/assets/aermet/AERMET_files_And_HRA_Tool.html

on South Coast AQMD's website that provide similar information, however, F.I.N.D makes the data available in a much more consolidated and user-friendly way. Updates to the database are made at least once per week and the tool also includes an interactive map. [16]

Small Business Assistance

South Coast AQMD has a team of engineers and inspectors that are specifically designated to help small businesses (defined as 100 or fewer employees or an annual gross revenue up to $5 million) understand and comply with air quality rules and regulations. Whether it is assistance in understanding regulations that may apply to a facility, identifying equipment that may need a permit, assisting with permit applications, or even scheduling a no-fault on-site inspection, the small business assistance unit act as advocates for these small businesses. Offering these services to smaller businesses streamlines air quality regulatory efforts while also creating a positive open working relationship with small local businesses.

Public Assistance

South Coast AQMD's AB 2588 Program provides public assistance services with a hotline at (909) 396-3616 and a designated email address (ab2588@aqmd.gov) to answer any program-related questions. Our website also includes a section specifically dedicated to the AB 2588 Program that provides up to date activities, including approved HRAs, RRPs, and public notices, and facility specific information, where applicable, on toxic air contaminant monitoring in affected communities.

South Coast AQMD also provides several other services, such as a telephone number to answer billing-related questions[17] and an online complaint system and telephone number where members of the public can notify staff of air quality problems, such as odor and visible emissions.[18] These services help to maintain good working relationships with facilities and to protect air quality and public health.

Rules Adopted or Amended in 2024

Regulatory Advisory Appended to Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations

On March 27, 2024, South Coast AQMD issued a Regulatory Advisory on Rule 1469, without amending Rule 1469. The Regulatory Advisory requires new facilities (as of January 1, 2024) to comply with the CARB Chrome Air Toxics Control Measure (ATCM), and existing 1469 facilities to continue compliance with Rule 1469. The CARB Chrome ATCM prohibits new hexavalent chrome plating or chromic acid anodizing facilities beginning January 1, 2024.

Adopted Amended Rule 1151 – Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations

On November 1, 2024, Rule 1151 was amended to gradually phase out two compounds used in motor vehicle and mobile equipment coatings and solvents: tert-butyl acetate (t-BAc) and para-

[16] http://www.aqmd.gov/nav/FIND/facility-information-detail
[17] Billing Services Telephone: 909-396-2900
[18] http://www3.aqmd.gov/webappl/complaintsystemonline/NewComplaint.aspx;
Telephone hotline: 1-800-CUT SMOG® (1-800-288-7664)

chlorobenzotrifluoride (pCBtF). The Scientific Review Panel (SRP) and OEHHA identified t-BAc as a carcinogen on August 18, 2018 and pCBtF as a carcinogen on June 28, 2019. CARB added t-BAc and pCBtF as toxic air contaminants on December 17, 2024.

State Level Air Toxics Related Activities

OEHHA Updates

Toxic Program Impacts with New or Proposed Toxic Air Contaminants

As described previously, OEHHA is required to develop guidelines for conducting HRAs under the AB 2588 Program. In implementing this requirement, OEHHA develops new, revised, or proposed risk factors for many toxic air contaminants. South Coast AQMD staff monitor the progress of these changes closely. For any finalized changes in risk factors, staff performs a preliminary estimate of potential Rule 1402 program impacts. Notice is provided to the Governing Board and affected industries annually through this and other AB 2588 annual reports.

Toxic Air Contaminants with New or Proposed Health Values

OEHHA did not adopt or revise risk values for any air contaminants in 2024. Staff continues to monitor OEHHA's progress in adopting or revising health values for substances that are listed in Appendix A of the EICG.

Ambient Air Monitoring

In addition to the AB 2588 Program, South Coast AQMD also conducts other activities to address toxic air contaminants, including special monitoring projects and emission investigations. As a result of lessons learned during South Coast AQMD's investigation into air monitoring for sources of toxic metal emissions in Paramount, West Rancho Dominguez, and other areas, South Coast AQMD continues to investigate, identify, and pursue remediation of additional sources across our four-county region that may emit high levels of toxic air contaminants.[19] If facilities are identified with high levels of toxic air emissions, South Coast AQMD may seek Orders for Abatement from the independent South Coast AQMD Hearing Board to require these facilities to quickly reduce their emissions to a level that does not pose an immediate threat to public health. South Coast AQMD may also designate facilities as Potentially High Risk Level Facilities under Rule 1402.

South Coast AQMD staff will engage and communicate regularly about its work with residents, community groups, local governments and their elected officials, partner regulatory agencies, affected facilities and industry groups, and solicit their feedback. South Coast AQMD will also seek to leverage the regulatory authorities of other agencies to assist in swiftly curtailing emissions from high-emitting facilities.

Assembly Bill 617 (AB 617)

Assembly Bill 617 (AB 617), passed by the California legislature in 2017, focuses on reducing air pollution in environmental justice communities. CARB designates communities for the AB 617 Program upon recommendations from local air districts. CARB designated the following communities for the AB 617 Program in the South Coast AQMD jurisdiction:

- Wilmington, Carson, West Long Beach
- San Bernardino, Muscoy

[19] http://www.aqmd.gov/home/news-events/community-investigations

- East Los Angeles, Boyle Heights, West Commerce
- Southeast Los Angeles
- Eastern Coachella Valley
- South Los Angeles

South Coast AQMD works with each community's Community Steering Committee, consisting of residents, community-based organizations, government agencies, local businesses, and other relevant community stakeholders, to identify their top air quality priorities and develop and implement plans for community air monitoring and emissions reductions.

The six AB 617 Community Air Monitoring Plans (CAMPs) have been completed and are available online. In 2024, AB 617 monitoring was ongoing and consist of a combination of mobile and stationary measurements of several toxic air contaminants. The results are routinely reported back to the communities and are published online.

Additional information about South Coast AQMD's AB 617 program is available online at www.aqmd.gov/ab617.

Federal Toxics Activities

Air Toxics Screening Assessment (AirToxScreen)

AirToxScreen is U.S. EPA's screening tool to provide state, local, and tribal air agencies with information to help identify which pollutants, emission sources, and places that may require further analysis to better understand any possible risks to public health from toxic air contaminants. AirToxScreen can also provide communities with information regarding health risks from toxic air contaminants. U.S. EPA previously conducted reviews every three years as part of the National Air Toxics Assessment (NATA) but recently transitioned to an annual review for AirToxScreen, starting with inventory year 2020. U.S. EPA made the results of the 2020 AirToxScreen analysis publicly available in May 2024. Furthermore, U.S EPA anticipates the results of the 2021 AirToxScreen to be released in 2025.

In 2024, South Coast AQMD staff conducted a review of the 2022 AirToxScreen point source inventory and preliminary analysis. The 2022 AirToxScreen analysis is based on U.S. EPA's 2022 National Emissions Inventory (NEI), which is updated to address any corrections identified by South Coast AQMD staff. South Coast AQMD staff is currently reviewing the AirToxScreen data to provide any necessary comments or corrections based on any findings.

Ethylene Oxide (NESHAP Rulemaking)

Ethylene oxide (EtO) is classified as one of the 188 hazardous air pollutants in the Clean Air Act. In December 2016, U.S. EPA published an updated evaluation of the inhalation carcinogenicity for EtO on the Integrated Risk Information System (IRIS). This IRIS assessment determined the full lifetime unit risk estimate for EtO to be 5.0×10^{-3} per $\mu g/m^3$, which results in an equivalent cancer risk many times higher than estimated by OEHHA. Using the OEHHA cancer potency factor for EtO, a concentration of 0.26 ppbv is approximately equivalent to a residential lifetime cancer risk of 100 chances in-one-million, whereas the updated U.S. EPA carcinogenicity factor is equivalent to over 2,300 chances in-one-million lifetime cancer risk. Subsequently, OEHHA released a draft updated cancer inhalation unit risk factor for EtO on April 7, 2023. This may result in an updated cancer potency factor much closer to the current IRIS unit risk estimate.

The updated unit risk estimate for EtO was used by U.S. EPA in conducting the 2014 NATA. As part of the 2014 NATA, U.S. EPA began collecting more refined data for commercial EtO sterilizers, such as release information from air pollution control equipment (e.g., emission rates, release coordinates and release heights). South Coast AQMD staff provided such information where available. The 2014 NATA results were published in August 2018 and showed that for all census tracts with cancer risk greater than 100 chances in-one-million, EtO was responsible for 70 percent of all cancer risk, on average. Furthermore, commercial sterilizers were closely situated to the census tracts showing high cancer risk.

U.S. EPA subsequently announced proposed rulemaking for two National Emissions Standards for Hazardous Air Pollutants (NESHAP): Ethylene Oxide Commercial Sterilizers and Miscellaneous Organic Chemical Manufacturing. Amendments to the Miscellaneous Organic Chemical Manufacturing NESHAP were proposed by U.S. EPA in December 2019 and made final in August 2020.

Amendments to the NESHAP for Ethylene Oxide Commercial Sterilizers was finalized on April 4, 2024. U.S. EPA provided advanced notice of proposed rulemaking for this NESHAP in December 2019. In January 2021, U.S. EPA requested South Coast AQMD assistance in reviewing data from an information collection request sent to commercial sterilizers. This process continued through 2021 and overlapped with the review of the data for the 2017 AirToxScreen. During the review process, South Coast initiated an investigation to assess fugitive releases of EtO at commercial sterilizers within our jurisdiction, as described earlier.

OEHHA withdrew the proposed rulemaking intended to update the Inhalation Unit Risk factor for EtO and plans to resume the rulemaking process at a later time. Once OEHHA finalizes new health values for EtO, staff will reevaluate potential risk posed by commercial sterilizers in South Coast AQMD jurisdiction.

South Coast AQMD EtO Activities

Ethylene Oxide (EtO) Emissions Investigation

Beginning in March 2022 and proceeding throughout 2024, South Coast AQMD investigated facilities in the South Coast Air Basin with known emissions of EtO, following U.S. EPA's reconsideration of the potential toxicity of EtO. The goal of the investigation is to identify sources and reduce emissions. These actions include:

- Air monitoring efforts, including mobile monitoring, at the facilities and near the surrounding community.
- Proposition 65 Notice disclosure where applicable.
- A complete investigation into the facilities' equipment and compliance with South Coast AQMD rules, regulations, and permit requirements.
- Evaluation of immediate actions to be taken by the facilities to reduce leaks or fugitive emissions, including leak repair and source testing.
- Rulemaking that will result in more stringent requirements for EtO emissions from sterilization facilities.

From this initial review, three EtO commercial sterilization facilities were identified for further investigation: Sterigenics facilities in Vernon and Ontario, and Parter Medical Products (Parter) in Carson.

Initial Inspections

In March 2022, South Coast AQMD initiated unannounced inspections at the Sterigenics facilities in Vernon and Ontario, and at the Parter facility in Carson. Initial air samples (grab samples) were collected inside the facilities and immediately outside of the facility's buildings and at neighboring businesses. Results indicated elevated levels of EtO near the facilities, prompting a more comprehensive air monitoring effort and further investigation.

Air Monitoring

Sterigenics Vernon

The Sterigenics facility, located in an industrial area of Vernon, conducts sterilization of medical equipment using EtO and operates within two buildings between 49th St. and 50th St. on Gifford Ave.

In March 2022, initial air samples were taken directly outside the facilities, and results showed elevated levels of EtO, prompting more comprehensive air monitoring and further investigation. Individual grab samples (an air sample collected at one location at one point in time) were taken near the two buildings (Figure 3-1) and also near the surrounding residential community (Figure 3-1). Monitors were placed near the facility on 50th Street and 49th Street and in the community to collect 24-hour samples (Figures 3-2). Additionally, mobile monitoring was conducted to collect data on volatile organic compounds (VOCs) around the facilities and the surrounding community. VOC signals associated with EtO were elevated near the facilities; however, levels in the community were within typical background levels.

From April 2022 through April 2024, South Coast AQMD conducted local air sampling to determine levels of EtO in the surrounding community and evaluate potential sources of emissions coming from the Sterigenics Vernon facility (Figure 3-3 and 3-4). However, as part of the EARP for AB 2588, the facility installed air samplers around the facility which were initially co-located with South Coast AQMD monitors to ensure accuracy. The facility monitors, along with the strengthened requirements on the facility under the recently amended Rule 1405, led to South Coast AQMD concluding its sampling activities.

Sterigenics is responsible for continuing to collect and analyze 24-hour samples near their Vernon facility and provide the results to South Coast AQMD. The agency will occasionally collect 24-hour samples at one or more of these locations for quality assurance and quality control purposes.

Figure 3-1: Map of South Coast AQMD Grab Samples

Figure 3-2: Map of South Coast AQMD 24-Hour Sampling Locations

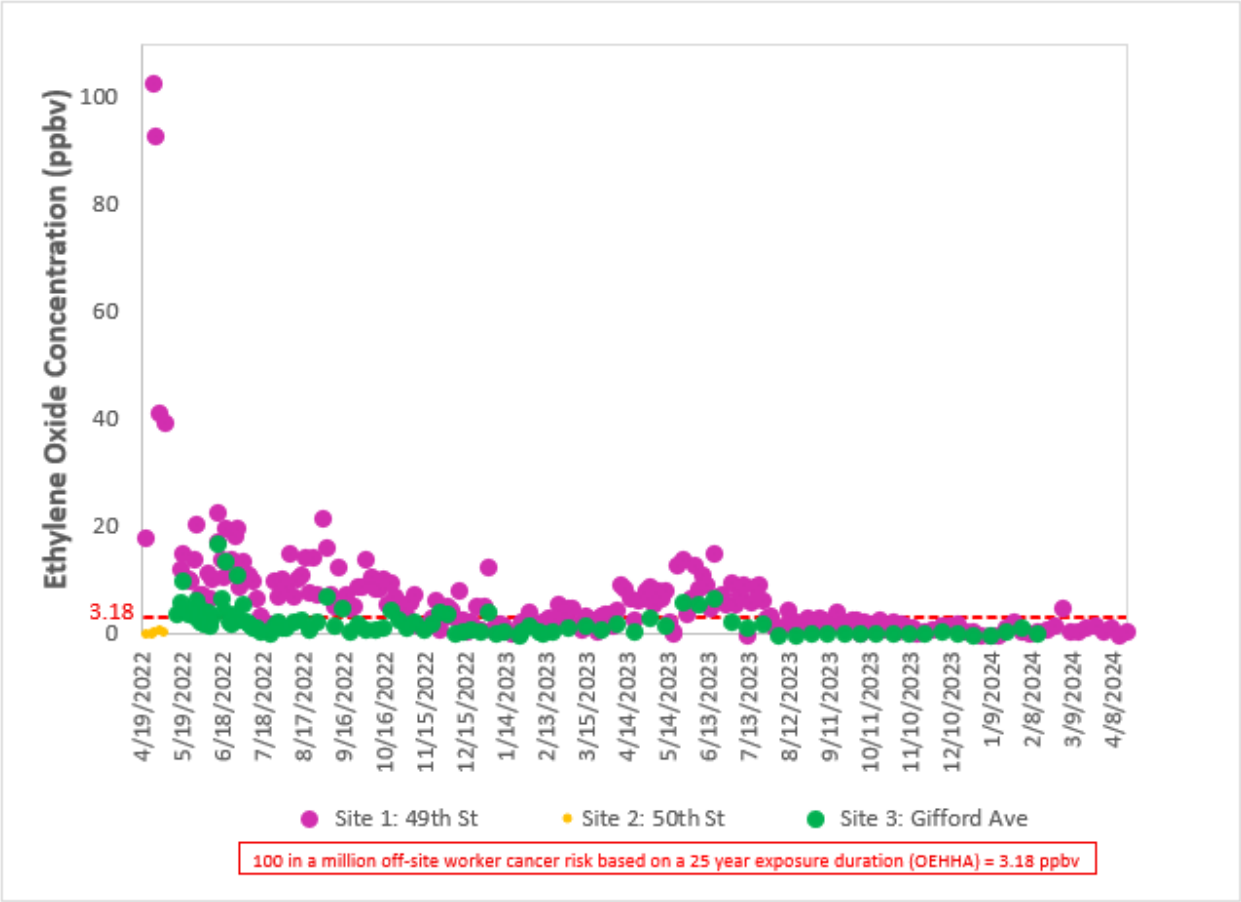

Figure 3-3: Plot of South Coast AQMD 24-Hour Time Integrated Sample Concentrations

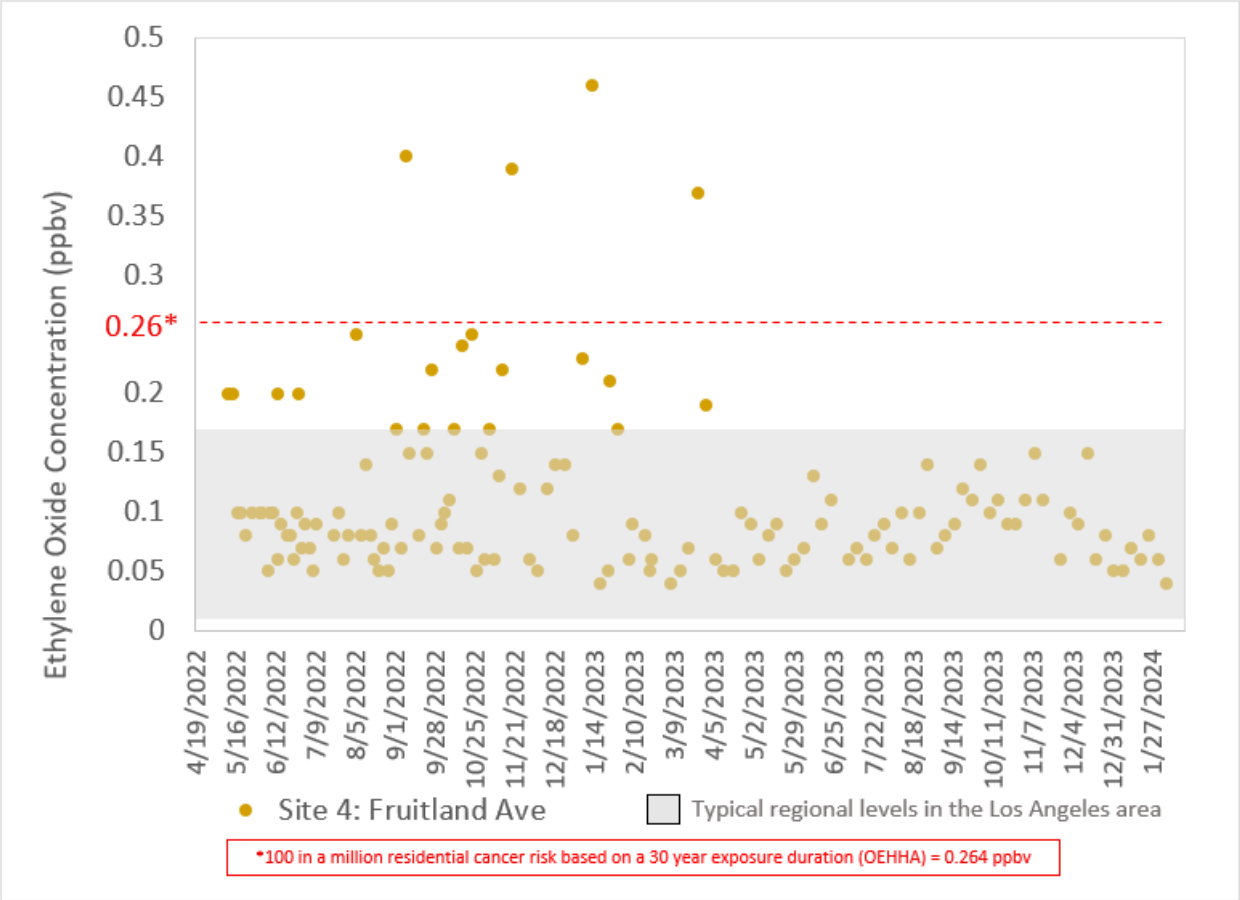

Figure 3-4: Plot of South Coast AQMD 24-Hour Time Integrated Sample Concentrations

Sterigenics Vernon made operational improvements throughout 2023 and 2024, including the installation of a Permanent Total Enclosure to capture fugitive emissions, leading to a reduction in monitored levels of EtO. Sterigenics has plans to make further improvements to facility operations, which is anticipated to result in additional reductions in monitored EtO levels.

Additional information on Sterigenics Vernon and their monitoring results are available online at:

https://www.aqmd.gov/home/news-events/community-investigations/sterigenics

Sterigenics Ontario

The Sterigenics Ontario facility located in an industrial part of Ontario conducts sterilization of medical equipment using EtO.

In May of 2022, initial air samples were taken directly outside the facilities, and results showed elevated levels of EtO, prompting more comprehensive air monitoring and further investigation at this location. Mobile monitoring was also conducted to collect data on volatile organic compounds (VOCs) around the facility and the surrounding area. VOC signals associated with EtO were elevated near the facility, but concentrations decreased to near background levels approximately 1,000 ft downwind. Individual grab samples were taken to confirm EtO levels (Figure 3-5), and

monitors were placed nearby to collect 24-hour samples (Figure 3-6). Monitor readings from these locations are shown in Figure 3-7.

From June 2022 through April 2024, South Coast AQMD conducted air monitoring efforts near the Sterigenics Ontario facility to determine levels of EtO near the facility and in the surrounding area. South Coast AQMD worked with Sterigenics' Ontario facility operator to identify potential sources of EtO from their operations and the facility implemented actions to reduce EtO emissions. As part of the facility's EARP, the facility installed air monitors around the facility adjacent to agency monitors and data collected was compared to ensure accuracy. The facility monitors, along with the strengthened requirements on the facility under the recently amended Rule 1405, led to South Coast AQMD concluding its sampling activities.

Sterigenics is responsible for continuing to collect and analyze 24-hour samples near their Ontario facility and provide that data to South Coast AQMD. As with the Vernon facility, the agency will occasionally collect 24-hour samples at one or more of these locations for quality assurance and quality control purposes.

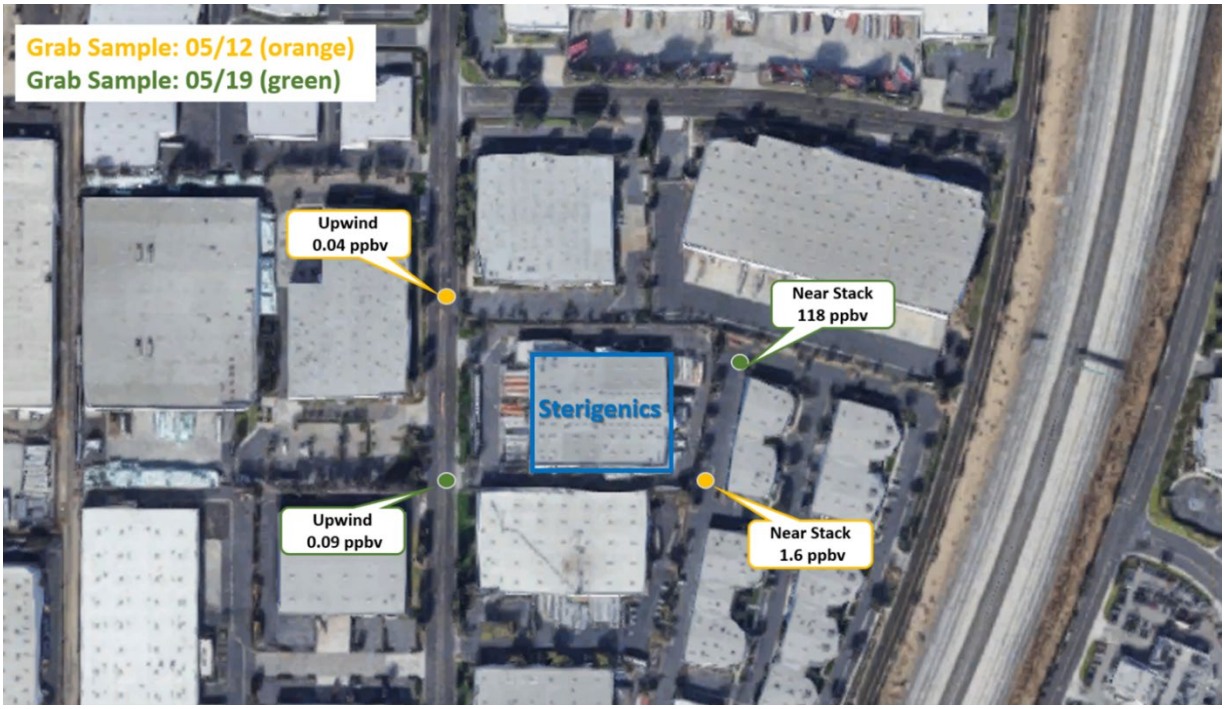

Figure 3-5: Map of South Coast AQMD Grab Samples

Figure 3-6: Map of South Coast AQMD 24-Hour Sampling Locations

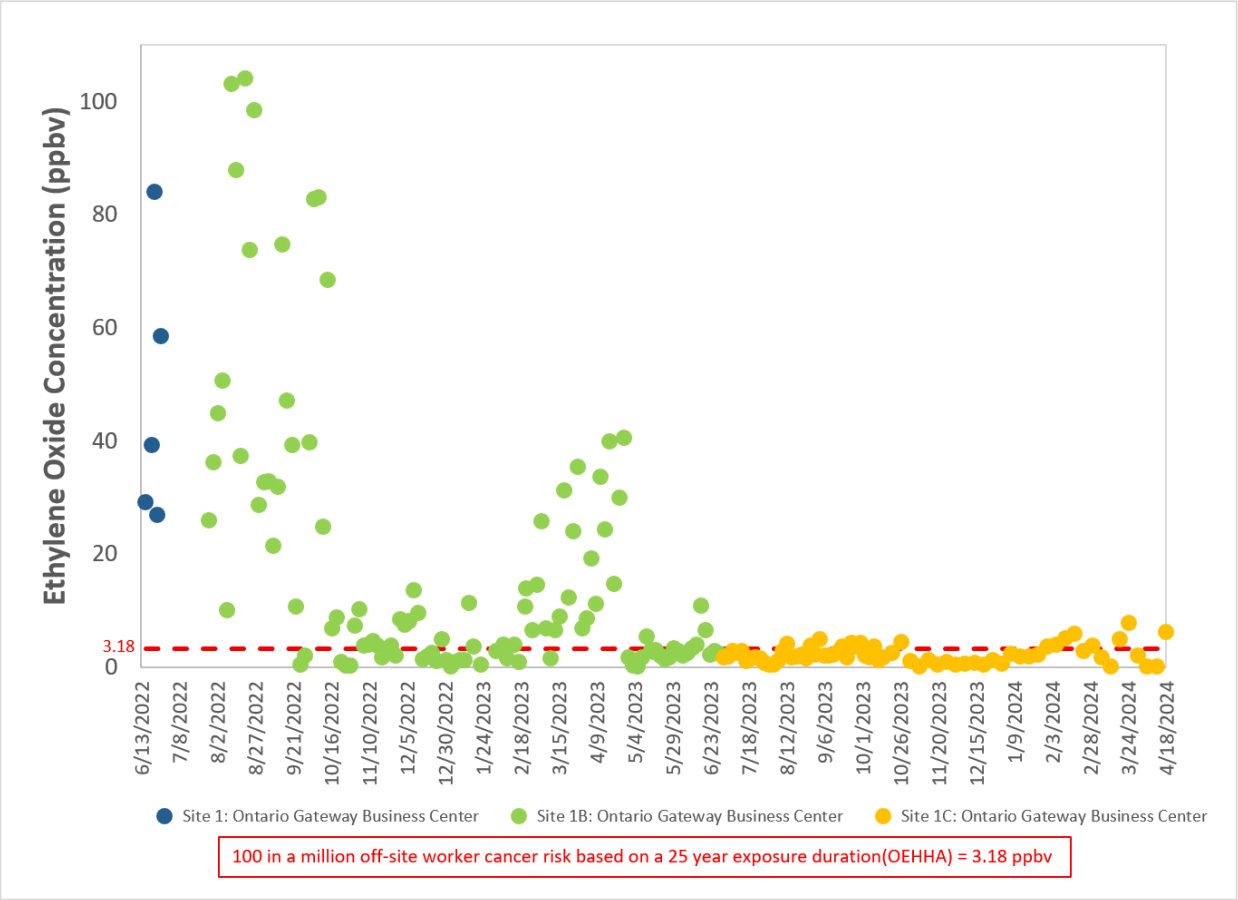

Figure 3-7: Plot of South Coast AQMD 24-Hour Time Integrated Sample Concentrations

Sterigenics Ontario made operational improvements throughout 2023 and 2024, including the installation of a Permanent Total Enclosure to capture fugitive emissions, leading to a reduction in monitored levels of EtO. Sterigenics plans to make further improvements to the facility, and it is anticipated that these improvements will lead to additional decreases in monitored EtO levels.

Additional information on Ontario special air monitoring is available online at:

https://www.aqmd.gov/home/news-events/community-investigations/sterigenics-ontario

Parter

South Coast AQMD, with assistance from CARB, has conducted local air monitoring to determine levels of EtO near the Parter facility located in Carson and in the surrounding community. Mobile monitoring was conducted to collect survey data on VOCs, and signals associated with EtO were elevated near and downwind of the facility.

Figure 3-8: Map of South Coast AQMD 24-Hour Integrated Sample Locations

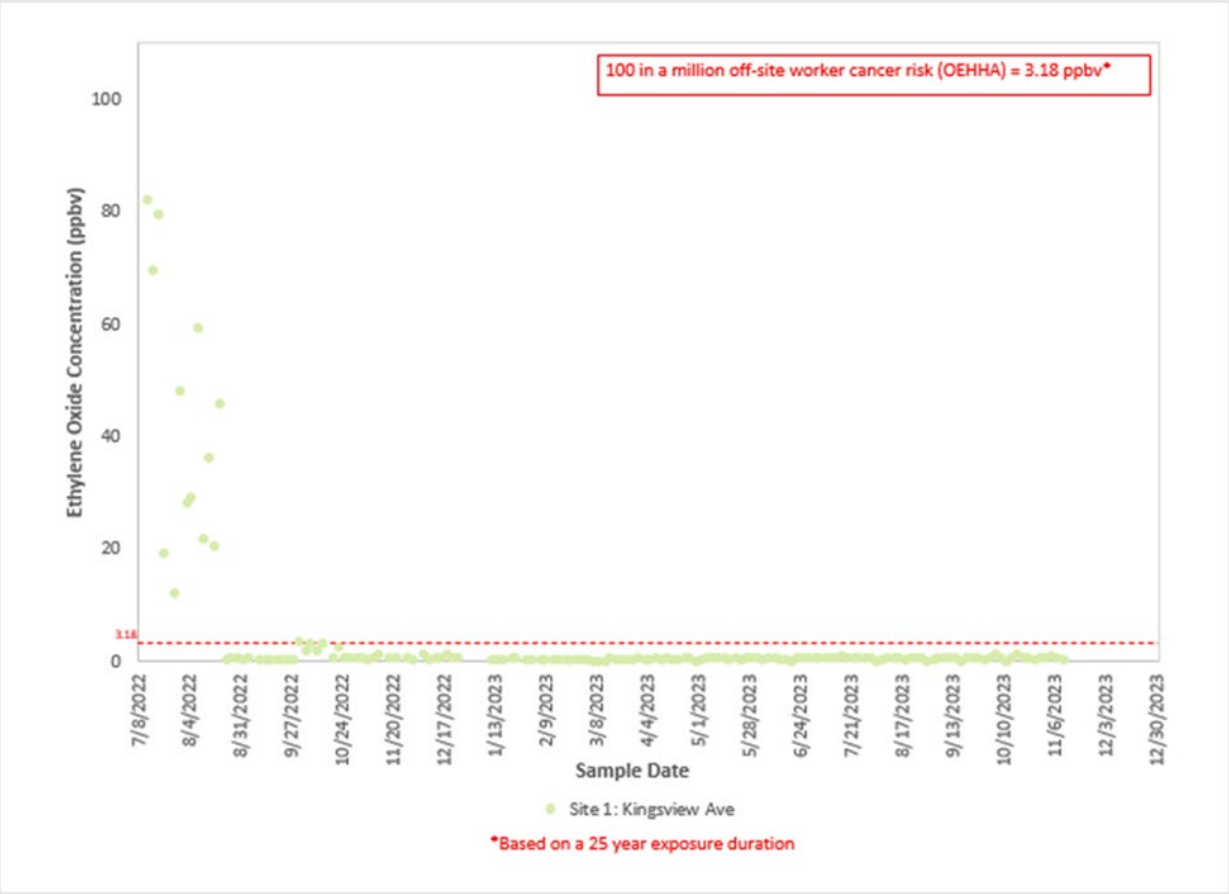

Figure 3-9: Plot of South Coast AQMD 24-Hour Near Source Samples

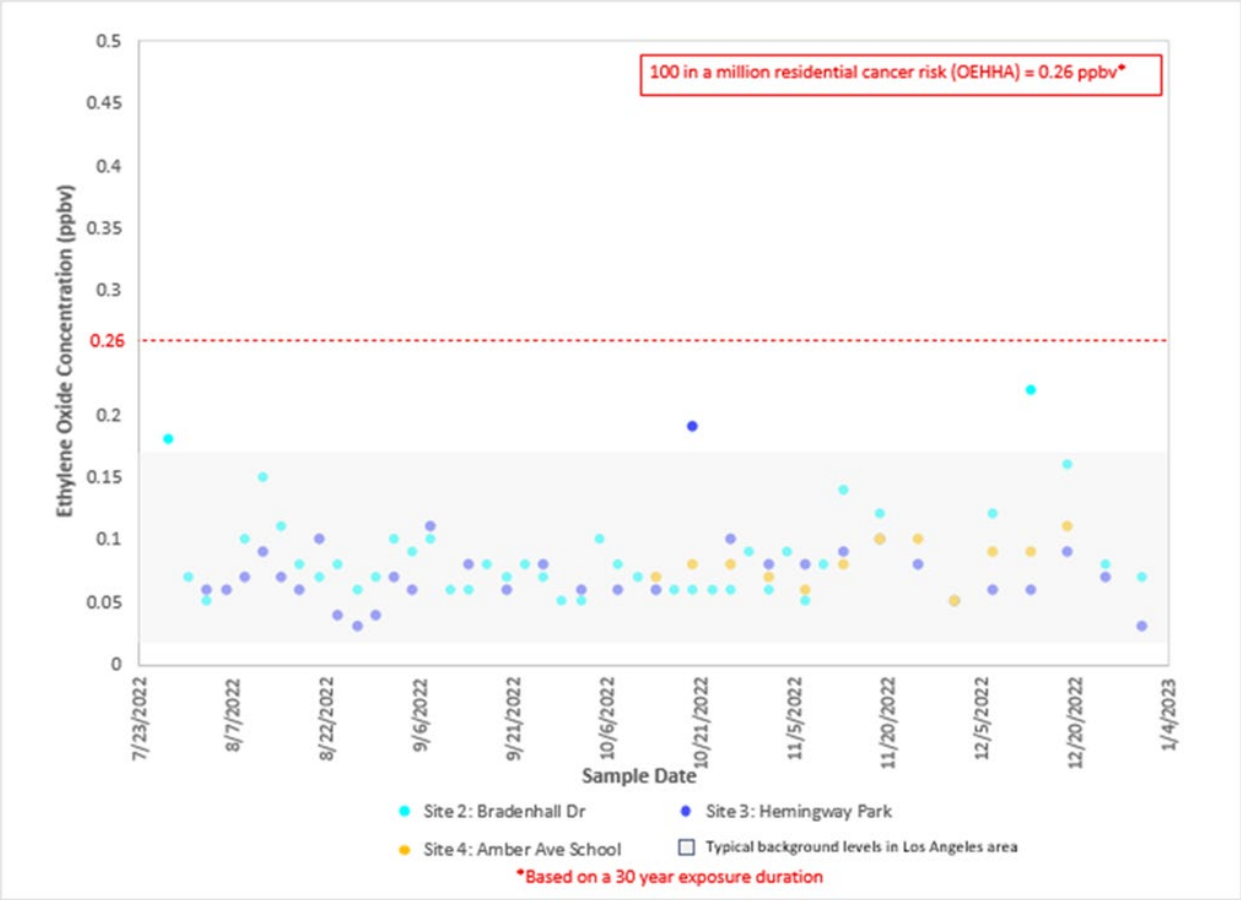

Figure 3-10: Plot of South Coast AQMD 24-Hour Community Samples

South Coast AQMD placed a monitor near the facility and worked with the City of Carson to identify locations to collect 24-hour samples in the nearest communities and school (Figures 3-8). Monitoring readings from these locations are shown in Figures 3-9 and 3-10, and indicate that almost all the readings from monitors in the nearby community (i.e. Sites #2, 3, and 4) are within expected background levels in the Los Angeles area. South Coast AQMD worked with Parter to identify the source(s) of EtO from their operations and identified actions to reduce emissions. The facility has implemented various measures including installing additional air pollution control equipment to reduce emissions of EtO.[20] After an extended period of time with monitoring results at or below background levels, monitors were removed from the Carson area with the last sample being taken on November 11, 2023.

Enforcement Action

Starting May 5, 2022, South Coast AQMD inspectors have issued several Notices of Violation (NOV) to the Sterigenics Vernon facility. Similarly, South Coast AQMD inspectors have issued several NOVs to the Sterigenics Ontario facility beginning June 6, 2022. These NOVs were issued for failing to maintain control equipment in good working condition and for public nuisance, in violation of South Coast AQMD's Rule 203, Rule 402, and California Health &

[20] http://www.aqmd.gov/home/news-events/community-investigations/parter

Safety Code § 41700. South Coast AQMD continues to conduct a full investigation and evaluation of all equipment to ensure that the Vernon facilities are adhering to permit conditions, meeting rule requirements and using proper emissions control equipment.

South Coast AQMD has also conducted multiple on-site inspections at Parter and conducted field operations in the surrounding area. On July 29, 2022, and April 18, 2024, South Coast AQMD issued Notices of Violations (NOVs) to Parter alleging violations of Rule 203 – Permit to Operate and Rule 402 – Nuisance. Following settlement discussions regarding the NOVs, South Coast AQMD and Parter reached a settlement agreement. Separately, the parties entered into a Memorandum of Understanding (MOU) to support the voluntary sharing and evaluation of data from Parter's existing continuous emissions monitoring system (CEMS) for ethylene oxide (EtO).

AB 2588 Air Toxics Hot Spot Program Efforts for EtO Facilities

The AB 2588 Air Toxics Hot Spots Program requires that facilities associated with health risks to residents or off-site workers above certain thresholds take action to reduce those risks. Facilities must prepare AB 2588 documents in accordance with the OEHHA methodology utilizing state-approved toxicity values. Currently, OEHHA has decided to withdraw its rulemaking intended to update the Cancer Potency Factor for EtO and plans to resume the rulemaking process at a later time. Upon finalization, future HRAs will utilize the update value.

Sterigenics Vernon

On June 7, 2022, South Coast AQMD designated Sterigenics Vernon as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers and required them to implement measures to reduce risks from the facility and provide detailed information on its toxic air emissions and potential health risks. The designation was based on sampling results taken from late April through early June 2022 showing an average concentration of 63.9 ppbv at Site #1 that is substantially higher than a concentration of 3.18 ppbv, which represents a cancer risk of 100 chances in-a-million to offsite workers using current OEHHA methodology and risk value for EtO.

The approved Early Action Reduction Plan set a temporary threshold for EtO emissions from the facility to ensure that the facility does not reverse any emission reductions that have been achieved while more permanent controls are put into place. If air monitoring results near the facility exceed the temporary thresholds, the facility must initiate curtailment of its operations. Repeated exceedances of the threshold may result in a temporary shutdown of the facility. Per the EARP, the facility began to collect ambient air samples near the facility on August 21, 2022. Sterigenics Vernon was required to curtail operations by 20% each day from March 4, 2023 to March 7, 2023 and from March 8, 2024 to March 14, 2024. Monitoring results during the curtailment period confirm that the reduction measure helped to immediately reduce EtO levels. Other early actions taken by Sterigenics Vernon include sealing of the building to prevent fugitive releases of EtO into the atmosphere, installing additional control equipment, and combining exhaust streams to allow for better dispersion of EtO emissions.

In addition to the early action reduction plan, the facility was required to submit an ATIR, conduct an HRA, and submit an RRP on an accelerated timeline. These documents have all been submitted by the facility.

South Coast AQMD staff identified deficiencies and rejected the ATIR on December 2, 2022. Sterigenics did not submit a revised ATIR, therefore South Coast AQMD modified the ATIR to

correct the deficiencies and approved it on May 26, 2023. Staff also identified deficiencies with the submitted HRA and rejected it on June 15, 2023. A revised HRA was received on August 15, 2023, which did not address all of the deficiencies. As a result, South Coast AQMD modified the HRA and it was approved as modified on June 12, 2024.

The modified HRA representing the 2021 inventory year indicated that Sterigenics Vernon posed a maximum cancer risk of 40.8 chances in-one-million for a residential receptor, based on a 30-year residential exposure, and a maximum cancer risk of 77.1 chances in-one-million for the worker receptor located immediately east of Sterigenics Vernon, based on a 25-year worker exposure. Since the HRA results exceeded the Notification Risk Level and the facility was designated as a Potentially High Risk Level facility, Sterigenics Vernon was required to notify the public about the health risk. Notices of the public notification meeting were sent out to businesses and residences in the area of impact. South Coast AQMD staff held a virtual public notification meeting on August 7, 2024, to explain the impact of Sterigenics Vernon's emissions on public health and to discuss next steps.

A revised RRP was submitted on July 12, 2024, which included all measures detailed in the EARP, a measure to combine all exhaust stacks into a single stack, a source testing requirement, and a measure to install additional controls for the scrubber. The revised RRP was conditionally approved on September 12, 2024, contingent upon the facility constructing a single stack at each location within one year of South Coast AQMD permit issuance or by April 18, 2025, and the facility incorporating source testing results for the PTEs into a risk assessment by September 12, 2026.

Sterigenics Ontario

On September 22, 2022, South Coast AQMD designated Sterigenics Ontario as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers. With this designation, Rule 1402 required the facility to implement measures to reduce risks and provide detailed information on its toxic air emissions and potential health risks. The designation was based on sampling results taken from mid-June through September 2022 showing average concentrations of ethylene oxide of 65.6 ppbv—substantially higher than a concentration of 3.18 ppbv, which represents a cancer risk of 100 chances in-one-million to offsite workers using current OEHHA methodology and risk value for EtO. Early actions taken by Sterigenics Ontario include adjusting the blower for the scrubber, combining exhaust streams to increase dispersion of EtO emissions, sealing of the building, and installing additional temporary control equipment. South Coast AQMD continues to work with Sterigenics Ontario on additional immediate and near-term actions to further reduce EtO emissions.

The approved Early Action Reduction Plan for Sterigenics Ontario also set a temporary threshold for EtO emissions from the facility. In April 2023, Sterigenics Ontario was required to temporarily shut down operations due to repeated exceedances of the thresholds. Also, the facility was required to curtail operations by 20% each day between June 23, 2023 and June 27, 2023. Sterigenics Ontario began to self-curtail operations where possible in order to remain below the thresholds and avoid another facility shut down.

In addition, the facility was required to submit an ATIR, conduct an HRA, and submit an RRP on an accelerated timeline. These documents have all been submitted by the facility.

South Coast AQMD staff identified deficiencies and rejected the ATIR on March 29, 2023. Sterigenics did not submit a revised ATIR, therefore South Coast AQMD modified the ATIR to correct the deficiencies and approved it on October 5, 2023. Staff also identified deficiencies with the submitted HRA and rejected it on October 31, 2023. A revised HRA was received on January 2, 2024, which again did not address all of the deficiencies. Therefore, staff began to modify the HRA in 2024 and plan to approve it as modified pursuant to Rule 1402(e)(2)D). Currently, the modified HRA is under OEHHA review and South Coast AQMD staff anticipates this approval to be completed in 2025.

Parter

On August 19, 2022, South Coast AQMD notified Parter that it may be designated as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers. Parter voluntarily shut down its operations on August 21, 2022 and worked with South Coast AQMD Engineering and Permitting to identify potential fugitive sources of EtO. This work resulted in the installation of new air pollution control equipment and facility modifications to meet the standards for a Permanent Total Enclosure (PTE) to control fugitive EtO emissions. Since monitored EtO concentrations have been significantly reduced at the fence line, South Coast AQMD has no immediate plans to designate Parter as a Potentially High Risk Level facility.

Engineering and Permitting Activity

Following the activities described above, staff noted many processes and areas at facilities that needed further controls. Many additional control systems were proposed at all three facilities.

Between May 25, 2022, and September 28, 2022, Sterigenics Vernon submitted permit applications to add a filtration system and dry beds at each building. On November 2, 2023, the facility submitted four permit applications to add a new dry bed scrubber to each building and to modify some of the air pollution control systems at the facility. Permits to construct for these applications were issued on April 30, 2024. As a result, the facility optimized the exhaust of current control equipment and will enclose each building to meet the standards of a PTE. These changes are designed to capture any potential fugitive emissions and increase the control of all emissions of EtO from the facility. The facility has since notified South Coast AQMD that the PTEs for both buildings have been constructed.

Additionally, on October 21, 2022, applications were submitted by Sterigenics Ontario to combine the exhaust streams of two existing control devices with the goal of achieving greater dispersion. This change was completed in July 2023. On October 31, 2023, the facility submitted three permit applications to modify their existing control equipment to include a PTE with negative air. Once installed, the PTE will be required to control at least 95% of EtO emissions from operations within the facility. Additionally, it will require the facility to maintain negative air pressure to prevent fugitive EtO emissions from escaping the building. The additional layer of controls will result in higher control efficiencies, which will be verified through Source Tests. Permits to Construct to modify the facility's existing two control systems to include a PTE were issued on July 19, 2024.

Similarly, Parter submitted an application on August 25, 2022, to enclose the areas containing the sterilization chambers, aeration rooms, post aeration room, process area, and staging area to meet the requirements of a PTE. The PTE operates under negative pressure with five dry bed scrubbers that are required to meet a control efficiency of 95%. The Permit to Construct was issued on September 21, 2022. Parter commenced operation of the new air pollution control equipment on

October 2, 2022, and completed the source test on the system on November 15, 2022. On May 2, 2024, the facility submitted two applications to modify the exhaust piping for two of the facility's air pollution control systems in order to install a Continuous Emissions Monitoring System (CEMS) unit for the entire facility's single stack. Permits to Construct were issued for these modifications on July 3, 2024.

Rule 1405 Development

During South Coast AQMD's monitoring efforts at these commercial EtO sterilization facilities, South Coast AQMD became aware of fugitive emissions from sources that were not previously known. Additionally, the investigation has identified that existing pollution controls will need to be upgraded and measures will be needed to reduce fugitive emissions. Rule 1405 was amended on December 1, 2023, to strengthen requirements for sterilization and storage facilities[21]. The updated rule applies to 15 sterilization facilities and one aeration-only facility. These facilities are required to upgrade existing controls or add new pollution controls and implement measures to monitor and minimize stack and fugitive emissions. The updated rule may also apply to 28 FDA-registered storage facilities that receive products sterilized by EtO, which would require monitoring of emissions at the fence line. More details related to Rule 1405 requirements can be found on the Rule 1405 webpage[22].

Next Steps

South Coast AQMD continues to work with Sterigenics on immediate and long-term actions, including measures to reduce EtO emissions, identification and mitigation of emission sources that are contributing to the elevated levels, and on-site testing at both the Vernon and Ontario facilities.

South Coast AQMD is committed to continuing work with these facilities to reduce EtO emissions and health risks within the agency's authority and is working closely with partner agencies to protect the health and safety of community members and workers who may be impacted by these facilities.

South Coast AQMD Commodity Fumigation Facility Activities

Methyl Bromide (MeBr) is a colorless, odorless pesticide commonly used to fumigate agricultural commodities to meet international import and export standards. In 2023, the California Air Resources Board (CARB) initiated ambient air monitoring near Hudson Elementary School in West Long Beach and detected elevated MeBr concentrations. In response, CARB formed an interagency working group in 2024 to evaluate potential health risks and identify and mitigate emission sources. In October 2024, South Coast AQMD launched an investigation targeting facilities within the South Coast Air Basin known to emit MeBr.[23] Two facilities near the monitoring site were flagged for further review along with three other facilities in South Los Angeles County, prompting on-site inspections by South Coast AQMD staff to assess equipment and operational practices. To foster transparency and community engagement, CARB hosted a public meeting on January 30, 2025, and South Coast AQMD hosted a follow-up public meeting on March 20, 2025, to share updates, respond to questions, and address concerns about MeBr emissions.

[21] https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1405.pdf
[22] https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1405
[23] https://www.aqmd.gov/home/news-events/community-investigations/fumigation-facilities

In parallel with these efforts, South Coast AQMD began issuing notification letters to all commodity fumigation facilities in the South Coast AQMD jurisdiction in November 2024, ensuring their participation in the AB 2588 program and informing them of reporting requirements outlined in the Emissions Inventory Criteria and Guidelines (EICG). Facilities with usage levels high enough to potentially cause offsite health impacts were required to submit an ATIR, which will support a HRA and potentially mitigation with an RRP, if deemed necessary. In addition, rulemaking will be conducted to address risks at commodity fumigation facilities with PAR 1495.

Chapter 4
Future Activities

AB 2588 staff will conduct AB 2588 related activities such as prioritizing facilities, review and approval of Air Toxic Inventory Reports, Health Risk Assessments, host public notification meetings, and continue to provide support to other South Coast AQMD departments and work with CARB to improve the implementation of the AB 2588 program.

4. Future Activities

AB 2588 Activities

In 2025, staff will prioritize approximately 95 facilities after comprehensive audits and notify those with high priority scores to prepare ATIRs or VRRPs, as necessary. An HRA, public notification, or RRP may be required if risks exceed regulatory thresholds.

Public notification is expected to occur for at least two facilities including Bowman Plating Co (18989), and R.J. Noble Company (19167). Staff will also review and, if necessary, update AB 2588 guidance documents to provide additional clarification on the process and requirements of the AB 2588 Program including the following:

- AB 2588 Voluntary Risk Reduction Plan Guidelines; and
- AB 2588 and Rule 1402 Supplemental Guidelines.

Other Activities

In addition to routine AB 2588 Program implementation activities, staff will:

- Begin to engage in the Department of Toxics Substances Control's (DTSC) SB 673 rulemaking which will fold existing health risks, community vulnerability, and cumulative impacts into DTSC's permitting process;
- Continue to provide support to rulemaking staff for toxics rules;
- Work with CARB and through the CAPCOA Toxics and Risk Managers Committee (TARMAC) to update CARB AB 2588 Guidelines and develop uniform reporting guidance for various industries;
- Work with CARB to develop guidance and outreach material for implementation of the EICG. This work will also include ensuring that reporting requirements under South Coast AQMD's AB 2588 Program and CARB's EICG are as streamlined as possible with other reporting requirements under CARB's CTR regulation and South Coast AQMD's AER program;
- Continue to work with CARB and through CAPCOA-TARMAC to develop HRA guidelines for the industry-wide category of auto body shops and provide training to South Coast AQMD personnel and the regulated community;
- Train new staff on the expanded emissions reporting under amended Rule 301 and CARB's CTR and EICG regulations;
- Track development of potential health risk value revisions by OEHHA, including potential revision to cancer risk from EtO; and
- Continue coordination with U.S. EPA and CARB staff to ensure AirToxScreen incorporates the best available local emissions data.

Rulemaking

South Coast AQMD staff are currently in the process of amending the following toxics rule:

- Proposed Amendments to Rule 1469 – Amendments to Rule 1469 may be needed to address potential changes with the CARB's Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations.
- Proposed Amendments to Rule 1420.2 – Emission Standards for Lead from Metal Melting Facilities. Proposed Amended Rule 1420.2 will update requirements to address arsenic

emissions to close a regulatory gap between Rule 1420 and Rule 1407 - Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Ferrous Metal Melting Operations. Additional amendments may be needed to address monitoring and post closure requirements.

South Coast AQMD staff are also expected to conduct rulemaking for the following toxics rules in 2025:

- Proposed Rule 1445 – Control of Toxic Emissions from Laser and Plasma Arc Metal Cutting
- Proposed Rule 1426.1 – Hexavalent Chromium Emissions from Metal Finishing Operations
- Proposed Rule 1435 – Control of Toxic Air Contaminant Emissions from Metal Heating Operations
- Proposed Rule 1495 – Commodity Fumigation

Appendix A – Description of Active AB 2588 Related Projects

This section includes tables that with details on active AB 2588 projects. Table A-1 lists the facilities that were prioritized in 2024 based on inventory year 2023. Note that the priority category of the facilities is subject to change and is considered "preliminary" until staff completes the auditing process. Tables A-2 and A-3 list facilities with ATIRs and/or HRAs, respectively, that are currently in progress or were approved in 2024. Tables A-4 and A-5 list facilities with VRRPs or RRPs. Lastly, for any active facilities that had a designation as a Potentially High Risk Level Facility or conducted public notification in 2024, a project overview is included at the end of this section.

Table A-1: Facilities Prioritized in 2024

Facility ID	Facility Name	City	Draft Priority Category
392	TAYLOR-DUNN MFG CO	ANAHEIM	Low
2526	CHEVRON USA INC	VAN NUYS	Low
2680	LA CO., SANITATION DISTRICT	WHITTIER	Low
2852	THE WALT DISNEY COMPANY	BURBANK	Low
3769	CALIF ST DEPT OF CORRECTIONS, CAL INS MEN	CHINO	Low
3968	TABC, INC	LONG BEACH	Low
4347	MT. SAN ANTONIO COMMUNITY COLLEGE	WALNUT	Low
4477	SO CAL EDISON CO	AVALON	High
5723	DUCOMMUN AEROSTRUCTURES INC	ORANGE	Low
7427	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	Intermediate
7730	CARPENTER CO	RIVERSIDE	Intermediate
8015	ANADITE INC	SOUTH GATE	Low
8309	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	Intermediate
8547	QUEMETCO INC	CITY OF INDUSTRY	Intermediate
8582	SO CAL GAS CO/PLAYA DEL REY STORAGE FAC	PLAYA DEL REY	Intermediate
10245	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	Low
11192	HI-SHEAR CORPORATION	TORRANCE	Low
11435	PQ CORPORATION	SOUTH GATE	Low
12036	HOLLIDAY TRUCKING, INC	RIALTO	Intermediate
13011	M.C. GILL CORP	EL MONTE	Intermediate
13433	SO ORANGE CO WASTEWATER AUTHORITY-RTP	LAGUNA NIGUEL	Intermediate
16642	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	Intermediate
16660	THE BOEING COMPANY	HUNTINGTON BEACH	Intermediate

Facility ID	Facility Name	City	Draft Priority Category
17301	ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	Intermediate
18452	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	Intermediate
20197	LAC/USC MEDICAL CENTER	LOS ANGELES	Intermediate
20280	METAL SURFACES INC	BELL GARDENS	Intermediate
22092	WESTERN TUBE & CONDUIT CORP	LONG BEACH	Low
22467	LEFIELL MFG CO	SANTA FE SPRINGS	Low
25638	BURBANK CITY, BURBANK WATER & POWER	BURBANK	Low
29110	ORANGE COUNTY SANITATION DISTRICT	HUNTINGTON BEACH	Intermediate
35302	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	Intermediate
35483	WARNER BROTHERS STUDIO FACILITIES	BURBANK	Intermediate
37603	SGL TECHNIC INC, POLYCARBON DIVISION	VALENCIA	Low
40034	BENTLEY PRINCE STREET INC	CITY OF INDUSTRY	Low
44577	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	High
45973	UNIVERSITY OF REDLANDS	REDLANDS	Intermediate
46268	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	High
49387	UNIV CAL, RIVERSIDE	RIVERSIDE	Intermediate
50310	WASTE MGMT DISP &RECY SERVS INC (BRADLEY	SUN VALLEY	Intermediate
70021	XERXES CORP (A DELAWARE CORP)	ANAHEIM	Low
82513	BREA CANON OIL COMPANY INC	HARBOR CITY	Low
94872	METAL CONTAINER CORP	MIRA LOMA	Intermediate
95535	HUNTINGTON BEACH CITY, WATER DIVISION	HUNTINGTON BEACH	Intermediate
101977	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	Intermediate
105598	SENIOR AEROSPACE SSP	BURBANK	Low
112684	COASTLINE HIGH PERFORMANCE COATINGS,LTD.	GARDEN GROVE	Low
116480	LA CITY, BUREAU OF STREET MAINTENANCE	LOS ANGELES	High
126191, 126197	STERIGENICS US INC	VERNON	High
126498	STEELSCAPE, INC	RANCHO CUCAMONGA	Low
126544	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	Low
127299	WILDFLOWER ENERGY LP/INDIGO GEN., LLC	NORTH PALM SPRINGS	Low
134018	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	Low
137471	GRIFOLS BIOLOGICALS INC	LOS ANGELES	Low
140811	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	High

Facility ID	Facility Name	City	Draft Priority Category
145232	AIR INDUSTRIES COMPANY, LLC	GARDEN GROVE	Intermediate
148925	CHERRY AEROSPACE	SANTA ANA	Intermediate
151798	TESORO REFINING AND MARKETING CO, LLC	CARSON	High
159492	WOODWARD HRT- VALENCIA	VALENCIA	Low
160916	FXI, INC.	ORANGE	Intermediate
167981	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	Low
169754	SO CAL HOLDING, LLC	HUNTINGTON BEACH	High
169990	SPS TECHNOLOGIES, LLC	GARDENA	Low
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	Intermediate
171109	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	High
174655	TESORO REFINING & MARKETING CO, LLC	CARSON	High
174694	TESORO LOGISTICS, CARSON CRUDE TERMINAL	CARSON	Intermediate
174703	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	Low
174710	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	Low
174711	TESORO LOGISTICS, HATHAWAY TERMINAL	SIGNAL HILL	Intermediate
176377	TESORO LOGISTICS MARINE TERMINAL 2	LONG BEACH	Low
181667	TORRANCE REFINING COMPANY LLC	TORRANCE	Intermediate
182610	ELITE COMFORT SOLUTIONS	COMMERCE	High
182752	TORRANCE LOGISTICS COMPANY LLC	VERNON	Low
182753	TORRANCE LOGISTICS COMPANY, LLC	TERMINAL ISLAND	Intermediate
182970	MATRIX OIL CORP	LA HABRA HEIGHTS	Intermediate
184301	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	Intermediate
185575	BRIDGE ENERGY, LLC	BREA	Low
186519	EMBEE PROCESSING	SANTA ANA	Intermediate
187823	KIRKHILL INC	BREA	Low
190051	BRIDGE POINT LONG BEACH LLC	LONG BEACH	Intermediate
194733	LGM PHARMA	IRVINE	Low
196103	SHADOW WOLF ENERGY, LLC	SANTA CLARITA	Low
196724	E&B NATURAL RESOURCES MANAGEMENT CORP	WILMINGTON	Low
199197	TEX-TECH ENGINEERED COMPOSITES INC	GARDENA	Intermediate
200797	WESTLAKE ROYAL ROOFING LLC	CORONA	Intermediate
201938	AIR PRODUCTS MANUFACTURING, LLC	PARAMOUNT	Intermediate
800003	HONEYWELL INTERNATIONAL INC	TORRANCE	Intermediate

Facility ID	Facility Name	City	Draft Priority Category
800022	CALNEV PIPE LINE, LLC	BLOOMINGTON	Intermediate
800026	ULTRAMAR INC	WILMINGTON	Intermediate
800030	CHEVRON PRODUCTS CO.	EL SEGUNDO	High
800032	CHEVRON USA INC	MONTEBELLO	Intermediate
800037	DEMENNO/KERDOON	COMPTON	Intermediate
800056	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	Low
800057	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	Intermediate
800067	THE BOEING COMPANY	EL SEGUNDO	Intermediate
800079	PETRO DIAMOND TERMINAL CO	LONG BEACH	Low
800080	LUNDAY-THAGARD CO DBA WORLD OIL REFINING	SOUTH GATE	Low
800113	ROHR, INC.	RIVERSIDE	Low
800129	SFPP, L.P.	BLOOMINGTON	High
800149	US BORAX INC	WILMINGTON	Low
800150	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	Low
800170	LA CITY, DWP HARBOR GENERATING STATION	WILMINGTON	Intermediate
800189	DISNEYLAND RESORT	ANAHEIM	Intermediate
800193	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	Intermediate
800198	ULTRAMAR INC	WILMINGTON	Low
800202	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	Intermediate
800214	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	Intermediate
800234	LOMA LINDA UNIV	LOMA LINDA	Intermediate
800288	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	Intermediate
800320	AMVAC CHEMICAL CORP	LOS ANGELES	Intermediate
800325	TIDELANDS OIL PRODUCTION CO	LONG BEACH	Low
800327	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	Intermediate
800330	THUMS LONG BEACH	LONG BEACH	Intermediate
800372	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	Intermediate
800408	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	Intermediate
800409	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	Intermediate
800436	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	High

Table A-2: Active ATIR Project

Facility ID	Facility Name	City	Inventory Year	Status
4988	SULLY MILLER CONTRACTING CO.	South Gate	2021	Approved*
11119	THE GAS CO./ SEMPRA ENERGY	Pico Rivera	2021	In Progress
15504	SCHLOSSER FORGE COMPANY	Rancho Cucamonga	2018	In Progress
19167	R J. NOBLE COMPANY	Orange	2017	Approved, HRA required
22911	CARLTON FORGE WORKS	Paramount	2022	In Progress
44577	LONG BEACH CITY, SERRF PROJECT	Long Beach	2017	In Progress
46268	CALIFORNIA STEEL INDUSTRIES INC	Fontana	2023	In Progress
60384	LOS ANGELES BY-PRODUCTS	Sun Valley	2017	In Progress
100145	HARBOR FUMIGATION INC	San Pedro	2022	In Progress
106897	AG-FUME SERVICES INC	San Pedro	2022	In Progress
116480	LA CITY, BUREAU OF STREET MAINTENANCE	Los Angeles	2023	In Progress
126544	PAC FOUNDRIES-INDUSTRY	City of Industry	2023	In Progress
134943	ARCONIC GLOBAL FASTENERS & RINGS INC	Torrance	2018	In Progress
160437	SOUTHERN CALIFORNIA EDISON	Redlands	2022	Approved, HRA required
164581	FLARE GROUP DBA AVIATION EQUIP PROCESS	Costa Mesa	2018	Approved*
169754	SO CAL HOLDING, LLC	Huntington Beach	2023	In Progress
175222	COASTLINE METAL FINISHING INC	Garden Grove	2021	In Progress
186519	EMBEE PROCESSING	Santa Ana	2019	Approved*
205376	AG-FUME SERVICES, INC	Long Beach	2022	In Progress
205451	SPF TERMINALS, INC	Long Beach	2022	In Progress
800037	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	Compton	2019	Approved*
800129	SFPP, L.P.	Bloomington	2019	In Progress

*Finalized priority score is between 1 and 10 and facility is reprioritized as intermediate.

Table A-3: Active HRA Projects

Facility ID	Facility Name	City	Inventory Year	Status
7730	CARPENTER CO	Riverside	2019	Approved, RRP required
17953	PACIFIC CLAY PRODUCTS INC	Lake Elsinore	2017	Complete
18989	BOWMAN PLATING CO INC	Compton	2019	Approved, RRP required
19167	R.J. NOBLE COMPANY	Orange	2017	In Progress
114264	ALL AMERICAN ASPHALT	Irwindale	2017	In Progress
126060	STERIGENICS US, LLC	Ontario	2021	In Progress
126191, 126197	STERIGENICS US, INC	Vernon	2021	Approved, RRP required
134943	ARCONIC GLOBAL FASTENERS & RINGS INC	Torrance	2018	In Progress
148146	ALL AMERICAN ASPHALT	Perris	2017	In Progress
160437	SOUTHERN CALIFORNIA EDISON	Redlands	2022	In Progress
185352	SNOW SUMMIT, LLC.	Big Bear Lake	2021	Complete

Table A-4: Active VRRP Project

Facility ID	Facility Name	City	Inventory Year	Plan Status	Implementation Progress
201938	AIR PRODUCTS MANUFACTURING	Paramount	2019	Approved	Complete
800026	ULTRAMAR INC	Wilmington	2015	Approved	Complete
800236	LA CO. SANITATION DIST	Carson	2021	In Progress	N/A
800436	TESORO REFINING AND MARKETING CO, LLC	Wilmington	2015	In Progress	N/A

Table A-5: Active RRP Project

Facility ID	Facility Name	City	Inventory Year	Plan Status	Implementation Progress
7730	CARPENTER CO.	Riverside	2019	Approved	In Progress
11818	HIXSON METAL FINISHING	Newport Beach	2013	Approved	Complete
18989	BOWMAN PLATING CO INC	Compton	2019	In Progress	N/A
23752	AEROCRAFT HEAT TREATING CO INC	Paramount	2016	Approved	Complete
112684	COASTLINE HIGH PERFORMANCE COATINGS, LTD.	Garden Grove	2019	Approved	In Progress
126060	STERIGENICS US, LLC.	Ontario	2021	Under Review	N/A
126191, 126197	STERIGENICS US, INC.	Vernon	2021	Approved	In Progress
140871	PAC RANCHO, INC.	Rancho Cucamonga	2018	Approved	In Progress
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	Wilmington	2015	Approved	Complete

Carpenter Co. (ID 7730) – Riverside

Carpenter Co. (Carpenter) is a manufacturer of flexible polyurethane foam products located in Riverside. The facility mixes various ingredients to produce foam slabs through chemical reactions. Carpenter Co. also recycles old foam pieces into new slabs. Equipment operated at this site includes storage tanks, mixers, a foam reprocessing system, a flexible foam manufacturing system and various air pollution control devices.

On March 5, 2021, South Coast AQMD staff sent a letter requiring Carpenter to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2019 annual emissions inventory. The main toxic air contaminant contributing to the priority score was toluene diisocyanate (TDI) from the Rebond Line which recycles and repurposes used foam.

On August 3, 2021, Carpenter submitted the ATIR. Following a thorough review, South Coast AQMD staff requested several revisions, and the final ATIR was received by staff on July 6, 2022. On August 17, 2022, the ATIR was approved by South Coast AQMD and Carpenter was notified to prepare an HRA.

Carpenter submitted the initial HRA on November 14, 2022, however staff identified several deficiencies. Revisions were requested by staff and the final HRA was received on May 3, 2023. During the review, South Coast AQMD staff noted minor deficiencies that did not impact threshold exceedance results, which included misreported worker adjustment factors in the body of the report, miscalculated cancer burden results, and a misidentified driver of risks. The HRA was submitted to OEHHA for review and was conditionally approved by OEHHA on September 26, 2023.

The HRA representing the 2019 inventory year indicated that Carpenter contributed a maximum chronic hazard index of 2.28 for a nearby residential receptor, a maximum chronic hazard index of 1.92 for a nearby worker receptor, and a maximum 8-hour chronic hazard index of 3.19 for a nearby worker receptor. The chronic risks were mainly due to TDI emissions from the Rebond Line. The HRA was conditionally approved on February 22, 2024.

Since the HRA results were above the Notification Risk Level in Rule 1402, Carpenter was required to notify the public about the health risk. Notices of the public notification meeting were sent out to over 200 people in the area of impact. South Coast AQMD staff held a virtual public notification meeting on April 25, 2024, to explain the impact of Carpenter's emissions on public health and to discuss next steps.

Since the HRA results were also above the Action Risk Level in Rule 1402, Carpenter was required to submit an RRP. The RRP was received on June 28, 2024, and proposed a Risk Reduction Measure (RRM) for the Rebond Line to completely eliminate the use of TDI within the process and replace it with 4,4'-methylenediphenyl diisocyanate (MDI). To ensure the RRM is permanent and enforceable, a permit application to prohibit the use of TDI in the Rebond Line was submitted to South Coast AQMD on June 19, 2024. The RRP was conditionally approved on October 23, 2024, contingent upon Carpenter being granted a new Permit to Operate for the Rebond Line, which must include a condition prohibiting the use of TDI. As of the end of 2024, the permit modification application was under review by South Coast AQMD staff.

Coastline High Performance Coatings, Ltd. (ID 112684) – Garden Grove

Coastline High Performance Coatings (Coastline HPC) is a manufacturer of satellite components located in Garden Grove. The facility operates paint spray booths, a dip and etch tank line, and various Rule 219 exempt equipment.

On February 5, 2020, South Coast AQMD staff sent a letter requiring Coastline HPC to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2019 annual emissions inventory. The main toxic air contaminant contributing to the priority score is hexavalent chromium from coating operations.

On September 24, 2020, Coastline HPC submitted the ATIR. After staff's review, South Coast AQMD staff requested several revisions, and the final ATIR was received by staff on November 11, 2020.

On December 18, 2020, staff sent a letter informing Coastline HPC that they may be designated as a Potentially High Risk Level facility based on the preliminary risk assessment, and a pre-designation conference was held on January 28, 2021. On February 4, 2021, staff sent a letter informing the facility that they had been designated as a Potentially High Risk Level facility and would be required to submit an Early Action Reduction Plan, HRA, and RRP on an accelerated timeline.

The Early Action Reduction Plan was received on April 28, 2021, and detailed the actions that Coastline HPC had taken to immediately reduce risk. These actions included ceasing the use of coatings containing hexavalent chromium in the paint spray booths that were not equipped with high efficiency particulate arresting (HEPA) filters and submitting permit modification application to South Coast AQMD for HEPA filters to be installed on two additional paint spray booths. Permit modification applications to install HEPA filters in two additional paint spray booths were received on December 29, 2020, and April 16, 2021.

Coastline HPC submitted the HRA on July 14, 2021, and the RRP on July 29, 2021, in accordance with the required deadlines. A revised RRP was later received on September 30, 2021. South Coast AQMD staff reviewed the HRA and found a discrepancy in the methodology used to calculate the cancer burden. On November 18, 2021, staff updated the cancer burden calculation, which did not result in any significant increase. The HRA was submitted to OEHHA for review and was conditionally approved by OEHHA on December 15, 2021.

The HRA representing the 2019 inventory year indicated that Coastline HPC posed a maximum cancer risk of 46 chances in-one-million for a residential receptor located at the corner of Kirby Way and Hardee Way, based on a 30-year residential exposure, and 1,091 chances in-one-million for the worker receptor located immediately east of Coastline HPC, based on a 25-year worker exposure. The cancer risk was mainly due to hexavalent chromium emissions from paint spray booth operations. The HRA and RRP were conditionally approved by South Coast AQMD on June 7, 2022. The approved RRP required Coastline HPC to install HEPA filters on two paint spray booths once modification applications had been approved, as well as replacing the contaminated ductwork for this equipment. On July 26, 2022, the contaminated ductwork was removed, disposed of as hazardous waste, and replaced with new ductwork.

Since the HRA results were above the Significant Risk Level in Rule 1402, Coastline HPC was required to notify the public about the health risk. Notices of the public notification meeting were sent out to over 1,000 people in the area of impact. South Coast AQMD staff held a virtual public

notification meeting on August 4, 2022, to explain the impact of Coastline HPC's emissions on public health and to discuss next steps.

On August 8, 2023, an annual progress report was received which stated that the facility was on track to implement the remaining reduction measures by the deadline of June 7, 2024. On June 28, 2024, a Permit to Construct was issued to install HEPA filters on one of the paint spray booths. The other permit modification application to install HEPA filters on an additional paint spray booth was under review by South Coast AQMD staff as of the end of 2024. The remaining Permit to Construct is anticipated to be issued in early 2025.

On August 23, 2024, a South Coast inspector conducted a compliance inspection at the facility. The inspector verified that the HEPA filters were installed on June 28, 2024, and issued a Notice of Violation for failing to comply with the Rule 1402 implementation deadline.

Pac Rancho, Inc. (ID 140871) – Rancho Cucamonga

Pac Rancho Inc. (Pac Rancho) located in the city of Rancho Cucamonga, manufactures components for the aerospace industry. The facility uses sand and permanent mold castings in aluminum and magnesium alloys, and investment castings in numerous ferrous, non-ferrous, and super alloys.

On September 4, 2019, South Coast AQMD staff sent a letter requiring Pac Rancho to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2018 annual emissions report. The facility submitted the Initial Information for the ATIR in November 2019 and the ATIR on February 21, 2020. South Coast AQMD staff provided several comments in April 2020. A revised ATIR was submitted on June 23, 2020. South Coast AQMD staff approved the ATIR on August 7, 2020, and notified the facility to prepare and submit a HRA by November 5, 2020. Based on preliminary results from the HRA, South Coast AQMD pre-designated Pac Rancho as a Potentially High Risk Level Facility on March 11, 2021. South Coast AQMD and Pac Rancho held a pre-designation meeting to discuss possible solutions for reducing risk as well as options for source testing to obtain site specific emission factors. After pre-designating Pac Rancho as a Potentially High Risk Level Facility, a virtual tour of the facility was scheduled on April 7, 2021. During the virtual tour, South Coast AQMD staff discovered heat treating operations that were not originally reported in the ATIR. As a result of these findings, the HRA and corresponding ATIR were rejected on September 15, 2021. Pac Rancho later provided information about the heat treating operations and it was determined the heat treating occurs at a low enough temperature that process emissions would be negligible. Additionally, South Coast AQMD staff took samples from the quench tanks and results showed negligible levels of hexavalent chromium. Therefore, the revised ATIR would only make minor corrections to metal grinding emissions calculations. On October 15, 2021, Pac Rancho submitted the revised ATIR which ultimately revised some minor grinding calculations. South Coast AQMD Approved the revised ATIR on November 16, 2021.

Pac Rancho also elected to move forward with source testing the steel melting furnace and submitted a protocol on May 10, 2021. The protocol was approved on July 14, 2021, but due to technical issues during the scheduled test, the facility had to stop the test and submit a revised protocol. The revised protocol was submitted on October 19, 2021, and was issued an amended approval from South Coast AQMD on November 2, 2021. Source testing of the furnace took place in January 2022 and after submittal of the report, the source test report was ultimately approved on December 28, 2022. Pac Rancho may utilize the results of the source test in the inventory for the RRP, if deemed necessary, consistent with South Coast AQMD policy.

On November 15, 2021, Pac Rancho submitted the revised HRA. South Coast AQMD reviewed the submittal and provided comments on December 17, 2021. After reviewing the revised HRA, South Coast AQMD submitted the HRA to OEHHA for review on February 24, 2022. Upon receiving comments from OEHHA, South Coast AQMD determined that certain modeling assumptions used for the HRA were not consistent with OEHHA guidelines. As a result, South Coast AQMD staff notified the facility that an internal modification and approval of the HRA would take place in accordance with Rule 1402. On March 3, 2023, South Coast AQMD approved the HRA as modified. The modified HRA indicated that Pac Rancho posed a maximum cancer risk of 38.7 chances in-one-million at the nearest worker receptor. The HRA also yielded hazard indices of 4.48, 2.87, and 21.26 for worker, 8-hour, and acute non-cancer risk scenarios, respectively. These risks exceeded both the public notification and risk reduction thresholds. Pac Rancho provided public notification to approximately 45 addresses and South Coast AQMD held a virtual public notification meeting on May 2, 2023.

Pac Rancho submitted an RRP on July 5, 2023, but South Coast AQMD rejected the submittal due to a number of deficiencies. After the deficiencies were corrected in a final February 9, 2024, submittal, South Coast AQMD approved the RRP on March 13, 2024. The approved RRP utilized source testing results on the metal melting operations to more accurately characterize toxic air emissions. Furthermore, the RRP required Pac Rancho to upgrade the existing dust collection system controlling metal grinding operations to HEPA with a rated control efficiency of 99.97%. Pac Rancho is currently going through the permitting process to satisfy the requirements of the RRP.

Sterigenics US, LLC (ID 126060) – Ontario

Sterigenics US, LLC (Sterigenics Ontario) conducts sterilization of medical equipment using EtO in gaseous form. The facility operates sterilization chambers, aeration rooms, a wet scrubber, a catalytic oxidizer and a boiler.

As a result of elevated monitored levels of EtO in the vicinity of where Sterigenics Ontario is located in addition to facility visit by South Coast AQMD indicating potential sources of EtO fugitive emissions, on September 7, 2022, staff sent a letter informing Sterigenics Ontario that they may be designated as a Potentially High Risk Level facility. A pre-designation conference was held on September 27, 2022, and the facility was officially designated as a Potentially High Risk Level facility on September 29, 2022. This designation requires the facility to submit an Early Action Reduction Plan (EARP), ATIR, HRA and RRP on an accelerated timeline.

The initial information for the ATIR was received on November 1, 2022, and detailed how the facility plans to calculate emissions for the ATIR. South Coast AQMD staff reviewed the information and requested that different emissions calculation methodologies be used to prepare the ATIR.

The EARP was received on December 28, 2022, and detailed the actions that Sterigenics Ontario would take to immediately reduce risk. These actions included, but are not limited to, sealing off the building, directing indoor ambient air towards control equipment, exploring additional control equipment that could reduce emissions, conducting weekly fenceline ambient air monitoring, and the possibility to curtail EtO usage based on monitoring results. The EARP was approved by South Coast AQMD staff on April 7, 2023.

The ATIR was received on February 28, 2023, and after a review by staff was rejected on March 29, 2023, requiring resubmittal by April 28, 2023. The main reason for the ATIR rejection was because the methodology used to estimate fugitive emissions did not meet Rule 1402 requirements. A revised ATIR was not received, therefore South Coast AQMD staff modified the ATIR and approved as modified pursuant to Rule 1402 (d)(4)(D) on October 5, 2023.

The HRA and RRP were received on March 28, 2023. After a review by staff, the HRA was rejected on October 31, 2023, requiring resubmittal by January 2, 2024. The main reason the HRA was rejected was because it was not based on the approved ATIR. Therefore, staff began to modify the HRA in 2024 and plan to approve it as modified pursuant to Rule 1402(e)(2)D). Currently, the modified HRA is under OEHHA review and South Coast AQMD staff anticipates this approval to be completed in 2025.The RRP was under review by South Coast AQMD staff as of the end of 2024.

On December 29, 2023, a request to amend the EARP was submitted and staff began discussions with Sterigenics Ontario to negotiate the updated terms. The amended EARP was approved on February 22, 2024, and included updated curtailment requirements.

Sterigenics US, Inc. (ID 126191 and 126197) – Vernon

Sterigenics US, LLC (Sterigenics Vernon) conducts sterilization of medical equipment using EtO in gaseous form. The facility operates sterilization chambers, aeration rooms, wet scrubbers, catalytic oxidizers and boilers. While the facility is currently permitted under two separate IDs, the operations are contiguous and therefore treated as a single facility.

On May 6, 2022, staff sent a letter informing Sterigenics Vernon that they may be designated as a Potentially High Risk Level facility based on elevated monitored EtO levels collected in and around the facility. A pre-designation conference was held on May 26, 2022, and the facility was officially designated as a Potentially High Risk Level facility on June 7, 2022. This designation requires the facility to submit an EARP, ATIR, HRA and RRP on an accelerated timeline.

The initial information for the ATIR was received on July 7, 2022, detailing how the facility plans to calculate emissions for the ATIR. South Coast AQMD staff reviewed the information and requested revisions to the emissions calculation methodologies for the preparation of the ATIR.

The Early Action Reduction Plan was received on September 2, 2022, and detailed the actions that Sterigenics Vernon had taken and would take to immediately reduce risk. These actions included, but are not limited to, sealing off the building, directing indoor ambient air towards control equipment, exploring additional control equipment that could reduce emissions, conducting weekly fenceline monitoring, and the possibility to curtail EtO usage based on the monitoring results. The EARP was approved by South Coast AQMD staff on September 9, 2022.

The ATIR was received on November 4, 2022, and after a review by staff was rejected on December 2, 2022, requiring resubmittal by January 3, 2023. The main reason for the ATIR rejection was because the methodology used to estimate fugitive emissions did not meet Rule 1402 requirements. A revised ATIR was not received, therefore South Coast AQMD staff modified the ATIR and approved as modified pursuant to Rule 1402 (d)(4)(D) on May 26, 2023.

The HRA and RRP were received on December 6, 2022. After a review by staff, the HRA was rejected on June 15, 2023, requiring resubmittal by August 15, 2023. The main reason the HRA was rejected was because it was not based on the approved ATIR. A revised HRA was received on August 15, 2023. After a review by staff, the revised HRA was also found to be deficient mainly because it was not based on the approved ATIR. Therefore, staff modified the HRA pursuant to Rule 1402(e)(2)D).

On December 29, 2023, a request to amend the EARP was submitted and staff began discussions with Sterigenics Vernon to negotiate the updated terms. The amended EARP was approved on February 6, 2024, and included updated curtailment requirements.

On June 12, 2024, after OEHHA finalized their review, staff approved the modified HRA and requested revisions to the RRP submittal. A revised RRP was submitted on July 12, 2024, which included all measures detailed in the EARP, a measure to combine all exhaust stacks into a single stack, a source testing requirement, and a measure to install additional controls for the scrubber.

The modified HRA representing the 2021 inventory year indicated that Sterigenics Vernon posed a maximum cancer risk of 40.8 chances in-one-million for a residential receptor, based on a 30-year residential exposure, and a maximum cancer risk of 77.1 chances in-one-million for the worker receptor located immediately east of Sterigenics Vernon, based on a 25-year worker exposure. The cancer risk was mainly due to EtO emissions from sterilization operations. Since the HRA results exceeded the Notification Risk Level, Sterigenics Vernon was required to notify the public about the health risk. Notices of the public notification meeting were sent out to businesses and residences in the area of impact. South Coast AQMD staff held a virtual public notification meeting on August 7, 2024, to explain the impact of Sterigenics Vernon's emissions on public health and to discuss next steps.

The revised RRP was conditionally approved on September 12, 2024, contingent upon the facility constructing a single stack at each location within one year of South Coast AQMD permit issuance or by April 18, 2025, and the facility incorporating source testing results for the PTEs into a risk assessment by September 12, 2026.

Appendix B – Health Risks from Facilities with an Approved HRA

The tables in Appendix B list the facilities and the health risks identified in their HRAs or RRPs as reviewed and approved by South Coast AQMD staff. Risks presented in these tables were calculated based on guidance that was available from OEHHA at the time of HRA approval. For example, the health risks presented in this appendix for facilities with HRA approval date prior to 2015 do not include the health risk calculation methodologies (2015 OEHHA Risk Assessment Guidelines) that account for the differences in children's breathing rates and place greater emphasis on their susceptibility to cancer risk in comparison to adults. The health risks in all HRAs finalized by South Coast AQMD staff in 2015 were recalculated to reflect the 2015 OEHHA Risk Assessment Guidelines. Additionally, facilities that have elected to participate in the Voluntary Risk Reduction Program and have an approved VRRP are listed in Table C-2.

Table B-1 lists the facilities in order of their cancer risks and Table B-2 lists the facilities ordered by facility ID. The listed health risks are from an approved HRA, unless an approved RRP has been fully implemented. In those instances, the listed health risks reflect the health risks after the implementation of the RRP. Appendix C lists the status of the facility's RRP and is presented by facility ID. It also provides the last known status of each facility as follows:

"A" – Active (note that facilities with this status may not be in operation currently)

"O" – Out of business or inactive (Out of business or inactive facilities have been retained for historical purposes since staff occasionally receives public inquiries regarding these facilities)

Facilities may undergo change of ownership and could have different name and facility ID numbers. In these cases, the facility ID numbers and facility names are updated.

The following thresholds are identified in South Coast AQMD Rule 1402 — Control of Toxic Air Contaminants from Existing Sources:

Thresholds	Cancer Risk in MM	Acute, Chronic HI	Cancer Burden
Significant Risk Level	≥ 100	≥ 5.0	N/A
Action Risk Level	≥ 25	≥ 3.0	≥ 0.5
Notification Risk Level	≥ 10	≥ 1.0	N/A
Voluntary Risk Threshold	≥ 10	≥ 1.0	N/A
Exemption Level	< 1	< 0.1	N/A

Table B-1: Risks from Facilities with an Approved HRA

Table B-1
Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
18989	A	BOWMAN PLATING CO INC (e)	COMPTON	673	0.14	2.89	0.8	2024
126191, 126197	A	STERIGENICS US, INC. (e)	LOS ANGELES	77.1	0.11	0	0.15	2024
140871	A	PAC RANCHO, INC. (e)	RANCHO CUCAMONGA	38.76	0	21.26	4.48	2023
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	24.5	0.43	0.44	0.15	2020
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	22	0.26	1.3	0.07	2020
122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21	ND	0.1	0.4	2000
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.6	0.3	2009
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0	0.3	2008
165192	O	TRIUMPH AEROSTRUCTURES, LLC	HAWTHORNE	19.7	ND	0.64	0.24	1999
187823	A	KIRKHILL INC	BREA	18.8	0.07	0.06	0.11	2019
11142	A	KEYSOR-CENTURY CORP	SAUGUS	17	ND	0.5	0.1	2000
22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
35302	A	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	14	0.02	0.1	0.1	2000
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
113873	A	MM WEST COVINA	WEST COVINA	13.3	0.31	1.7	0.98	2020
23907	I	JOHNS MANVILLE CORP	CORONA	13	ND	0.4	2.7	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12	ND	0.4	0.1	2000
4477	A	SO CAL EDISON CO	AVALON	11.8	0.05	0.44	0.02	2020
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.3	0.4	2013
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0	0.1	2000
101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0	0.1	2000

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148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.1	0.2	1999
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.3	0.1	2000
187165	CO	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0	0	2002
511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0	2020
15504	A	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	9.5	0.07	1.59	1.11	2002
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0	0	2000
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.1	0	2001
10510	A	GREGG INDUSTRIES INC	EL MONTE	9.4	ND	0.6	0.6	2008
62897	O	NORTHROP GRUMMAN CORP, MASD	PICO RIVERA	9.4	ND	1	0.5	2000
155828	O	GARRETT AVN. SVCS. LLC DBA STANDARD AERO	LOS ANGELES	9.3	ND	0.19	0.25	2002
8582	A	SO CAL GAS CO/PLAYA DEL REY STORAGE FAC	PLAYA DEL REY	9.2	0	0.46	0.02	2019
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	9.2	ND	0.97	0.07	2018
42922	O	CMC PRINTED BAG INC	WHITTIER	9	ND	0	0	1995
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9	ND	0	0	1994
169990	A	SPS TECHNOLOGIES, LLC	GARDENA	8.9	ND	0.1	0.1	1999
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.2	0.1	1997
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0	0	1995
2680	A	LA CO., SANITATION DISTRICT	WHITTIER	8.6	ND	0	0	1999
7203	O	HESSCO IND INC	LA HABRA	8.6	ND	0	0	1995
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0	0	0.2	2002
194431	CO	GC HUNTINGTON PARK, LLC	HUNTINGTON PARK	8.5	ND	0	0	2000
800057	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	8.5	ND	0	0.1	1999

Table B-1
Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0	0.2	1998
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.1	0	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.2	0.1	1998
800054	A	GATX RAIL CORP	SAN PEDRO	8	ND	0.3	0.5	1997
3609	A	AL'S PLATING CO INC	LOS ANGELES	7.8	ND	0.3	0.2	1999
37603	A	SGL TECHNIC LLC	VALENCIA	7.8	ND	0	0.4	1998
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.1	0.1	2001
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0	0.8	0.3	2008
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.2	0.5	2013
18294	A	NORTHROP GRUMMAN SYSTEMS CORP	EL SEGUNDO	7.6	ND	0.13	0.05	1999
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.2	0	1997
169754	A	SO CAL HOLDING, LLC	HUNTINGTON BEACH	7.6	0.02	0.02	0.04	2019
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.1	0	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.7	0.4	2007
800032	A	CHEVRON USA INC	MONTEBELLO	7.5	0.14	0	0.2	1999
800150	A	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	7.4	0.02	0.3	0	2008
108701	I	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.1	0.1	2000
174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.3	0.1	2000
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0	0.1	1998
800026	A	ULTRAMAR INC	WILMINGTON	7.2	0.18	0.7	0.2	2012
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.9	0	2007
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.2	0.1	2007

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8547	A	QUEMETCO INC	CITY OF INDUSTRY	7.1	0.45	0.09	0.69	2016
27343	O	CON AGRA INC, GILROY FOODS DBA	SANTA ANA	7.1	ND	0.2	0.1	1995
166587	O	THE BOEING COMPANY	HUNTINGTON BEACH	7	ND	0	0	1995
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0	0.1	2000
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0	0.9	0.3	2011
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0	0.1	1999
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0	0.2	1997
171109	A	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	6.6	0.11	0	0.3	2011
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
6643	O	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0	0.1	2007
11726	O	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.1	0.6	1999
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0	0.1	2002
168088	O	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.1	1.6	1995
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0	0	1997
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	6.4	0.02	0.01	0.08	2015
200797	A	WESTLAKE ROYAL ROOFING LLC	CORONA	6.4	0	0.51	2.72	2018
800066	CO	HITCO CARBON COMPOSITES INC	GARDENA	6.4	ND	0.3	0	1995
17953	A	PACIFIC CLAY PRODUCTS INC	LAKE ELSINORE	6.3	0.03	0.16	0.71	2024
183567	A	GS II, INC.	WILMINGTON	6.3	0.04	1.82	0.19	2018
1226	A	HYATT DIE CAST & ENGINEERING CORP	CYPRESS	6.2	ND	0	0.1	1996
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0	0.1	1998
112684	A	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	GARDEN GROVE	6.2	ND	ND	0.01	2022

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800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0	0.1	2000
800180	O	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.5	0.8	1999
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6	ND	0	0.5	1996
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0	0.1	1999
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0	0	1998
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0	0.1	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0	0.2	1999
8578	O	ASSOCIATED CONCRETE PROD. INC	SANTA ANA	5.8	ND	0.1	0.6	1999
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.3	0.6	1998
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0	0	1996
164864	A	ARROWHEAD BRASS & PLUMBING	LOS ANGELES	5.7	ND	0.3	0	1995
22410	O	PALACE PLATING	LOS ANGELES	5.6	ND	0.73	0.38	2004
38971	O	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0	0.4	1995
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0	0.1	1996
14146	O	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0	0.1	1998
54424	O	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.2	0.2	2001
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.5	0.2	1998
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.1	0	1997
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.6	0.2	2000
109198	CO	TORCH OPERATING COMPANY	BREA	5	ND	0	0	2001
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.2	0	1999

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800037	A	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	COMPTON	4.9	0.01	0.01	0.02	2009
11192	A	HI-SHEAR CORPORATION	TORRANCE	4.8	ND	0	0	2008
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0	0	0	2002
190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.2	0.1	1999
101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.6	1	1998
3950	O	CROWN CORK & SEAL CO INC	LA MIRADA	4.6	ND	0	0.1	1997
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0	0.01	0.02	2021
82207	A	ALL AMERICAN ASPHALT,ALL AMER AGGREGATES	IRVINE	4.4	0	2.41	0.07	2022
157451	A	BENDER CCP INC	VERNON	4.4	0	1	0	2002
800041	I	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.1	0	2000
93346	I	WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY	SOUTH EL MONTE	4.3	ND	0.1	0.2	1997
174591	A	TESORO REF & MKTG CO LLC,CALCINER	LONG BEACH	4.3	ND	0.1	0.2	1995
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.3	0	2001
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.5	0.1	1995
6459	O	HONEYWELL INTERNATIONAL INC	VERNON	4.1	ND	0	0	1999
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.6	0.2	1998
152952	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.3	0.1	2003
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.3	0	2002
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0	0	0	2007
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	CITY OF INDUSTRY	3.7	ND	0	0	1996
9114	O	SOMITEX PRINTS OF CAL INC	CITY OF INDUSTRY	3.7	ND	0.1	0	1996
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0	0	2002

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106838	O	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1	0.5	2001
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0	0.5	2000
8015	A	ANADITE INC	SOUTH GATE	3.5	ND	0.63	0.78	1998
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.1	0.5	2000
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0	0	2002
151899	O	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0	0.2	2000
9163	A	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	ONTARIO	3.4	ND	0.3	0	2007
16951	A	ANAPLEX CORP	PARAMOUNT	3.4	ND	2.89	ND	2018
57329	O	KWIKSET CORP	ANAHEIM	3.4	ND	0	0.1	2000
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0	0	1999
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0	0	1996
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0	0	1999
800063	A	GROVER PROD. CO (EIS USE)	LOS ANGELES	3.3	0.04	0.88	0.07	2001
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
18396	O	SPRAYLAT CORP	LOS ANGELES	3.2	0	0.7	0	2012
6384	A	LA CO., RANCHO LOS AMIGOS NAT. REHAB CTR	DOWNEY	3.1	ND	0	0.1	1999
10005	A	ELECTRONIC CHROME GRINDING CO, INC	SANTA FE SPRINGS	3	0.01	0.2	0.1	2001
11435	A	PQ CORPORATION	SOUTH GATE	3	ND	0	0	1998
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	3	0	0.27	0.13	2022
113676	O	VICKERS	LOS ANGELES	3	ND	0	0	1995

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174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3	ND	0	0	1994
2613	A	U.S.GVT,NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.1	0	2002
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0	0.1	1999
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.7	0.1	2009
116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0	0	1999
48274	O	FENDER MUSICAL INST	CORONA	2.8	ND	0	0.4	1997
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.1	0	1999
167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0	0	2000
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0	0.1	1995
5887	CO	NEXGEN PHARMA INC	IRVINE	2.7	ND	0	0	1997
16642	A	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	2.7	ND	0	0.1	1999
25440	A	INVENSYS CLIMATE CONTROLS	LONG BEACH	2.7	ND	0	1	1998
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0	0.1	2002
46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.2	0	1995
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0	0.1	1997
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	2.7	0	0.3	0	2024
800030	A	CHEVRON PRODUCTS CO.	EL SEGUNDO	2.7	0.28	0.3	0.1	2001
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0	0.2	2000
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.1	0.3	1997
37507	A	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	2.6	0	1.1	1.3	2012
41229	A	LUBECO INC	LONG BEACH	2.6	ND	ND	ND	2019
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.6	0	2008

Table B-1
Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
185059	O	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0	0	1995
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1	0	0.2	1998
133405	O	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0	0.2	1999
172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0	0	1999
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.1	0.8	1999
800039	O	DOUGLAS PRODUCTS DIVISION	TORRANCE	2.4	ND	0	0	1996
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0	0	1996
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0	0.1	1999
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.1	0	2007
1208	I	MICROSEMI CORP	SANTA ANA	2.3	ND	0	0	2001
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0	0	1996
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0	0	0	2013
800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0	0	1997
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0	0.1	1996
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0	0	0.2	2000
103659	O	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.6	0	2004
9668	O	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0	0	2000
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0	0	0.1	2009
2605	CO	3M DRUG DELIVERY SYSTEMS	NORTHRIDGE	2	ND	0.4	0.4	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2	ND	0.1	0.2	2001
155474	CO	BICENT (CALIFORNIA) MALBURG LLC	VERNON	2	0	0	0	2007
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2	ND	0	0.5	1998

Table B-1
Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
800181	O	CALIFORNIA PORTLAND CEMENT CO	COLTON	2	ND	0	0.4	1996
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.1	0.6	1999
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0	0	2000
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0	0.1	2001
800003	A	HONEYWELL INTERNATIONAL INC	TORRANCE	1.8	ND	0	0	1999
8309	A	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	1.7	ND	0	0.1	2000
22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.7	0.2	2000
82512	CO	BREA CANON OIL CO	WILMINGTON	1.7	ND	0	0	1996
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.3	0.3	1996
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0	0.4	0.3	2017
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.8	0.4	1998
196103	A	SHADOW WOLF ENERGY, LLC	SANTA CLARITA	1.6	ND	0.2	0.7	1999
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.1	0	2007
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0	0.3	0.1	2009
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0	0	2001
126536	O	CPP - POMONA	POMONA	1.5	ND	0	0	1999
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.1	0.2	1999
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0	0	1996
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.9	0.1	1998
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0	0	1996
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0	0.5	1997
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.6	0.1	1996

Table B-1
Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0	0	1999
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0	0	1996
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0	0	2005
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0	0	2000
7730	A	CARPENTER CO (e)	RIVERSIDE	1.1	0	0.36	2.28	2024
42514	A	LA COUNTY SANITATION DIST (CALABASAS)	AGOURA	1.1	0	0.1	0	2010
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0	0.1	1996
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1	ND	0	0.1	1997
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1	ND	0	0	1999
800127	A	SO CAL GAS CO	MONTEBELLO	1	0	0	0	2009
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	1	0	0.0	0.0	2019
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.2	0.1	1996
47056	O	MYERS CONTAINER CORP, IMACC CORP DIV	HUNTINGTON PARK	0.9	ND	0.2	2	2002
800301	O	ITT GILFILLAN	VAN NUYS	0.9	ND	0.1	0.2	1998
11818	A	HIXSON METAL FINISHING (e)	NEWPORT BEACH	0.8	0	0.04	0.01	2015
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0	0.4	1999
18378	O	GRUBER SYS INC	VALENCIA	0.8	ND	0.1	0.1	2004
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0	0.1	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0	0	1995
150201	CO	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0	0	1998
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.2	0	2007
22373	O	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0	0	1996

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Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
24060	O	AQUATIC COMPANY	ANAHEIM	0.7	ND	0	0	1996
174340	I	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0	0	1995
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0	0	1999
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.1	0	2000
24756	CO	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0	0.1	1997
115394	A	AES ALAMITOS, LLC	LONG BEACH	0.6	ND	0	0	1999
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.9	0.02	1997
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0	0	1995
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	SYLMAR	0.5	ND	0	0	1999
6281	I	US GOVT,MARINE CORPS AIR STATION,EL TORO	SANTA ANA	0.5	ND	0	0	1996
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0	0	2003
61160	O	GE ENGINE SERVICES, LLC	ONTARIO	0.5	ND	0.7	0.01	2003
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.4	0.2	2001
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0	0.1	0.4	2012
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0	0	1994
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0	0	2001
43436	A	TST, INC.	FONTANA	0.4	0.11	0	0.4	1997
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0	0	0.1	2011
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0	0	1998
122295	O	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0	0	1999
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0	0	2008
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0	0	1999

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24520	A	LA CNTY SANITATION DISTRICT-PALOS VERDES	ROLLING HILLS ESTATES	0.3	ND	0	0	1998
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.3	0	1996
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.1	0.3	1999
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.1	0.1	2007
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0	0	1997
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0	0	2000
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.6	0	2002
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0	0	2000
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0	0	0	2010
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0	0.2	1996
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0	0	1999
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0	0	2002
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0	0	2000
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.7	0	1996
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.3	0	1999
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0	0	1997
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0	0	2001
16044	A	SPECIALTY ORGANICS, INC.	IRWINDALE	0.1	ND	0	0.2	1997
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0	0	1995
24118	A	DEVOE COATINGS CO	RIVERSIDE	0.1	ND	0.3	0.1	1999
24812	A	FARMER BROS CO	TORRANCE	0.1	ND	0	0	1999
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0	0	2002

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37336	A	COMMERCE REFUSE TO ENERGY FACILITY	COMMERCE	0.1	0	0	0	2010
42676	A	CES PLACERITA INC	NEWHALL	0.1	ND	0.1	0	2003
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.4	0.4	2002
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0	0	1999
156741	A	HARBOR COGENERATION CO, LLC	WILMINGTON	0.1	ND	0	0	2002
180908	A	ECO SERVICES OPERATIONS CORP.	LONG BEACH	0.06	ND	1.64	0.15	2023
809	O	GARNER GLASS CO	CLAREMONT	0	ND	0	0	1996
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0	ND	0	0	1996
1746	O	UNITED ALLOYS INC	LOS ANGELES	0	ND	0	0	1998
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0	ND	0	0	1996
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0	ND	0	0	1995
4616	O	SUPERIOR IND INTL INC	VAN NUYS	0	ND	0	0.4	1997
5125	O	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0	ND	0	0.3	1996
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0	ND	0	0	1999
6163	O	OHLINE	GARDENA	0	ND	0.3	0.7	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0	ND	0	0.6	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0	ND	0	0	1995
6670	O	TRU CUT INC	LOS ANGELES	0	ND	0	0	2002
7010	A	PRUDENTIAL OVERALL SUPPLY	IRVINE	0	ND	0	0	1995
8560	A	PRUDENTIAL OVERALL SUPPLY CO	COMMERCE	0	ND	0.2	0.4	1995
8935	O	TRAIL RITE INC	SANTA ANA	0	ND	0	0.3	1996
10656	A	NEWPORT LAMINATES	SANTA ANA	0	ND	0	0	1996

Table B-1
Health Risks from Facilities with an Approved HRA
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12493	O	REMO INC	NORTH HOLLYWOOD	0	ND	0	0	1997
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0	ND	0	0	1994
14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0	ND	0	0	2002
14217	O	MODERN FAUCET MFG COMPANY	LOS ANGELES	0	ND	0	0.5	1996
18931	A	GERDAU/TAMCO	RANCHO CUCAMONGA	0	0	0	0	2015
19953	O	RISTON KELLER INC	IRVINE	0	ND	0	0	1996
20144	O	CANON BUSINESS MACHINES INC	COSTA MESA	0	ND	0	0.1	1999
22092	O	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0	ND	0	0.6	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0	ND	0	0	2002
23752	A	AEROCRAFT HEAT TREATING CO INC (e)	PARAMOUNT	0	ND	1.20	0.1	2018
24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0	ND	0	0.2	1999
40806	A	NEW BASIS	RIVERSIDE	0	ND	0.7	0.2	1997
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0	ND	0	0	1999
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0	ND	0	0	1995
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0	ND	0	0	1996
70021	O	XERXES CORP (A DELAWARE CORP)	ANAHEIM	0	ND	0	0	1996
102075	CO	FOAMEX INTERNATIONAL INC	ORANGE	0	ND	0.4	0.4	1994
115586	O	SUNDANCE SPAS, INC	CHINO	0	ND	0	0.4	1996
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0	ND	0	0	2000
124016	O	CHEMETALL U,S., INC,	LA MIRADA	0	ND	0.1	0.1	2000

Table B-1
Health Risks from Facilities with an Approved HRA
(Listed in descending order by cancer risk)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
124838	CO	EXIDE TECHNOLOGIES	VERNON	0	ND	0	0	2013
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0	ND	0.2	0.7	1997
149241	O	REGAL CULTURED MARBLE	POMONA	0	ND	0	0.2	1995
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0	ND	0	0	1996
189043	A	REVLINE DBA ELIMINATOR BOATS	MIRA LOMA	0	ND	0	0	1995
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0	ND	0.3	0	1999
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0	ND	0.2	0.2	2000
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0	ND	0	0.4	1994
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0	ND	0	0	2000
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0	ND	0	0	1997
800109	O	REYNOLDS METALS CO	TORRANCE	0	ND	0.2	0.9	2001
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0	ND	0	0	2000
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0	ND	0	0	1996
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0	ND	0	0	2000
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0	ND	0.1	0.3	2004
800337	O	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0	ND	0	0	1996

Notes:
(a) A = Active (note that facilities with "Active" status within South Coast AQMD's database may not currently be in operation); I = Inactive; O = Out of Business; CO = Change of Operator
(b) Cancer Risk and Non-Cancer Chronic Hazard Index is presented as the higher of residential and worker risk
(c) ND = Not Determined
(d) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
(e) RRP in progress, see Table C-1.

Table B-2: Health Risks from Facilities with an Approved HRA

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0	2020
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0	0	2008
809	O	GARNER GLASS CO	CLAREMONT	0	ND	0	0	1996
1208	O	MICROSEMI CORP	SANTA ANA	2.3	ND	0	0	2001
1226	A	HYATT DIE CAST & ENGINEERING CORP	CYPRESS	6.2	ND	0	0.1	1996
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0	0	1995
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0	ND	0	0	1996
1746	O	UNITED ALLOYS INC	LOS ANGELES	0	ND	0	0	1998
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0	0	1997
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0	0	1996
2605	CO	3M DRUG DELIVERY SYSTEMS	NORTHRIDGE	2	ND	0.4	0.4	1996
2613	A	U.S.GVT,NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.1	0	2002
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.1	0	2007
2680	A	LA CO., SANITATION DISTRICT	WHITTIER	8.6	ND	0	0	1999
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0	0	1997
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0	ND	0	0	1996
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	SYLMAR	0.5	ND	0	0	1999
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0	ND	0	0	1995
3609	A	AL'S PLATING CO INC	LOS ANGELES	7.8	ND	0.3	0.2	1999
3950	O	CROWN CORK & SEAL CO INC	LA MIRADA	4.6	ND	0	0.1	1997
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.1	0.2	1999

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
4477	A	SO CAL EDISON CO	AVALON	11.8	0.05	0.44	0.02	2020
4616	O	SUPERIOR IND INTL INC	VAN NUYS	0	ND	0	0.4	1997
5125	O	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0	ND	0	0.3	1996
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0	ND	0	0	1999
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0	0.1	1999
5887	CO	NEXGEN PHARMA INC	IRVINE	2.7	ND	0	0	1997
6163	O	OHLINE	GARDENA	0	ND	0.3	0.7	1996
6281	I	US GOVT,MARINE CORPS AIR STATION,EL TORO	SANTA ANA	0.5	ND	0	0	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0	ND	0	0.6	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0	ND	0	0	1995
6384	A	LA CO., RANCHO LOS AMIGOS NAT. REHAB CTR	DOWNEY	3.1	ND	0	0.1	1999
6459	O	HONEYWELL INTERNATIONAL INC	VERNON	4.1	ND	0	0	1999
6643	O	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0	0.1	2007
6670	O	TRU CUT INC	LOS ANGELES	0	ND	0	0	2002
7010	A	PRUDENTIAL OVERALL SUPPLY	IRVINE	0	ND	0	0	1995
7203	O	HESSCO IND INC	LA HABRA	8.6	ND	0	0	1995
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0	0	2001
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
7730	A	CARPENTER CO (e)	RIVERSIDE	1.1	0	0.36	2.28	2024
8015	A	ANADITE INC	SOUTH GATE	3.5	ND	0.63	0.78	1998
8309	A	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	1.7	ND	0	0.1	2000
8547	A	QUEMETCO INC	CITY OF INDUSTRY	7.1	0.45	0.09	0.69	2016

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8560	A	PRUDENTIAL OVERALL SUPPLY CO	COMMERCE	0	ND	0.2	0.4	1995
8578	O	ASSOCIATED CONCRETE PROD. INC	SANTA ANA	5.8	ND	0.1	0.6	1999
8582	A	SO CAL GAS CO/PLAYA DEL REY STORAGE FAC	PLAYA DEL REY	9.2	0	0.46	0.02	2019
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	CITY OF INDUSTRY	3.7	ND	0	0	1996
8935	O	TRAIL RITE INC	SANTA ANA	0	ND	0	0.3	1996
9114	O	SOMITEX PRINTS OF CAL INC	CITY OF INDUSTRY	3.7	ND	0.1	0	1996
9163	A	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	ONTARIO	3.4	ND	0.3	0	2007
9668	O	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0	0	2000
10005	A	ELECTRONIC CHROME GRINDING CO, INC	SANTA FE SPRINGS	3	0.01	0.2	0.1	2001
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0	0	2000
10510	A	GREGG INDUSTRIES INC	EL MONTE	9.4	ND	0.6	0.6	2008
10656	A	NEWPORT LAMINATES	SANTA ANA	0	ND	0	0	1996
11142	A	KEYSOR-CENTURY CORP	SAUGUS	17	ND	0.5	0.1	2000
11192	A	HI-SHEAR CORPORATION	TORRANCE	4.8	ND	0	0	2008
11435	A	PQ CORPORATION	SOUTH GATE	3	ND	0	0	1998
11726	O	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.1	0.6	1999
11818	A	HIXSON METAL FINISHING (e)	NEWPORT BEACH	0.8	0	0.04	0.01	2015
12493	O	REMO INC	NORTH HOLLYWOOD	0	ND	0	0	1997
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0	0	1994
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0	ND	0	0	1994
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0	0.8	0.3	2008
14146	O	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0	0.1	1998

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14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0	ND	0	0	2002
14217	O	MODERN FAUCET MFG COMPANY	LOS ANGELES	0	ND	0	0.5	1996
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0	0.3	2008
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0	0.4	1999
15504	A	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	9.5	0.07	1.59	1.11	2002
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.1	0	2000
16044	A	SPECIALTY ORGANICS, INC.	IRWINDALE	0.1	ND	0	0.2	1997
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0	0	1999
16642	A	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	2.7	ND	0	0.1	1999
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	6.4	0.02	0.01	0.08	2015
16951	A	ANAPLEX CORP	PARAMOUNT	3.4	ND	2.89	ND	2018
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0	0	2002
17953	A	PACIFIC CLAY PRODUCTS INC	LAKE ELSINORE	6.3	0.03	0.16	0.71	2024
18294	A	NORTHROP GRUMMAN SYSTEMS CORP	EL SEGUNDO	7.6	ND	0.13	0.05	1999
18378	O	GRUBER SYS INC	VALENCIA	0.8	ND	0.1	0.1	2004
18396	O	SPRAYLAT CORP	LOS ANGELES	3.2	0	0.7	0	2012
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.6	0.2	1998
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0	0.1	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12	ND	0.4	0.1	2000
18931	A	GERDAU/TAMCO	RANCHO CUCAMONGA	0	0	0	0	2015
18989	A	BOWMAN PLATING CO INC (e)	COMPTON	673	0.14	2.89	0.8	2024
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0	0	2001

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19953	O	RISTON KELLER INC	IRVINE	0	ND	0	0	1996
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0	0	1999
20144	O	CANON BUSINESS MACHINES INC	COSTA MESA	0	ND	0	0.1	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.7	0.4	2007
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0	0.9	0.3	2011
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1	ND	0	0.1	1997
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0	0	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.2	0.1	1998
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0	0	2003
22092	O	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0	ND	0	0.6	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0	ND	0	0	2002
22373	O	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0	0	1996
22410	O	PALACE PLATING	LOS ANGELES	5.6	ND	0.73	0.38	2004
22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.7	0.2	2000
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.2	0.1	1996
22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0	0.1	2001
23752	A	AEROCRAFT HEAT TREATING CO INC (e)	PARAMOUNT	0	ND	1.20	0.1	2018
23907	I	JOHNS MANVILLE CORP	CORONA	13	ND	0.4	2.7	1999
24060	O	AQUATIC COMPANY	ANAHEIM	0.7	ND	0	0	1996
24118	A	DEVOE COATINGS CO	RIVERSIDE	0.1	ND	0.3	0.1	1999
24520	A	LA CNTY SANITATION DISTRICT-PALOS VERDES	ROLLING HILLS ESTATES	0.3	ND	0	0	1998

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24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0	ND	0	0.2	1999
24756	CO	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0	0.1	1997
24812	A	FARMER BROS CO	TORRANCE	0.1	ND	0	0	1999
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0	0	2002
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0	0.3	0.1	2009
25440	A	INVENSYS CLIMATE CONTROLS	LONG BEACH	2.7	ND	0	1	1998
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.3	0	1996
27343	O	CON AGRA INC, GILROY FOODS DBA	SANTA ANA	7.1	ND	0.2	0.1	1995
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0	0.1	2002
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0	0.1	2002
35302	A	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	14	0.02	0.1	0.1	2000
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.1	0.3	1997
37336	A	COMMERCE REFUSE TO ENERGY FACILITY	COMMERCE	0.1	0	0	0	2010
37507	A	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	2.6	0	1.1	1.3	2012
37603	A	SGL TECHNIC LLC	VALENCIA	7.8	ND	0	0.4	1998
38971	O	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0	0.4	1995
40806	A	NEW BASIS	RIVERSIDE	0	ND	0.7	0.2	1997
41229	A	LUBECO INC	LONG BEACH	2.6	ND	ND	ND	2019
42514	A	LA COUNTY SANITATION DIST (CALABASAS)	AGOURA	1.1	0	0.1	0	2010
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0	0	1996
42676	A	CES PLACERITA INC	NEWHALL	0.1	ND	0.1	0	2003
42922	O	CMC PRINTED BAG INC	WHITTIER	9	ND	0	0	1995

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43436	A	TST, INC.	FONTANA	0.4	0.11	0	0.4	1997
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0	0	0.1	2011
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0	0.1	1998
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.3	0	2002
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0	ND	0	0	1999
46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.2	0	1995
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0	ND	0	0	1995
48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0	0.4	1997
48274	O	MYERS CONTAINER CORP, IMACC CORP DIV	HUNTINGTON PARK	0.9	ND	0.2	2	2002
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0	0	2002
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	9.2	ND	0.97	0.07	2018
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.7	0.1	2009
54424	O	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.2	0.2	2001
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
57329	O	KWIKSET CORP	ANAHEIM	3.4	ND	0	0.1	2000
61160	O	GE ENGINE SERVICES, LLC	ONTARIO	0.5	ND	0.7	0.01	2003
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0	ND	0	0	1996
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0	0.5	1997
62897	O	NORTHROP GRUMMAN CORP, MASD	PICO RIVERA	9.4	ND	1	0.5	2000
70021	O	XERXES CORP (A DELAWARE CORP)	ANAHEIM	0	ND	0	0	1996
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1	0	0.2	1998

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82207	A	ALL AMERICAN ASPHALT,ALL AMER AGGREGATES	IRVINE	4.4	0	2.41	0.07	2022
82512	CO	BREA CANON OIL CO	WILMINGTON	1.7	ND	0	0	1996
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0	0	1996
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	3	0	0.27	0.13	2022
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0	0	1996
93346	I	WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY	SOUTH EL MONTE	4.3	ND	0.1	0.2	1997
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.4	0.4	2002
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.1	0.3	1999
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0	0	0.2	2000
101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0	0.1	2000
101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.6	1	1998
102075	CO	FOAMEX INTERNATIONAL INC	ORANGE	0	ND	0.4	0.4	1994
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.6	0	2004
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.2	0	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1	0.5	2001
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0	0.1	2000
106838	O	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.1	0.1	2007
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0	0	2001
108701	I	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.1	0.1	2000
109198	CO	TORCH OPERATING COMPANY	BREA	5	ND	0	0	2001
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0	0.1	1996

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112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0	0	1997
112684	A	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	GARDEN GROVE	6.2	ND	ND	0.01	2022
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.2	0	1997
113676	O	VICKERS	LOS ANGELES	3	ND	0	0	1995
113873	A	MM WEST COVINA	WEST COVINA	13.3	0.31	1.7	0.98	2020
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0	0	1999
115394	A	AES ALAMITOS, LLC	LONG BEACH	0.6	ND	0	0	1999
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0	0	1998
115586	O	SUNDANCE SPAS, INC	CHINO	0	ND	0	0.4	1996
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0	0	2000
116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0	0	1999
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0	0.2	1997
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0	ND	0	0	2000
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.3	0.3	1996
122295	O	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0	0	1999
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.6	0	2002
122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21	ND	0.1	0.4	2000
124016	O	CHEMETALL U,S., INC,	LA MIRADA	0	ND	0.1	0.1	2000
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.5	0.1	1995
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0	0	2000
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1	ND	0	0	1999
124838	CO	EXIDE TECHNOLOGIES	VERNON	0	ND	0	0	2013

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125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.1	0	1995
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0	0	0	2007
126191, 126197	A	STERIGENICS US, INC. (e)	LOS ANGELES	77.1	0.11	0	0.15	2024
126536	O	CPP - POMONA	POMONA	1.5	ND	0	0	1999
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.6	0.1	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0	0	1995
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.1	0.5	2000
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0	ND	0.2	0.7	1997
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0	0.4	0.3	2017
133405	O	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0	0.2	1999
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.8	0.4	1998
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.6	0.2	2000
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.9	0.02	1997
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.6	0	2008
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.3	0.6	1998
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0	0	2002
140871	A	PAC RANCHO, INC. (e)	RANCHO CUCAMONGA	38.76	0	21.26	4.48	2023
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6	ND	0	0.5	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2	ND	0.1	0.2	2001
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0	0.01	0.02	2021
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.1	0.2	1999
149241	O	REGAL CULTURED MARBLE	POMONA	0	ND	0	0.2	1995

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150201	CO	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0	0	1998
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.1	0	1999
151899	O	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0	0.2	2000
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0	0.1	1996
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.4	0.2	2001
152952	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.3	0.1	2003
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0	0	1999
155474	CO	BICENT (CALIFORNIA) MALBURG LLC	VERNON	2	0	0	0	2007
155828	O	GARRETT AVN. SVCS. LLC DBA STANDARD AERO	LOS ANGELES	9.3	ND	0.19	0.25	2002
156741	A	HARBOR COGENERATION CO, LLC	WILMINGTON	0.1	ND	0	0	2002
157451	A	BENDER CCP INC	VERNON	4.4	0	1	0	2002
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0	0	0	2013
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0	0	0	2010
164864	A	ARROWHEAD BRASS & PLUMBING	LOS ANGELES	5.7	ND	0.3	0	1995
165192	O	TRIUMPH AEROSTRUCTURES, LLC	HAWTHORNE	19.7	ND	0.64	0.24	1999
166587	O	THE BOEING COMPANY	HUNTINGTON BEACH	7	ND	0	0	1995
167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0	0	2000
168088	O	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.1	1.6	1995
169754	A	SO CAL HOLDING, LLC	HUNTINGTON BEACH	7.6	0.02	0.02	0.04	2019
169990	A	SPS TECHNOLOGIES, LLC	GARDENA	8.9	ND	0.1	0.1	1999
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	24.5	0.43	0.44	0.15	2020
171109	A	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	6.6	0.11	0	0.3	2011

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0	0	1999
174340	I	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0	0	1995
174591	A	TESORO REF & MKTG CO LLC,CALCINER	LONG BEACH	4.3	ND	0.1	0.2	1995
174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.3	0.1	2000
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3	ND	0	0	1994
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9	ND	0	0	1994
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0	0	1995
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0	ND	0	0	1996
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.3	0	2001
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
180908	A	ECO SERVICES OPERATIONS CORP.	LONG BEACH	0.06	ND	1.64	0.15	2023
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.6	0.3	2009
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.2	0.5	2013
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2	ND	0	0.5	1998
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.1	0	1997
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0	0	1999
183567	A	GS II, INC.	WILMINGTON	6.3	0.04	1.82	0.19	2018
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.1	0.8	1999
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0	0.1	1997
185059	O	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0	0	1995
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0	0	2005
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	2.7	0	0.3	0	2024

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0	0	1999
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.2	0	2007
187165	CO	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0	0	2002
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0	0	1999
187823	A	KIRKHILL INC	BREA	18.8	0.07	0.06	0.11	2019
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0	0.1	0.4	2012
189043	A	REVLINE DBA ELIMINATOR BOATS	MIRA LOMA	0	ND	0	0	1995
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0	0	0	2002
190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.2	0.1	1999
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0	ND	0.3	0	1999
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0	0	0.2	2002
194431	CO	GC HUNTINGTON PARK, LLC	HUNTINGTON PARK	8.5	ND	0	0	2000
196103	A	SHADOW WOLF ENERGY, LLC	SANTA CLARITA	1.6	ND	0.2	0.7	1999
200797	A	WESTLAKE ROYAL ROOFING LLC	CORONA	6.4	0	0.51	2.72	2018
800003	A	HONEYWELL INTERNATIONAL INC	TORRANCE	1.8	ND	0	0	1999
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0	0.5	2000
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0	ND	0.2	0.2	2000
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0	ND	0	0.4	1994
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0	0.1	1999
800026	A	ULTRAMAR INC	WILMINGTON	7.2	0.18	0.7	0.2	2012
800030	A	CHEVRON PRODUCTS CO.	EL SEGUNDO	2.7	0.28	0.3	0.1	2001

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
800032	A	CHEVRON USA INC	MONTEBELLO	7.5	0.14	0	0.2	1999
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0	0.1	1995
800037	A	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	COMPTON	4.9	0.01	0.01	0.02	2009
800039	O	DOUGLAS PRODUCTS DIVISION	TORRANCE	2.4	ND	0	0	1996
800041	I	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.1	0	2000
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0	0	1998
800054	A	GATX RAIL CORP	SAN PEDRO	8	ND	0.3	0.5	1997
800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0	0	1997
800057	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	8.5	ND	0	0.1	1999
800063	A	GROVER PROD. CO (EIS USE)	LOS ANGELES	3.3	0.04	0.88	0.07	2001
800066	CO	HITCO CARBON COMPOSITES INC	GARDENA	6.4	ND	0.3	0	1995
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0	0.1	2000
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0	0	2000
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0	ND	0	0	2000
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0	0.2	1998
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0	ND	0	0	1997
800109	O	REYNOLDS METALS CO	TORRANCE	0	ND	0.2	0.9	2001
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0	0.1	1996
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.9	0	2007
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0	0.1	1998
800127	A	SO CAL GAS CO	MONTEBELLO	1	0	0	0	2009
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0	0	1996

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0	0	2000
800150	A	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	7.4	0.02	0.3	0	2008
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0	ND	0	0	2000
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.7	0	1996
800180	O	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.5	0.8	1999
800181	O	CALIFORNIA PORTLAND CEMENT CO	COLTON	2	ND	0	0.4	1996
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.1	0.1	2001
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.2	0.1	1997
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.3	0	1999
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0	0.1	1999
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0	0	1996
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0	0	1996
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0	ND	0	0	1996
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0	0.1	2000
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.1	0	1999
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0	0.2	2000
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.2	0.1	2007
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0	ND	0	0	2000
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0	0.1	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0	0.2	1999

Table B-2
Health Risks from Facilities with an Approved HRA
(Listed by Facility ID)

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0	0.1	1996
800301	O	ITT GILFILLAN	VAN NUYS	0.9	ND	0.1	0.2	1998
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.1	0	2001
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0	ND	0.1	0.3	2004
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.1	0.6	1999
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	1	0	0.0	0.0	2019
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0	0	2000
800337	O	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0	ND	0	0	1996
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0	0.2	1996
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	22	0.26	1.3	0.07	2020
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.3	0.1	2000
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.1	0	2007
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.9	0.1	1998
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.5	0.2	1998
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0	0	0.1	2009
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.3	0.4	2013

Notes:
(a) A = Active (note that facilities with "Active" status within South Coast AQMD's database may not currently be in operation); I = Inactive; O = Out of Business; CO = Change of Operator
(b) Cancer Risk and Non-Cancer Chronic Hazard Index is presented as the higher of residential and worker risk
(c) ND = Not Determined
(d) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
(e) RRP in progress, see Table C-1.

Appendix C – Approved Risk Reduction Plans and Voluntary Risk Reduction Plans

Facilities with an Approved Rule 1402(f) Risk Reduction Plan

Table C-1: Status of Risk Reduction Plans

Facility ID	Facility Name	Submitted	Approved	Implemented	Residual Risk (e)			
					Cancer Risk	Chronic HI	Acute HI	Cancer Burden
7427	OWENS-BROCKWAY GLASS CONTAINER INC	Yes	Yes	Yes	3.6	0.01	0.06	0.00
7730	CARPENTER CO	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
8015	ANADITE INC	Yes	Yes	Yes	3.5	0.63	0.78	N/A
8547	QUEMETCO INC	Yes	Yes	Yes	7.1	0.09	0.69	0.45
8582	SO CAL GAS CO/PLAYA DEL REY STORAGE FACILITY	Yes	Yes	Yes	9.0	0.02	0.46	0.00
11818	HIXSON METAL FINISHING	Yes	Yes	Yes	0.8	0.01	0.04	0
14191	NIKLOR CHEMICAL COMPANY INC **(a)**	Yes	Yes	Yes	N/A	N/A	N/A	N/A
15504	SCHLOSSER FORGE COMPANY	Yes	Yes	Yes	9.5	1.59	1.11	0.07
16951	ANAPLEX CORP	Yes	Yes	Yes	3.4	ND	2.89	ND
18294	NORTHROP GRUMMAN SYSTEMS CORP	Yes	Yes	Yes	7.6	0.13	0.05	N/A
18931	GERDAU/TAMCO **(c)**	Yes	Yes	*(See Note)*	0.0	0.00	0.00	0.00
18989	BOWMAN PLATING CO INC **(d)**	Yes	*(See Note)*	*(See Note)*	TBD	TBD	TBD	TBD
22410	PALACE PLATING **(b)**	Yes	Yes	Yes	5.6	0.73	0.38	N/A
23752	AEROCRAFT HEAT TREATING CO INC	Yes	Yes	Yes	0.0	0.1	1.20	ND
25012	AMADA AMERICA, INC.	Yes	Yes	Yes	0.0	0.00	0.00	0.00
41229	LUBECO INC	Yes	Yes	Yes	2.6	ND	ND	ND
45938	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	Yes	Yes	Yes	0.0	0.00	0.00	0.00
61160	GE ENGINE SERVICES, LLC	Yes	Yes	Yes	0.5	0.70	0.01	0.00
113873	MM WEST COVINA LLC	Yes	Yes	Yes	13.3	0.98	1.7	0.31
112684	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	Yes	Yes	Yes	0.3	0.01	ND	ND
119127	PRC DESOTO INTERNATIONAL **(a)**	Yes	Yes	Yes	N/A	N/A	N/A	N/A
124838	EXIDE TECHNOLOGIES **(a,c)**	Yes	Yes	*(See Note)*	N/A	N/A	N/A	N/A
126191, 126197	STERIGENIC US, INC.	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
134931	ARCONIC GLOBAL FASTENERS & RINGS, INC.	Yes	Yes	Yes	0.6	1.90	0.02	0.00
140871	PAC RANCHO, INC.	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
155828	GARRETT AVIATION SERVICES, LLC **(a)**	Yes	Yes	Yes	7.0	0.28	0.03	N/A
165192	TRIUMPH AEROSTRUCTURES, LLC. **(c)**	Yes	Yes	Yes	19.7	0.64	0.24	N/A
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	Yes	Yes	Yes	24.5	0.15	0.44	0.43
180631	STCDARA, LLC	Yes	Yes	Yes	13.8	0.01	0.74	0.02
186519	EMBEE PROCESSING	Yes	Yes	Yes	6.6	0.21	0.58	N/A

Facility ID	Facility Name	Submitted	Approved	Implemented	Residual Risk (e)			
					Cancer Risk	Chronic HI	Acute HI	Cancer Burden
800037	DEMENNO/KERDOON	Yes	Yes	Yes	4.9	0.00	0.02	0.01
800063	GROVER PRODUCTS CO.	Yes	Yes	Yes	3.3	0.88	0.07	0.04
800196	AMERICAN AIRLINES, INC.	Yes	Yes	Yes	5.4	0.86	0.08	0.19
800327	GLENDALE CITY, GLENDALE WATER & POWER	Yes	Yes	Yes	1.0	0.00	0.00	0.00

Notes:
(a) Facility has shut down, resulting risks are zero.
(b) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated.
(c) Facility shut down prior to implementation of RRP.
(d) Updated RRP review is in progress and residual risk is to be determined after implementation of risk reduction measures.
(e) ND = Not Determined

Facilities with an Approved Rule 1402(h) Voluntary Risk Reduction Plan

South Coast AQMD's Rule 1402 – Control of Toxic Air Contaminants from Existing Sources includes a Voluntary Risk Reduction Program. The Voluntary Risk Reduction Program provides an alternative path for facilities that meet specific requirements to reduce risk and comply with Rule 1402. Facilities that participate in the Voluntary Risk Reduction Program reduce their health risks sooner and below the levels required for AB2588 facilities that do not participate in this program.

Table C-2 below lists the facilities with an approved Voluntary Risk Reduction Plan.

Table C-2: Facilities with Approved Voluntary Risk Reduction Plans

Facility ID	Facility Status	Facility Name	Address	City	VRRP Approval Year
17301	A	ORANGE COUNTY SANITATION DISTRICT	10844 ELLIS AVE	FOUNTAIN VALLEY	2018
29110	A	ORANGE COUNTY SANITATION DISTRICT	22212 BROOKHURST ST	HUNTINGTON BEACH	2018
800030	A	CHEVRON EL SEGUNDO REFINERY	324 WEST EL SEGUNDO BLVD	EL SEGUNDO	2019
181667	A	TORRANCE REFINING COMPANY	3370 W 190TH ST	TORRANCE	2020
182610	A	ELITE COMFORT SOLUTIONS **(a)**	4542 E DUNHAM ST	COMMERCE	2020
800026	A	ULTRAMAR INC	2402 E ANAHEIM ST	WILMINGTON	2021
187165	CO	ALTAIR PARAMOUNT, LLC	14700-08 DOWNEY AVE	PARAMOUNT	2023

Notes:
(a) Facility shut down prior to full implementation of VRRP.

Appendix D – List of Acronyms and Abbreviations

Acronym	Description
AB 2588	Assembly Bill 2588: Air Toxics "Hot Spots" Information and Assessment Act
AB 617	Assembly Bill 617: Community Air Protection Program
AirToxScreen	Air Toxics Screening Assessment
AER	Annual Emissions Reporting
ATCM	Air Toxics Control Measure
ATIR	Air Toxics Inventory Report
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAMP	Community Air Monitoring Plan
CEQA	California Environmental Quality Act
CTR	Criteria Pollutant and Toxics Emissions Reporting
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substance Control
EARP	Early Action Reduction Plan
EICG	Emissions Inventory Criteria and Guidelines
EtO	Ethylene Oxide
FDA	Food and Drug Administration
F.I.N.D	Facility Information Detail
H&S Code	California Health and Safety Code
HARP	Hotspots Analysis and Reporting Program
HEPA	High Efficiency Particulate Arresting
HI	Hazard Index
HRA	Health Risk Assessment
IRIS	Integrated Risk Information System
IWS	Industrywide Source Category
MATES	Multiple Air Toxics Exposure Study
MeBr	Methyl Bromide
MDI	Methylene Phenyl Diisocyanate
NAAQS	National Ambient Air Quality Standard
NATA	National Air Toxics Assessment
NEI	National Emissions Inventory
NESHAP	National Emission Standard for Hazardous Air Pollutant
NOV	Notice of Violation
ODC	Ozone Depleting Compound
OEHHA	Office of Environmental Health Hazard Assessment
PAMS	Photochemical Assessment Monitoring Stations
pCBtF	Para-Chlorobenzotrifluoride
PTE	Permanent Total Enclosure

REL	Reference Exposure Levels
RRM	Risk Reduction Measure
RRP	Risk Reduction Plan
SB 1731	Senate Bill 1731: Facility Air Toxic Contaminant Risk Audit and Reduction Plan
SB 673	Senate Bill 673: Community Protection
SIC	Standard Industrial Classification
South Coast AQMD	South Coast Air Quality Management District
t-BAc	Tert-Butyl Acetate
TARMAC	Toxics and Risk Managers Committee
TDI	Toluene Diisocyanate
TS	Total Facility Score
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VRRP	Voluntary Risk Reduction Plan

Attachment 2

South Coast Air Quality Management District

Facility Prioritization Procedure
for
the Rule 1402 Implementation of the AB 2588 Program

December 2025

Preface

This version of the Prioritization Procedure updates the previous October 2020 version. This is intended to be a "living" document, which staff will update periodically as needed.

The revisions to this document from the previous October 2020 version include:

- Updating the annual and hourly receptor proximity adjustment factors (Tables 2 and 3) using the most current meteorological data;
- Updating the multipathway factors used for prioritization; and
- Incorporating the multipathway factor calculation methodologies into an appendix.

Table of Contents

I. INTRODUCTION 1
II. FACILITY PRIORITIZATION PROCEDURE 2
A. Calculation of Cancer Score 3
Annual Emissions: 3
Cancer Potency: 4
Multipathway Adjustment Factor: 4
Receptor Proximity Adjustment Factor: 4
Worker Adjustment Factor: 5
Combined Exposure Factor: 5
B. Calculation of Non-Cancer Score 6
Non-Cancer Chronic Score: 6
Non-Cancer 8-Hour Score: 7
Non-Cancer Acute Score: 8
Annual and Maximum Hourly Emissions: 8
Reference Exposure Levels: 8
Multipathway Adjustment Factor: 8
Receptor Proximity Adjustment Factor: 9
Worker Adjustment Factor: 9
C. Facility Ranking 9

List of Tables

Table 1: Prioritization Categories 2
Table 2: Residential CEF Parameters 6
Table 3: Worker CEF Parameters 6
Table 4: Annual Receptor Proximity Adjustment Factors 10
Table 5: Hourly Receptor Proximity Adjustment Factors 32

Appendices

Appendix I: Derivation of MultiPathway Adjustment Factors I-1

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.

This document describes the facility prioritization procedure utilized by South Coast AQMD (South Coast AQMD Procedure), which is consistent with the California Air Pollution Control Officers Association's (CAPCOA) August 2016 Facility Prioritization Guidelines (CAPCOA Guidelines)[1] developed by the Toxics and Risk Managers Committee (TARMAC). AB 2588 requires the South Coast Air Quality Management District (South Coast AQMD) to designate high, intermediate, and low priority categories and include each facility within the appropriate category based on its individual priority score. In establishing priorities, South Coast AQMD 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 South Coast AQMD finds and determines may indicate that the facility may pose a significant risk to receptors.

While the South Coast AQMD Procedure is consistent with the CAPCOA Guidelines, several refinements have been made over the history of South Coast AQMD's AB 2588 Program. In September 1990, South Coast AQMD refined the original CAPCOA Guidelines to include adjustment factors for receptor proximity, exposure period, and averaging times in addition to the treatment of multipathway pollutants. In August 2004, South Coast AQMD revised its Procedure 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 multipathway factors for resident and workers. In March 2011, the South Coast AQMD Procedure was revised to include updated toxicity criteria. In June 2015, the South Coast AQMD Procedure was updated to incorporate the revised risk calculation methodologies in the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual for Preparation of Health Risk Assessments.

In November 2016, the South Coast AQMD Procedure was revised to further streamline and refine the prioritization methodology for better characterization of the priority score for each facility before an Air Toxics Inventory Report (ATIR) or a Voluntary Risk Reduction Plan (VRRP) is requested. The 2016 South Coast AQMD Procedure used the local meteorology from all available South Coast AQMD meteorological stations (Version 8 meteorological data) for every facility and evaluated risks at the actual closest receptor locations as well as receptors located in the worst case wind direction (e.g., downwind). The September 2019 South Coast AQMD Procedure incorporated the Version 9 meteorological data and simplified calculation of a facility's non-cancer acute score. The October 2020 version of the South Coast AQMD Procedure corrected the equation for calculating the cancer score for worker adjustment factor, removed reference to worker adjustment factor in non-cancer chronic description, and provided additional clarity on the worker adjustment factor (WAF).

[1] https://capcoa.org/capcoa-prioritization-guidelines/

This 2025 update of the South Coast AQMD Procedure incorporates the most current meteorological data (Version 11), updates multipathway factors, and includes the corresponding methodology for calculating multipathway factors.

II. FACILITY PRIORITIZATION PROCEDURE

South Coast AQMD's Procedure primarily relies on four parameters to prioritize facilities: emissions, toxicity, the proximity to potential receptors, and stack height. A facility receives scores for four health endpoints: cancer, non-cancer chronic, non-cancer chronic 8-hr, and non-cancer acute. The cancer, non-cancer chronic, non-cancer chronic 8-hr health endpoints are evaluated for four receptors for each facility: the absolute closest sensitive receptor and worker receptor, and the closest sensitive receptor and worker receptor in the worst-case wind direction. The non-cancer acute health endpoint is evaluated at a single receptor only in the worst-case wind direction. Unlike the sensitive and worker receptor, this single receptor can be located at the facility fenceline due to a potential one-hour exposure duration. In total, every facility receives 13 different scores: three health endpoints (cancer, non-cancer chronic and non-cancer chronic 8 hour) at four receptors, and one non-cancer acute health endpoint at a single receptor. The highest score is used to determine the Priority Score (PS).

Three categories are used in the ranking: high priority, intermediate priority and low priority. Facilities designated as high priority are required to submit either an ATIR or VRRP under the AB 2588 Program. Facilities ranked with intermediate priority are considered District Tracking facilities, which are then required to submit an emissions inventory once every four years. Facilities ranked with low priority are potentially exempt from reporting. Due to the very conservative nature of the screening South Coast AQMD Procedure uses for prioritization, and consistent with CAPCOA's Guidelines, facilities that are designated as high priority may not significantly impact receptors. The same emissions profile evaluated in a more detailed Health Risk Assessment (HRA) using actual stack parameters and more detailed dispersion modeling will result in a more accurate risk estimation and likely lower calculated risks. The following table summarizes thresholds used to prioritize facilities:

Table 1: Prioritization Categories

Priority Score	Category
PS > 10	High Priority
1 < PS ≤ 10	Intermediate Priority
PS ≤ 1	Low Priority

Facilities subject to the AB 2588 Program are required to submit a detailed list of their air toxic emissions every four years (referred to as a quadrennial update). Based on their level of air toxic and criteria pollutant emissions, each year a different group of facilities will report a detailed list of its air toxic emissions. Upon initial prioritization of facilities, South Coast AQMD staff conducts auditing to confirm the distances reported to sensitive receptors and workers, verify reported emissions are consistent with expected levels considering trends and facility changes such as new or modified permitted equipment or pollution controls, and compare the priority score results with the last (HRA) or Risk Reduction Plan (Voluntary or Traditional), if applicable. This additional information obtained through priority score auditing will often negate the need to ask for additional

reports such as an ATIR. However, if the priority score remains high, the facility may be asked to prepare an ATIR or a VRRP under the AB 2588 Program.

A. Calculation of Cancer Score

The scores for residential and worker cancer effects are calculated as follows:

$$S_{r,cancer} = \sum E_c \times CP_c \times MP_{c,r} \times RP_r \times 677.40 \times 10^{-1}$$

$$S_{w,cancer} = \sum E_c \times CP_c \times MP_{c,w} \times RP_w \times WAF \times 55.86 \times 10^{-1}$$

Where:

$S_{r,\,cancer}$ $S_{w,\,cancer}$	=	Total cancer score (summed for all carcinogens separately, by the residential receptor and worker receptor)
c	=	Specific carcinogen
r	=	Residential receptor
w	=	Worker receptor
E_c	=	Annual emissions of carcinogen, c $\left(\frac{ton}{year}\right)$
CP_c	=	Cancer potency of carcinogen, c $(mg/kg\text{-}day)^{-1}$
$MP_{c,r}$ $MP_{c,w}$	=	Multipathway adjustment factor of carcinogen, c; there are separate multipathway factors for residential receptor and worker receptors for the applicable exposure duration (see Appendix I for calculation methodology)
RP_r RP_w	=	Receptor proximity adjustment factor for residential receptor and worker receptor, χ/Q $\left(\frac{\mu g}{m^3} \Big/ \frac{ton}{year}\right)$
WAF	=	Worker Adjustment Factor (dimensionless)
CEF_R	=	30-Year Residential Combined Exposure Factor, 677.40
CEF_W	=	25-Year Worker Combined Exposure Factor, 55.86
10^{-1}	=	Scalar to adjust priority score to 1-10 scale

<u>Annual Emissions:</u>

Annual emissions of carcinogens are taken from the Toxic Air Contaminants (TAC)/Ozone Depleting Compounds (ODC) Emissions and Fees Summary of the Annual Emission Reporting (AER) Program. Each substance has a degree of accuracy associated with them that is a de-minimis emission level for reporting. As a result, facility-wide air toxic emissions greater than one-half of their corresponding degree of accuracy are inventoried and reported. Conversely, total facility air toxic emissions less than one-half of their corresponding degree of accuracy levels are not considered in the prioritization. The carcinogens and associated degree of accuracy levels are listed in the *AB 2588 Quadrennial Air Toxics Emission Inventory Reporting Procedures*.[2]

[2] https://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/quadrennial-procedures.pdf

Cancer Potency:

The Cancer Potency (CP) factor is a measure of the cancer potency of a carcinogen. The CP 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 potencies used in this Procedure are published by the Office of Environmental Health Hazard Assessment (OEHHA).[3]

Multipathway Adjustment Factor:

The multipathway (MP_c) adjustment factor is used for carcinogens that may contribute to risk from exposure pathways other than inhalation. These carcinogens 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 South Coast AQMD staff by using the Health Risk Assessment Standalone Tool (RAST) developed by the California Air Resources Board (CARB).[4] The MP_c factors also satisfy the requirements of the South Coast AQMD's *Risk Assessment Procedures for Rules 1401, 1401.1 and 212*.[5] The methodology used to calculate the MP_c adjustment factors for worker and residents for longest exposure duration is outlined in Appendix I. For carcinogens that only affect the inhalation pathway, the MP_c adjustment factor is set to one.

Receptor Proximity Adjustment Factor:

There are four Receptor Proximity (RP) adjustment factors calculated for each facility for cancer score. They are calculated based on the distances from the facility to the nearest sensitive (e.g., residential) and worker receptors regardless of wind direction, and the nearest sensitive and worker receptors in the worst-case wind direction. The receptors in the worst-case wind direction are also evaluated in case the nearest receptors do not experience the highest risk. Receptor locations are off-site, where persons may be exposed to air toxic emissions from the facility. The receptor distance is defined as the closest distance between any major source or group of major sources of air toxic emissions at the facility and the property boundary of any one of the receptor locations. Consistent with the CAPCOA Guidelines, the minimum distance evaluated is 50 meters. The RP adjustment factors for every meteorological station[6] using the Version 11 meteorological data at receptor locations of 50, 75, 100, 200, 300, 500, and 1000 meters are included in Tables 3 and 4 at the end of this guidance. These RP adjustment factors are (χ/Q) values derived from U.S. EPA's AERMOD air dispersion model utilizing a unitary emission rate of one ton per year exiting out of a 0.1 meter diameter stack that is 0.27 meters above a 4.0 meter tall building, with a velocity of 5 meters per second. Linear interpolation is used to determine the appropriate (χ/Q) for receptor locations located between the distances specified in Tables 4 and 5 at the end of this document.

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3 The latest CP values can be obtained at http://www.arb.ca.gov/toxics/healthval/healthval.htm

4 www.arb.ca.gov/toxics/harp/harp.htm

5 https://www.aqmd.gov/docs/default-source/permitting/hra-procedures/hraprocedures9-0_103124.pdf

6 Meteorological station information is available here: www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod

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 (WAF) is calculated with the following equation:

$$WAF = \frac{H_r}{H_{source}} \times \frac{D_r}{D_{source}} \times DF$$

Where:

H_r	=	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_r	=	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
DF	=	Discount factor for when the offsite worker's schedule partially overlaps the source's emission schedule.

Although the 2015 OEHHA Guidelines allow the use of a discount factor (DF) when assessing inhalation cancer health impacts, if the off-site 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 South Coast AQMD permits do not typically include limits on hours of operations, it is assumed that the offsite worker's schedule fully overlaps with the emission source's schedule, and therefore DF is assumed to be equal to 1. Further, for facilities that operate less than 8 hours per day and 5 days per week, WAF is calculated based on an operating schedule of 8 hours per day and 5 days per week.

Combined Exposure Factor:

The Combined Exposure Factor (CEF) for each exposure type (residential or worker) combines default exposure parameters into a single value. The CEFs are calculated using the following equations:

$$CEF_R = \sum (DBR_{AgeBin}\ x\ ED_{AgeBin}\ x\ ASF_{AgeBin}\ x\ FAH_{AgeBin})\ x\ EF_R\ /\ AT$$

Where:

DBR_{AgeBin}	=	Age specific daily breathing rate
ED_{AgeBin}	=	Age specific exposure duration
ASF_{AgeBin}	=	Age specific factor
FAH_{AgeBin}	=	Age specific fraction of time spent at home
EF_R	=	Residential exposure frequency
AT	=	Averaging time

$$CEF_W = DBR_W\ x\ ED_W\ x\ EF_W\ /\ AT$$

Where:

DBR_W	=	Age specific daily breathing rate

ED_W = Worker exposure duration
EF_W = Worker exposure frequency
AT = Averaging time

The parameters used to develop the residential and worker CEFs used in this document are summarized in Tables 2 and 3 below.

Table 2: Residential CEF Parameters

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency	Averaging Time (years)
-0.25 to 0	361	10	0.25	1	0.96	70
0 to 2	1,090	10	2	1		
2 to 16	572	3	14	1		
16 to 30	261	1	14	0.73		

Table 3: Worker CEF Parameters

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency	Averaging Time (years)
16 to 41	230	1	25	0.68	70

B. Calculation of Non-Cancer Score

For a toxic substance, non-cancer health effects can occur via acute, non-cancer 8-hour exposure, and/or annual chronic exposure. All of these non-cancer effects are used in the calculation of a facility's priority score. For each substance associated with acute, non-cancer 8-hour and chronic toxicity, South Coast AQMD staff calculates separate scores using the formulas shown below.

<u>Non-Cancer Chronic Score:</u>

For a facility which emits pollutants with known non-cancer chronic health effects, the scores for non-cancer chronic effects for residential receptor and worker receptor are calculated as follows:

$$S_{r,chronic} = \sum \left(\frac{E_t}{REL_{t,chronic}} \right) \times MP_{t,r} \times RP_r$$

$$S_{w,chronic} = \sum \left(\frac{E_t}{REL_{t,chronic}} \right) \times MP_{t,w} \times RP_w$$

Where:

$S_{r,\ chronic}$ $S_{w,\ chronic}$	=	Total chronic score (summed for all substances with non-cancer chronic effects separately, by the residential receptor and worker receptor)
t	=	Toxic substance
r	=	Residential Receptor
w	=	Worker Receptor
E_t	=	Annual emissions of substance, t (ton/year)
$REL_{t,\ chronic}$	=	Chronic reference exposure level of toxic substance, t (µg/m^3)
$MP_{t,r}$ $MP_{t,w}$	=	Multipathway adjustment factor of carcinogen, c; there are separate multipathway factors for residential receptor and worker receptors for the applicable exposure duration (see Appendix I for calculation methodology)
RP_r RP_w	=	Receptor proximity adjustment factor for residential receptor and for worker receptor, $\chi/Q \left(\frac{\mu g}{m^3} \Big/ \frac{ton}{year} \right)$

<u>Non-Cancer 8-Hour Score:</u>

For a facility which emits pollutants with known non-cancer 8-hour health effects, the scores for non-cancer 8-hour effects for residential receptor and worker receptor are calculated as follows:

$$S_{r,8-hr} = \sum \left(\frac{E_t}{REL_t} \right) \times (WAF) \times RP_r$$

$$S_{w,8-hr} = \sum \left(\frac{E_t}{REL_t} \right) \times (WAF) \times RP_w$$

Where:

$S_{w,\ 8\text{-}hr}$ $S_{r,\ 8\text{-}hr}$	=	Total 8-hour score (summed for all substances with non-cancer 8-hour effects separately, by the residential receptor and worker receptor)
t	=	Toxic substance
r	=	Residential Receptor
w	=	Worker Receptor
E_t	=	Annual emissions of substance, t (ton/year)
$REL_{t,\ 8\text{-}hr}$	=	8-hour reference exposure level of toxic substance, t (µg/m^3)
RP_r RP_w	=	Receptor proximity adjustment factor for residential receptor and worker receptor, $\chi/Q \left(\frac{\mu g}{m^3} \Big/ \frac{ton}{year} \right)$
WAF	=	Worker Adjustment Factor (dimensionless)

Non-Cancer Acute Score:

For a facility which emits pollutants with known non-cancer acute health effects, the score for non-cancer acute effects is calculated as follows:

$$S_{acute} = \sum \left(\frac{E_t}{REL_t}\right) \times RP$$

Where:

S_{acute}	=	Total acute score (summed for all substances with non-cancer acute effects separately, by the residential receptor and worker receptor)
t	=	Toxic substance
E_t	=	Maximum hourly emissions of substance, t (lb/hour)
REL_t	=	Acute reference exposure level of toxic substance, t (μg/m^3)
RP	=	Receptor proximity adjustment factor for hourly concentration, χ/Q $\left(\frac{\mu g}{m^3} \Big/ \frac{lb}{hr}\right)$

Annual and Maximum Hourly Emissions:

Two different emissions rates are required for calculating the score for non-cancer health effects. The methodology for calculating the non-cancer score for chronic exposure requires annual emissions (tons/year) for each emitted pollutant whereas calculation of the non-cancer score for acute exposure requires maximum hourly emissions (lbs/hr) for each emitted pollutant. Maximum hourly emissions are obtained by dividing the annual emissions (lbs/yr) of the pollutant by the facility's actual operating hours and then multiplied by a maximum hourly emission adjustment factor of 1.25. Annual emissions are taken from the Toxic Air Contaminants (TAC)/Ozone Depleting Compounds (ODC) Emissions and Fees Summary of the AER Program. As specified previously, emissions of specified substances which are below one-half of their corresponding degree of accuracy levels are neglected in the computation.

Reference Exposure Levels:

The Reference Exposure Level (REL) is used as an indicator of all potential adverse non-cancer health effects and refers to a concentration level (μg/m^3) or dose (mg/kg-day) below which no adverse health effects are anticipated. The RELs used in this Procedure are published by OEHHA and CARB.[7]

Multipathway Adjustment Factor:

The MultiPathway (MP_t) adjustment factor is used for substances that may contribute to non-cancer chronic risks from exposure pathways other than inhalation. The methodology used to calculate MP_t adjustment factors to evaluate the non-cancer chronic health endpoint for selected toxic pollutants can be found in Appendix I. There are separate MP factors for workers and residents. For non-cancer chronic health effects, substances that only affect the inhalation pathway, the MP_t adjustment factor is set to one (1.0). Note that for calculation of non-cancer scores, the MP_t is relevant for the chronic risk endpoint.

[7] www.arb.ca.gov/toxics/healthval/healthval.htm

Receptor Proximity Adjustment Factor:

The Receptor Proximity (RP) adjustment factor is the same adjustment factor used in the calculation of the facility cancer score discussed previously. The RP adjustment factor for non-cancer acute score is based on a single distance from the facility to the nearest receptor regardless of wind direction. This receptor can be at the facility fenceline to account for the short one-hour exposure duration. To simplify calculation of the non-cancer acute score, the worst-case wind direction is used for the single receptor distance.

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 previously.

C. Facility Ranking

From the computed scores for cancer and all non-cancer effects, the priority score is the higher of the 13 scores and serves as the basis for ranking a facility as described in Table 1.

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Anaheim	10	7.884	3.894	2.330	0.670	0.325	0.132	0.040
Anaheim	20	8.320	4.142	2.489	0.718	0.347	0.140	0.042
Anaheim	30	8.675	4.356	2.634	0.769	0.373	0.151	0.045
Anaheim	40	8.871	4.481	2.724	0.806	0.394	0.160	0.048
Anaheim	50	8.870	4.487	2.731	0.811	0.397	0.162	0.049
Anaheim	60	8.675	4.373	2.654	0.782	0.381	0.154	0.046
Anaheim	70	8.325	4.168	2.516	0.732	0.354	0.142	0.042
Anaheim	80	7.894	3.920	2.355	0.679	0.328	0.132	0.040
Anaheim	90	7.476	3.690	2.211	0.638	0.310	0.126	0.038
Anaheim	100	7.156	3.520	2.110	0.614	0.300	0.124	0.038
Anaheim	110	6.969	3.423	2.053	0.601	0.295	0.122	0.038
Anaheim	120	6.884	3.376	2.026	0.594	0.293	0.121	0.037
Anaheim	130	6.845	3.353	2.011	0.590	0.290	0.120	0.037
Anaheim	140	6.824	3.340	2.002	0.587	0.289	0.120	0.037
Anaheim	150	6.811	3.331	1.996	0.585	0.288	0.119	0.037
Anaheim	160	6.802	3.325	1.991	0.584	0.288	0.119	0.037
Anaheim	170	6.799	3.322	1.990	0.583	0.287	0.119	0.037
Anaheim	180	6.803	3.324	1.991	0.583	0.287	0.119	0.037
Anaheim	190	6.814	3.329	1.994	0.584	0.288	0.119	0.037
Anaheim	200	6.832	3.339	2.000	0.586	0.289	0.120	0.037
Anaheim	210	6.857	3.353	2.009	0.589	0.290	0.120	0.037
Anaheim	220	6.885	3.369	2.020	0.593	0.292	0.121	0.037
Anaheim	230	6.914	3.386	2.031	0.597	0.294	0.122	0.038
Anaheim	240	6.936	3.401	2.041	0.601	0.296	0.123	0.038
Anaheim	250	6.949	3.409	2.047	0.603	0.298	0.123	0.038
Anaheim	260	6.950	3.410	2.048	0.604	0.298	0.124	0.038
Anaheim	270	6.939	3.402	2.042	0.601	0.296	0.123	0.038
Anaheim	280	6.918	3.389	2.033	0.597	0.294	0.122	0.038
Anaheim	290	6.895	3.374	2.022	0.592	0.291	0.121	0.037
Anaheim	300	6.877	3.363	2.014	0.590	0.290	0.120	0.037
Anaheim	310	6.872	3.361	2.013	0.589	0.290	0.120	0.037
Anaheim	320	6.890	3.371	2.019	0.591	0.291	0.120	0.037
Anaheim	330	6.938	3.396	2.034	0.595	0.293	0.121	0.037
Anaheim	340	7.026	3.442	2.061	0.602	0.296	0.122	0.038
Anaheim	350	7.188	3.527	2.111	0.614	0.301	0.124	0.038
Anaheim	360	7.476	3.675	2.198	0.635	0.310	0.127	0.039
Azusa	10	6.883	3.376	2.020	0.591	0.290	0.120	0.037
Azusa	20	7.044	3.460	2.068	0.600	0.294	0.121	0.037
Azusa	30	7.361	3.628	2.166	0.622	0.302	0.123	0.037
Azusa	40	7.799	3.870	2.315	0.663	0.319	0.128	0.038
Azusa	50	8.256	4.135	2.488	0.718	0.346	0.139	0.041
Azusa	60	8.616	4.352	2.634	0.771	0.375	0.151	0.045
Azusa	70	8.788	4.456	2.706	0.799	0.390	0.159	0.047
Azusa	80	8.728	4.416	2.676	0.786	0.383	0.155	0.046

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Azusa	90	8.448	4.243	2.556	0.739	0.357	0.143	0.042
Azusa	100	8.022	3.990	2.389	0.683	0.329	0.132	0.039
Azusa	110	7.558	3.731	2.225	0.636	0.308	0.125	0.038
Azusa	120	7.177	3.528	2.105	0.607	0.296	0.121	0.037
Azusa	130	6.951	3.409	2.036	0.592	0.290	0.119	0.037
Azusa	140	6.856	3.357	2.007	0.586	0.287	0.119	0.037
Azusa	150	6.847	3.350	2.002	0.584	0.287	0.118	0.037
Azusa	160	6.909	3.382	2.021	0.589	0.289	0.119	0.037
Azusa	170	7.019	3.441	2.059	0.600	0.294	0.121	0.037
Azusa	180	7.135	3.507	2.101	0.615	0.302	0.124	0.038
Azusa	190	7.227	3.560	2.137	0.630	0.310	0.129	0.040
Azusa	200	7.278	3.590	2.158	0.639	0.316	0.132	0.041
Azusa	210	7.283	3.593	2.160	0.639	0.316	0.132	0.041
Azusa	220	7.242	3.568	2.143	0.632	0.312	0.129	0.040
Azusa	230	7.158	3.520	2.110	0.619	0.304	0.125	0.038
Azusa	240	7.046	3.457	2.069	0.604	0.296	0.122	0.037
Azusa	250	6.934	3.396	2.031	0.593	0.291	0.120	0.037
Azusa	260	6.854	3.355	2.007	0.587	0.289	0.119	0.037
Azusa	270	6.816	3.336	1.996	0.585	0.288	0.119	0.037
Azusa	280	6.802	3.329	1.993	0.585	0.288	0.119	0.037
Azusa	290	6.798	3.328	1.992	0.585	0.288	0.119	0.037
Azusa	300	6.796	3.326	1.992	0.585	0.288	0.119	0.037
Azusa	310	6.794	3.325	1.991	0.585	0.288	0.119	0.037
Azusa	320	6.792	3.325	1.991	0.584	0.288	0.119	0.037
Azusa	330	6.792	3.325	1.991	0.584	0.288	0.119	0.037
Azusa	340	6.795	3.327	1.992	0.584	0.288	0.119	0.037
Azusa	350	6.803	3.331	1.995	0.585	0.288	0.119	0.037
Azusa	360	6.825	3.344	2.002	0.587	0.289	0.119	0.037
Banning	10	1.673	0.918	0.570	0.170	0.083	0.034	0.010
Banning	20	1.949	1.073	0.660	0.191	0.091	0.037	0.011
Banning	30	2.716	1.514	0.927	0.257	0.119	0.045	0.013
Banning	40	4.316	2.459	1.517	0.420	0.192	0.072	0.019
Banning	50	6.838	3.986	2.498	0.719	0.336	0.128	0.035
Banning	60	9.862	5.857	3.731	1.125	0.542	0.215	0.062
Banning	70	12.427	7.474	4.822	1.513	0.750	0.309	0.093
Banning	80	13.430	8.115	5.267	1.689	0.852	0.359	0.112
Banning	90	12.343	7.426	4.807	1.531	0.769	0.322	0.100
Banning	100	9.668	5.740	3.675	1.132	0.555	0.225	0.067
Banning	110	6.590	3.837	2.419	0.713	0.340	0.133	0.038
Banning	120	4.138	2.357	1.466	0.418	0.196	0.075	0.021
Banning	130	2.665	1.490	0.921	0.264	0.125	0.049	0.014
Banning	140	1.980	1.095	0.679	0.200	0.097	0.039	0.012
Banning	150	1.732	0.953	0.593	0.178	0.087	0.036	0.011
Banning	160	1.673	0.918	0.572	0.173	0.085	0.035	0.011

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Banning	170	1.713	0.942	0.587	0.177	0.087	0.036	0.011
Banning	180	1.836	1.019	0.639	0.194	0.095	0.039	0.012
Banning	190	2.015	1.135	0.718	0.223	0.111	0.046	0.014
Banning	200	2.195	1.251	0.799	0.255	0.129	0.055	0.017
Banning	210	2.329	1.333	0.853	0.273	0.138	0.059	0.019
Banning	220	2.418	1.379	0.878	0.277	0.139	0.058	0.018
Banning	230	2.512	1.426	0.903	0.280	0.139	0.058	0.018
Banning	240	2.693	1.524	0.961	0.294	0.145	0.060	0.018
Banning	250	3.019	1.712	1.076	0.324	0.158	0.064	0.019
Banning	260	3.457	1.974	1.242	0.372	0.181	0.073	0.021
Banning	270	3.823	2.201	1.389	0.419	0.203	0.082	0.024
Banning	280	3.832	2.213	1.398	0.422	0.205	0.082	0.024
Banning	290	3.361	1.925	1.209	0.359	0.173	0.069	0.020
Banning	300	2.641	1.485	0.922	0.267	0.127	0.050	0.014
Banning	310	2.041	1.127	0.695	0.201	0.096	0.038	0.011
Banning	320	1.720	0.944	0.584	0.173	0.084	0.034	0.010
Banning	330	1.606	0.881	0.549	0.166	0.082	0.034	0.010
Banning	340	1.579	0.867	0.541	0.164	0.081	0.034	0.010
Banning	350	1.577	0.866	0.540	0.164	0.081	0.034	0.010
Banning	360	1.595	0.876	0.546	0.165	0.082	0.034	0.010
Burbank Arpt.	10	5.684	2.918	1.771	0.514	0.247	0.098	0.028
Burbank Arpt.	20	5.188	2.638	1.590	0.453	0.216	0.085	0.025
Burbank Arpt.	30	4.703	2.374	1.424	0.403	0.193	0.077	0.023
Burbank Arpt.	40	4.340	2.190	1.315	0.376	0.182	0.073	0.022
Burbank Arpt.	50	4.169	2.114	1.276	0.371	0.181	0.074	0.022
Burbank Arpt.	60	4.147	2.116	1.284	0.378	0.186	0.076	0.023
Burbank Arpt.	70	4.173	2.138	1.302	0.388	0.191	0.079	0.024
Burbank Arpt.	80	4.174	2.140	1.304	0.389	0.192	0.080	0.025
Burbank Arpt.	90	4.133	2.111	1.283	0.380	0.187	0.077	0.024
Burbank Arpt.	100	4.069	2.068	1.253	0.368	0.180	0.074	0.022
Burbank Arpt.	110	4.024	2.036	1.230	0.359	0.176	0.072	0.022
Burbank Arpt.	120	4.040	2.043	1.233	0.359	0.175	0.072	0.022
Burbank Arpt.	130	4.143	2.105	1.273	0.372	0.181	0.074	0.022
Burbank Arpt.	140	4.319	2.214	1.347	0.398	0.195	0.080	0.024
Burbank Arpt.	150	4.504	2.333	1.428	0.429	0.212	0.088	0.027
Burbank Arpt.	160	4.620	2.408	1.480	0.449	0.224	0.094	0.029
Burbank Arpt.	170	4.619	2.408	1.480	0.448	0.223	0.093	0.029
Burbank Arpt.	180	4.513	2.342	1.434	0.429	0.212	0.088	0.027
Burbank Arpt.	190	4.356	2.244	1.368	0.406	0.200	0.082	0.025
Burbank Arpt.	200	4.197	2.147	1.304	0.385	0.189	0.078	0.024
Burbank Arpt.	210	4.064	2.066	1.252	0.368	0.181	0.074	0.023
Burbank Arpt.	220	3.966	2.007	1.213	0.356	0.174	0.072	0.022
Burbank Arpt.	230	3.921	1.979	1.194	0.349	0.171	0.070	0.021
Burbank Arpt.	240	3.963	2.000	1.205	0.350	0.171	0.070	0.021

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Burbank Arpt.	250	4.136	2.100	1.266	0.366	0.178	0.072	0.022
Burbank Arpt.	260	4.494	2.312	1.402	0.407	0.197	0.080	0.024
Burbank Arpt.	270	5.099	2.675	1.636	0.482	0.235	0.096	0.029
Burbank Arpt.	280	5.955	3.190	1.970	0.589	0.290	0.119	0.036
Burbank Arpt.	290	6.924	3.771	2.348	0.713	0.352	0.146	0.045
Burbank Arpt.	300	7.734	4.246	2.656	0.812	0.403	0.167	0.051
Burbank Arpt.	310	8.145	4.461	2.784	0.847	0.419	0.174	0.053
Burbank Arpt.	320	8.086	4.378	2.711	0.808	0.395	0.161	0.048
Burbank Arpt.	330	7.675	4.090	2.510	0.730	0.350	0.138	0.040
Burbank Arpt.	340	7.128	3.746	2.286	0.659	0.314	0.122	0.034
Burbank Arpt.	350	6.608	3.441	2.098	0.611	0.294	0.117	0.034
Burbank Arpt.	360	6.144	3.179	1.938	0.568	0.275	0.111	0.032
Catalina Arpt.	10	3.500	1.833	1.114	0.321	0.155	0.062	0.018
Catalina Arpt.	20	3.731	1.959	1.189	0.341	0.163	0.065	0.019
Catalina Arpt.	30	4.240	2.244	1.364	0.389	0.186	0.074	0.022
Catalina Arpt.	40	5.092	2.728	1.664	0.475	0.226	0.089	0.026
Catalina Arpt.	50	6.209	3.373	2.074	0.599	0.287	0.114	0.033
Catalina Arpt.	60	7.287	4.006	2.479	0.728	0.351	0.140	0.041
Catalina Arpt.	70	7.910	4.367	2.710	0.799	0.386	0.155	0.045
Catalina Arpt.	80	7.822	4.302	2.660	0.776	0.372	0.147	0.042
Catalina Arpt.	90	7.146	3.890	2.387	0.683	0.323	0.126	0.036
Catalina Arpt.	100	6.285	3.384	2.064	0.584	0.276	0.108	0.031
Catalina Arpt.	110	5.597	2.992	1.825	0.521	0.249	0.099	0.029
Catalina Arpt.	120	5.154	2.749	1.681	0.488	0.236	0.095	0.029
Catalina Arpt.	130	4.832	2.574	1.577	0.462	0.224	0.091	0.027
Catalina Arpt.	140	4.524	2.404	1.472	0.430	0.208	0.084	0.025
Catalina Arpt.	150	4.211	2.228	1.361	0.395	0.191	0.077	0.023
Catalina Arpt.	160	3.926	2.068	1.260	0.364	0.176	0.070	0.021
Catalina Arpt.	170	3.707	1.946	1.184	0.343	0.165	0.067	0.020
Catalina Arpt.	180	3.568	1.870	1.138	0.330	0.160	0.065	0.019
Catalina Arpt.	190	3.498	1.832	1.116	0.325	0.157	0.064	0.019
Catalina Arpt.	200	3.473	1.820	1.109	0.323	0.157	0.063	0.019
Catalina Arpt.	210	3.482	1.826	1.113	0.324	0.157	0.064	0.019
Catalina Arpt.	220	3.521	1.849	1.128	0.329	0.160	0.065	0.020
Catalina Arpt.	230	3.586	1.888	1.153	0.337	0.164	0.067	0.020
Catalina Arpt.	240	3.664	1.934	1.183	0.347	0.169	0.069	0.021
Catalina Arpt.	250	3.725	1.968	1.205	0.354	0.173	0.070	0.021
Catalina Arpt.	260	3.742	1.976	1.208	0.355	0.173	0.070	0.021
Catalina Arpt.	270	3.720	1.958	1.196	0.349	0.170	0.069	0.021
Catalina Arpt.	280	3.687	1.937	1.181	0.344	0.167	0.067	0.020
Catalina Arpt.	290	3.672	1.928	1.176	0.343	0.166	0.067	0.020
Catalina Arpt.	300	3.677	1.935	1.183	0.347	0.169	0.069	0.021
Catalina Arpt.	310	3.687	1.945	1.191	0.351	0.172	0.070	0.021
Catalina Arpt.	320	3.680	1.945	1.193	0.353	0.172	0.071	0.021

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Catalina Arpt.	330	3.647	1.930	1.184	0.350	0.171	0.070	0.021
Catalina Arpt.	340	3.584	1.895	1.161	0.343	0.168	0.069	0.021
Catalina Arpt.	350	3.504	1.847	1.130	0.332	0.162	0.066	0.020
Catalina Arpt.	360	3.452	1.812	1.104	0.321	0.156	0.063	0.019
Central L.A.	10	6.547	3.144	1.865	0.535	0.260	0.106	0.032
Central L.A.	20	6.649	3.205	1.903	0.545	0.264	0.107	0.032
Central L.A.	30	6.762	3.275	1.950	0.558	0.270	0.109	0.032
Central L.A.	40	6.864	3.342	1.997	0.574	0.277	0.111	0.033
Central L.A.	50	6.934	3.391	2.033	0.589	0.285	0.115	0.034
Central L.A.	60	6.967	3.414	2.050	0.598	0.290	0.117	0.035
Central L.A.	70	6.960	3.407	2.045	0.596	0.290	0.117	0.035
Central L.A.	80	6.917	3.372	2.016	0.583	0.283	0.114	0.034
Central L.A.	90	6.841	3.314	1.971	0.563	0.271	0.109	0.032
Central L.A.	100	6.743	3.242	1.918	0.541	0.260	0.105	0.031
Central L.A.	110	6.635	3.170	1.867	0.525	0.252	0.102	0.031
Central L.A.	120	6.538	3.110	1.829	0.514	0.248	0.101	0.031
Central L.A.	130	6.467	3.071	1.805	0.510	0.247	0.101	0.031
Central L.A.	140	6.429	3.051	1.795	0.508	0.247	0.101	0.031
Central L.A.	150	6.412	3.043	1.791	0.508	0.246	0.101	0.031
Central L.A.	160	6.401	3.037	1.788	0.507	0.246	0.100	0.031
Central L.A.	170	6.388	3.032	1.785	0.507	0.246	0.100	0.031
Central L.A.	180	6.377	3.027	1.783	0.507	0.246	0.101	0.031
Central L.A.	190	6.370	3.024	1.782	0.508	0.247	0.101	0.031
Central L.A.	200	6.369	3.025	1.783	0.509	0.247	0.101	0.031
Central L.A.	210	6.374	3.028	1.785	0.509	0.248	0.101	0.031
Central L.A.	220	6.386	3.035	1.790	0.511	0.248	0.102	0.031
Central L.A.	230	6.404	3.046	1.798	0.513	0.249	0.102	0.031
Central L.A.	240	6.425	3.060	1.807	0.516	0.251	0.103	0.031
Central L.A.	250	6.441	3.071	1.815	0.519	0.253	0.104	0.032
Central L.A.	260	6.445	3.074	1.816	0.520	0.253	0.104	0.032
Central L.A.	270	6.433	3.064	1.809	0.516	0.251	0.103	0.031
Central L.A.	280	6.409	3.047	1.796	0.511	0.248	0.101	0.031
Central L.A.	290	6.383	3.031	1.785	0.506	0.246	0.100	0.031
Central L.A.	300	6.364	3.019	1.777	0.504	0.244	0.100	0.030
Central L.A.	310	6.355	3.014	1.774	0.503	0.244	0.100	0.030
Central L.A.	320	6.356	3.017	1.776	0.504	0.244	0.100	0.030
Central L.A.	330	6.370	3.028	1.785	0.507	0.246	0.100	0.031
Central L.A.	340	6.393	3.045	1.798	0.513	0.249	0.101	0.031
Central L.A.	350	6.425	3.068	1.815	0.519	0.252	0.103	0.031
Central L.A.	360	6.473	3.099	1.836	0.526	0.256	0.105	0.032
Chino Arpt.	10	4.237	2.253	1.391	0.421	0.208	0.086	0.027
Chino Arpt.	20	4.526	2.427	1.500	0.451	0.222	0.091	0.028
Chino Arpt.	30	5.073	2.769	1.719	0.516	0.253	0.103	0.031
Chino Arpt.	40	6.061	3.400	2.128	0.639	0.311	0.126	0.038

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Chino Arpt.	50	7.598	4.396	2.779	0.839	0.408	0.164	0.049
Chino Arpt.	60	9.373	5.557	3.547	1.083	0.529	0.214	0.063
Chino Arpt.	70	10.700	6.428	4.129	1.274	0.624	0.253	0.075
Chino Arpt.	80	11.145	6.724	4.338	1.356	0.670	0.274	0.082
Chino Arpt.	90	10.708	6.444	4.169	1.322	0.660	0.275	0.085
Chino Arpt.	100	9.553	5.684	3.671	1.168	0.586	0.245	0.076
Chino Arpt.	110	7.986	4.644	2.970	0.931	0.464	0.193	0.059
Chino Arpt.	120	6.444	3.623	2.278	0.692	0.339	0.138	0.041
Chino Arpt.	130	5.287	2.872	1.778	0.526	0.254	0.102	0.030
Chino Arpt.	140	4.620	2.460	1.514	0.449	0.219	0.090	0.027
Chino Arpt.	150	4.323	2.291	1.414	0.427	0.211	0.087	0.027
Chino Arpt.	160	4.209	2.233	1.382	0.422	0.210	0.087	0.027
Chino Arpt.	170	4.158	2.204	1.365	0.418	0.208	0.087	0.027
Chino Arpt.	180	4.154	2.198	1.359	0.414	0.206	0.086	0.027
Chino Arpt.	190	4.236	2.244	1.385	0.418	0.207	0.085	0.026
Chino Arpt.	200	4.432	2.369	1.469	0.446	0.220	0.090	0.027
Chino Arpt.	210	4.716	2.560	1.602	0.497	0.248	0.104	0.032
Chino Arpt.	220	4.987	2.743	1.730	0.545	0.275	0.117	0.037
Chino Arpt.	230	5.144	2.844	1.796	0.565	0.284	0.119	0.037
Chino Arpt.	240	5.171	2.855	1.799	0.561	0.280	0.117	0.036
Chino Arpt.	250	5.113	2.815	1.769	0.549	0.274	0.114	0.035
Chino Arpt.	260	5.015	2.754	1.729	0.536	0.267	0.111	0.034
Chino Arpt.	270	4.892	2.678	1.679	0.519	0.259	0.108	0.033
Chino Arpt.	280	4.741	2.584	1.617	0.499	0.249	0.104	0.032
Chino Arpt.	290	4.572	2.477	1.547	0.476	0.237	0.099	0.031
Chino Arpt.	300	4.400	2.368	1.473	0.451	0.224	0.093	0.029
Chino Arpt.	310	4.245	2.270	1.408	0.429	0.213	0.088	0.027
Chino Arpt.	320	4.129	2.198	1.361	0.415	0.206	0.086	0.027
Chino Arpt.	330	4.056	2.154	1.333	0.407	0.202	0.084	0.026
Chino Arpt.	340	4.024	2.135	1.320	0.402	0.200	0.083	0.026
Chino Arpt.	350	4.032	2.138	1.322	0.402	0.199	0.083	0.026
Chino Arpt.	360	4.092	2.170	1.341	0.407	0.202	0.084	0.026
Desert Hot Springs Arpt.	10	3.676	1.862	1.114	0.315	0.152	0.061	0.018
Desert Hot Springs Arpt.	20	3.497	1.768	1.060	0.303	0.146	0.059	0.018
Desert Hot Springs Arpt.	30	3.404	1.719	1.031	0.295	0.143	0.058	0.018
Desert Hot Springs Arpt.	40	3.367	1.699	1.019	0.292	0.142	0.058	0.017
Desert Hot Springs Arpt.	50	3.374	1.702	1.021	0.293	0.142	0.058	0.017
Desert Hot Springs Arpt.	60	3.433	1.734	1.039	0.297	0.144	0.058	0.018
Desert Hot Springs Arpt.	70	3.564	1.805	1.082	0.309	0.149	0.060	0.018
Desert Hot Springs Arpt.	80	3.801	1.937	1.163	0.331	0.159	0.064	0.019
Desert Hot Springs Arpt.	90	4.193	2.156	1.299	0.370	0.177	0.071	0.021
Desert Hot Springs Arpt.	100	4.806	2.500	1.513	0.432	0.207	0.082	0.024
Desert Hot Springs Arpt.	110	5.701	3.003	1.827	0.525	0.251	0.100	0.029
Desert Hot Springs Arpt.	120	6.823	3.634	2.225	0.647	0.312	0.125	0.036

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Desert Hot Springs Arpt.	130	7.892	4.232	2.606	0.771	0.376	0.153	0.046
Desert Hot Springs Arpt.	140	8.513	4.570	2.822	0.844	0.415	0.171	0.052
Desert Hot Springs Arpt.	150	8.447	4.514	2.782	0.830	0.407	0.167	0.051
Desert Hot Springs Arpt.	160	7.760	4.108	2.518	0.742	0.361	0.147	0.044
Desert Hot Springs Arpt.	170	6.744	3.530	2.150	0.625	0.302	0.122	0.036
Desert Hot Springs Arpt.	180	5.714	2.960	1.794	0.517	0.250	0.101	0.030
Desert Hot Springs Arpt.	190	4.859	2.495	1.506	0.432	0.208	0.083	0.025
Desert Hot Springs Arpt.	200	4.227	2.154	1.294	0.369	0.177	0.071	0.021
Desert Hot Springs Arpt.	210	3.799	1.923	1.152	0.328	0.157	0.063	0.019
Desert Hot Springs Arpt.	220	3.530	1.779	1.065	0.303	0.146	0.059	0.018
Desert Hot Springs Arpt.	230	3.378	1.700	1.018	0.291	0.140	0.057	0.017
Desert Hot Springs Arpt.	240	3.315	1.668	0.999	0.286	0.139	0.056	0.017
Desert Hot Springs Arpt.	250	3.322	1.673	1.003	0.287	0.139	0.057	0.017
Desert Hot Springs Arpt.	260	3.398	1.714	1.027	0.293	0.142	0.058	0.017
Desert Hot Springs Arpt.	270	3.570	1.805	1.079	0.306	0.147	0.059	0.018
Desert Hot Springs Arpt.	280	3.886	1.969	1.175	0.329	0.157	0.063	0.019
Desert Hot Springs Arpt.	290	4.334	2.208	1.320	0.368	0.174	0.069	0.020
Desert Hot Springs Arpt.	300	4.810	2.473	1.488	0.419	0.198	0.078	0.022
Desert Hot Springs Arpt.	310	5.169	2.681	1.623	0.464	0.222	0.088	0.025
Desert Hot Springs Arpt.	320	5.301	2.758	1.676	0.483	0.232	0.092	0.027
Desert Hot Springs Arpt.	330	5.172	2.683	1.626	0.465	0.222	0.088	0.025
Desert Hot Springs Arpt.	340	4.833	2.488	1.498	0.422	0.200	0.078	0.022
Desert Hot Springs Arpt.	350	4.395	2.243	1.343	0.374	0.177	0.070	0.020
Desert Hot Springs Arpt.	360	3.981	2.021	1.207	0.338	0.161	0.064	0.019
Fontana	10	6.374	3.225	1.955	0.577	0.283	0.117	0.036
Fontana	20	6.750	3.428	2.077	0.609	0.297	0.122	0.037
Fontana	30	7.350	3.754	2.275	0.663	0.322	0.131	0.040
Fontana	40	8.203	4.228	2.569	0.748	0.362	0.146	0.044
Fontana	50	9.198	4.797	2.934	0.864	0.420	0.169	0.050
Fontana	60	10.064	5.308	3.271	0.981	0.482	0.197	0.060
Fontana	70	10.493	5.566	3.445	1.046	0.518	0.215	0.066
Fontana	80	10.300	5.452	3.368	1.017	0.502	0.207	0.063
Fontana	90	9.534	4.996	3.063	0.906	0.442	0.180	0.054
Fontana	100	8.455	4.367	2.652	0.768	0.371	0.149	0.044
Fontana	110	7.415	3.780	2.282	0.657	0.318	0.128	0.039
Fontana	120	6.671	3.375	2.037	0.593	0.289	0.119	0.036
Fontana	130	6.269	3.162	1.913	0.564	0.278	0.115	0.036
Fontana	140	6.118	3.082	1.868	0.555	0.274	0.114	0.035
Fontana	150	6.113	3.080	1.867	0.555	0.274	0.114	0.035
Fontana	160	6.214	3.134	1.901	0.564	0.278	0.116	0.036
Fontana	170	6.413	3.246	1.971	0.585	0.289	0.119	0.037
Fontana	180	6.700	3.411	2.078	0.620	0.306	0.127	0.039
Fontana	190	7.032	3.604	2.203	0.662	0.329	0.137	0.042
Fontana	200	7.315	3.766	2.308	0.698	0.348	0.146	0.045

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Fontana	210	7.432	3.832	2.349	0.711	0.354	0.148	0.046
Fontana	220	7.328	3.767	2.305	0.693	0.344	0.143	0.044
Fontana	230	7.043	3.601	2.196	0.656	0.324	0.134	0.041
Fontana	240	6.694	3.402	2.069	0.615	0.303	0.125	0.039
Fontana	250	6.394	3.235	1.965	0.584	0.288	0.119	0.037
Fontana	260	6.194	3.126	1.898	0.565	0.279	0.116	0.036
Fontana	270	6.078	3.063	1.860	0.554	0.274	0.114	0.035
Fontana	280	6.011	3.027	1.837	0.548	0.271	0.113	0.035
Fontana	290	5.971	3.005	1.824	0.544	0.270	0.112	0.035
Fontana	300	5.947	2.992	1.816	0.542	0.269	0.112	0.035
Fontana	310	5.937	2.987	1.813	0.541	0.268	0.112	0.035
Fontana	320	5.937	2.988	1.814	0.542	0.268	0.112	0.035
Fontana	330	5.950	2.995	1.818	0.543	0.269	0.112	0.035
Fontana	340	5.977	3.011	1.828	0.545	0.270	0.112	0.035
Fontana	350	6.034	3.042	1.847	0.550	0.272	0.113	0.035
Fontana	360	6.152	3.106	1.884	0.559	0.276	0.114	0.035
Fullerton Arpt.	10	7.647	3.897	2.369	0.697	0.339	0.137	0.041
Fullerton Arpt.	20	7.734	3.953	2.409	0.712	0.347	0.141	0.042
Fullerton Arpt.	30	7.630	3.894	2.370	0.698	0.339	0.137	0.040
Fullerton Arpt.	40	7.379	3.748	2.271	0.661	0.320	0.128	0.038
Fullerton Arpt.	50	7.066	3.567	2.152	0.621	0.299	0.120	0.035
Fullerton Arpt.	60	6.778	3.408	2.053	0.592	0.286	0.115	0.034
Fullerton Arpt.	70	6.565	3.299	1.989	0.578	0.281	0.114	0.034
Fullerton Arpt.	80	6.431	3.235	1.955	0.574	0.281	0.115	0.035
Fullerton Arpt.	90	6.346	3.194	1.934	0.572	0.281	0.116	0.035
Fullerton Arpt.	100	6.272	3.154	1.910	0.566	0.279	0.115	0.035
Fullerton Arpt.	110	6.182	3.101	1.876	0.554	0.273	0.112	0.034
Fullerton Arpt.	120	6.070	3.036	1.833	0.540	0.265	0.109	0.033
Fullerton Arpt.	130	5.949	2.968	1.789	0.526	0.258	0.106	0.033
Fullerton Arpt.	140	5.838	2.908	1.752	0.515	0.253	0.105	0.032
Fullerton Arpt.	150	5.758	2.866	1.727	0.509	0.251	0.104	0.032
Fullerton Arpt.	160	5.716	2.844	1.714	0.506	0.249	0.103	0.032
Fullerton Arpt.	170	5.700	2.835	1.709	0.504	0.249	0.103	0.032
Fullerton Arpt.	180	5.696	2.832	1.707	0.504	0.249	0.103	0.032
Fullerton Arpt.	190	5.700	2.833	1.707	0.504	0.249	0.103	0.032
Fullerton Arpt.	200	5.719	2.842	1.712	0.505	0.249	0.103	0.032
Fullerton Arpt.	210	5.793	2.878	1.731	0.508	0.250	0.103	0.032
Fullerton Arpt.	220	6.004	2.990	1.796	0.522	0.256	0.105	0.032
Fullerton Arpt.	230	6.440	3.239	1.951	0.566	0.275	0.112	0.034
Fullerton Arpt.	240	7.079	3.626	2.206	0.650	0.318	0.129	0.039
Fullerton Arpt.	250	7.735	4.038	2.489	0.757	0.377	0.157	0.048
Fullerton Arpt.	260	8.154	4.306	2.677	0.834	0.422	0.179	0.057
Fullerton Arpt.	270	8.181	4.319	2.685	0.836	0.423	0.180	0.057
Fullerton Arpt.	280	7.841	4.094	2.525	0.770	0.383	0.160	0.049

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Fullerton Arpt.	290	7.299	3.748	2.285	0.677	0.332	0.136	0.041
Fullerton Arpt.	300	6.760	3.417	2.064	0.602	0.293	0.120	0.036
Fullerton Arpt.	310	6.383	3.195	1.922	0.558	0.272	0.111	0.034
Fullerton Arpt.	320	6.237	3.111	1.869	0.543	0.265	0.109	0.033
Fullerton Arpt.	330	6.320	3.153	1.895	0.551	0.269	0.110	0.034
Fullerton Arpt.	340	6.600	3.301	1.985	0.575	0.280	0.114	0.035
Fullerton Arpt.	350	6.994	3.517	2.119	0.614	0.298	0.121	0.036
Fullerton Arpt.	360	7.380	3.737	2.261	0.659	0.320	0.129	0.039
Hawthorne Arpt.	10	4.829	2.409	1.455	0.429	0.211	0.087	0.027
Hawthorne Arpt.	20	4.895	2.443	1.472	0.432	0.212	0.087	0.027
Hawthorne Arpt.	30	5.159	2.587	1.554	0.448	0.218	0.089	0.027
Hawthorne Arpt.	40	5.874	2.987	1.794	0.508	0.242	0.096	0.028
Hawthorne Arpt.	50	7.182	3.738	2.264	0.644	0.306	0.120	0.034
Hawthorne Arpt.	60	8.780	4.679	2.876	0.845	0.409	0.164	0.048
Hawthorne Arpt.	70	9.936	5.371	3.334	1.005	0.495	0.203	0.061
Hawthorne Arpt.	80	10.018	5.409	3.355	1.008	0.494	0.201	0.060
Hawthorne Arpt.	90	9.021	4.792	2.940	0.859	0.413	0.164	0.047
Hawthorne Arpt.	100	7.558	3.916	2.369	0.673	0.320	0.126	0.036
Hawthorne Arpt.	110	6.326	3.205	1.923	0.544	0.260	0.103	0.030
Hawthorne Arpt.	120	5.597	2.799	1.677	0.480	0.232	0.094	0.028
Hawthorne Arpt.	130	5.234	2.604	1.562	0.452	0.220	0.090	0.027
Hawthorne Arpt.	140	5.037	2.504	1.505	0.439	0.215	0.088	0.027
Hawthorne Arpt.	150	4.923	2.449	1.474	0.432	0.212	0.088	0.027
Hawthorne Arpt.	160	4.868	2.423	1.460	0.429	0.211	0.087	0.027
Hawthorne Arpt.	170	4.846	2.412	1.454	0.428	0.210	0.087	0.027
Hawthorne Arpt.	180	4.832	2.405	1.449	0.426	0.210	0.087	0.027
Hawthorne Arpt.	190	4.820	2.399	1.446	0.425	0.209	0.087	0.027
Hawthorne Arpt.	200	4.812	2.395	1.444	0.425	0.209	0.087	0.027
Hawthorne Arpt.	210	4.811	2.395	1.444	0.425	0.209	0.087	0.027
Hawthorne Arpt.	220	4.819	2.399	1.447	0.426	0.210	0.087	0.027
Hawthorne Arpt.	230	4.849	2.415	1.455	0.428	0.210	0.087	0.027
Hawthorne Arpt.	240	4.931	2.458	1.480	0.433	0.212	0.087	0.027
Hawthorne Arpt.	250	5.086	2.547	1.535	0.448	0.219	0.089	0.027
Hawthorne Arpt.	260	5.290	2.670	1.617	0.476	0.233	0.095	0.029
Hawthorne Arpt.	270	5.481	2.791	1.700	0.508	0.251	0.104	0.032
Hawthorne Arpt.	280	5.585	2.858	1.748	0.528	0.263	0.110	0.034
Hawthorne Arpt.	290	5.559	2.842	1.737	0.523	0.260	0.108	0.034
Hawthorne Arpt.	300	5.414	2.750	1.672	0.497	0.245	0.101	0.031
Hawthorne Arpt.	310	5.207	2.623	1.587	0.467	0.229	0.094	0.028
Hawthorne Arpt.	320	5.015	2.511	1.516	0.446	0.219	0.090	0.027
Hawthorne Arpt.	330	4.890	2.442	1.474	0.435	0.215	0.089	0.027
Hawthorne Arpt.	340	4.832	2.412	1.457	0.432	0.213	0.088	0.027
Hawthorne Arpt.	350	4.817	2.404	1.453	0.430	0.212	0.088	0.027
Hawthorne Arpt.	360	4.818	2.404	1.452	0.430	0.212	0.087	0.027

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
John Wayne Int'l Arpt.	10	8.277	4.604	2.892	0.882	0.434	0.178	0.054
John Wayne Int'l Arpt.	20	8.403	4.694	2.961	0.915	0.454	0.188	0.058
John Wayne Int'l Arpt.	30	7.613	4.198	2.629	0.796	0.389	0.157	0.046
John Wayne Int'l Arpt.	40	6.316	3.393	2.093	0.613	0.292	0.114	0.031
John Wayne Int'l Arpt.	50	5.180	2.710	1.656	0.481	0.230	0.090	0.025
John Wayne Int'l Arpt.	60	4.535	2.336	1.425	0.419	0.202	0.081	0.023
John Wayne Int'l Arpt.	70	4.258	2.173	1.322	0.386	0.186	0.074	0.021
John Wayne Int'l Arpt.	80	4.099	2.071	1.251	0.360	0.172	0.069	0.020
John Wayne Int'l Arpt.	90	3.940	1.972	1.184	0.338	0.162	0.065	0.019
John Wayne Int'l Arpt.	100	3.789	1.886	1.129	0.323	0.156	0.063	0.019
John Wayne Int'l Arpt.	110	3.677	1.827	1.095	0.315	0.153	0.062	0.019
John Wayne Int'l Arpt.	120	3.611	1.795	1.077	0.311	0.152	0.062	0.019
John Wayne Int'l Arpt.	130	3.579	1.779	1.067	0.309	0.151	0.062	0.019
John Wayne Int'l Arpt.	140	3.563	1.770	1.062	0.308	0.150	0.062	0.019
John Wayne Int'l Arpt.	150	3.556	1.766	1.060	0.307	0.150	0.061	0.019
John Wayne Int'l Arpt.	160	3.557	1.766	1.059	0.307	0.150	0.061	0.019
John Wayne Int'l Arpt.	170	3.575	1.774	1.063	0.308	0.150	0.061	0.019
John Wayne Int'l Arpt.	180	3.618	1.796	1.076	0.311	0.151	0.062	0.019
John Wayne Int'l Arpt.	190	3.692	1.835	1.100	0.317	0.154	0.063	0.019
John Wayne Int'l Arpt.	200	3.795	1.890	1.134	0.328	0.160	0.065	0.020
John Wayne Int'l Arpt.	210	3.931	1.964	1.180	0.342	0.167	0.068	0.021
John Wayne Int'l Arpt.	220	4.112	2.067	1.244	0.361	0.176	0.072	0.022
John Wayne Int'l Arpt.	230	4.334	2.200	1.331	0.389	0.189	0.077	0.023
John Wayne Int'l Arpt.	240	4.542	2.332	1.422	0.422	0.207	0.085	0.026
John Wayne Int'l Arpt.	250	4.648	2.404	1.473	0.443	0.220	0.092	0.028
John Wayne Int'l Arpt.	260	4.608	2.379	1.456	0.437	0.217	0.091	0.028
John Wayne Int'l Arpt.	270	4.496	2.300	1.396	0.410	0.200	0.082	0.025
John Wayne Int'l Arpt.	280	4.457	2.265	1.365	0.391	0.187	0.075	0.022
John Wayne Int'l Arpt.	290	4.585	2.344	1.417	0.408	0.196	0.079	0.023
John Wayne Int'l Arpt.	300	4.865	2.526	1.544	0.458	0.225	0.093	0.028
John Wayne Int'l Arpt.	310	5.194	2.738	1.689	0.511	0.254	0.106	0.033
John Wayne Int'l Arpt.	320	5.467	2.905	1.797	0.544	0.269	0.111	0.034
John Wayne Int'l Arpt.	330	5.676	3.026	1.869	0.561	0.276	0.113	0.035
John Wayne Int'l Arpt.	340	5.968	3.192	1.967	0.583	0.285	0.116	0.035
John Wayne Int'l Arpt.	350	6.561	3.539	2.184	0.642	0.311	0.126	0.037
John Wayne Int'l Arpt.	360	7.466	4.091	2.543	0.756	0.367	0.148	0.044
Long Beach Arpt.	10	5.123	2.669	1.644	0.496	0.243	0.099	0.029
Long Beach Arpt.	20	5.049	2.625	1.614	0.484	0.237	0.096	0.028
Long Beach Arpt.	30	4.904	2.534	1.551	0.459	0.223	0.090	0.026
Long Beach Arpt.	40	4.710	2.417	1.471	0.430	0.208	0.084	0.025
Long Beach Arpt.	50	4.513	2.304	1.397	0.408	0.198	0.081	0.024
Long Beach Arpt.	60	4.387	2.239	1.357	0.397	0.194	0.079	0.024
Long Beach Arpt.	70	4.449	2.282	1.384	0.404	0.197	0.080	0.024
Long Beach Arpt.	80	4.857	2.521	1.531	0.443	0.214	0.086	0.026

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Long Beach Arpt.	90	5.779	3.068	1.873	0.538	0.257	0.102	0.030
Long Beach Arpt.	100	7.163	3.920	2.429	0.713	0.342	0.135	0.039
Long Beach Arpt.	110	8.533	4.799	3.030	0.932	0.460	0.188	0.056
Long Beach Arpt.	120	9.253	5.284	3.378	1.080	0.549	0.234	0.074
Long Beach Arpt.	130	9.023	5.151	3.299	1.063	0.543	0.234	0.075
Long Beach Arpt.	140	8.069	4.535	2.878	0.905	0.454	0.189	0.058
Long Beach Arpt.	150	6.878	3.765	2.353	0.713	0.349	0.142	0.042
Long Beach Arpt.	160	5.841	3.109	1.915	0.568	0.277	0.113	0.034
Long Beach Arpt.	170	5.106	2.662	1.627	0.480	0.235	0.096	0.029
Long Beach Arpt.	180	4.639	2.389	1.454	0.429	0.210	0.086	0.026
Long Beach Arpt.	190	4.358	2.228	1.352	0.398	0.195	0.080	0.024
Long Beach Arpt.	200	4.202	2.140	1.298	0.383	0.188	0.077	0.024
Long Beach Arpt.	210	4.142	2.107	1.279	0.378	0.186	0.077	0.024
Long Beach Arpt.	220	4.155	2.116	1.285	0.381	0.188	0.077	0.024
Long Beach Arpt.	230	4.220	2.153	1.308	0.388	0.191	0.079	0.024
Long Beach Arpt.	240	4.329	2.213	1.346	0.399	0.197	0.081	0.025
Long Beach Arpt.	250	4.480	2.298	1.400	0.415	0.204	0.084	0.026
Long Beach Arpt.	260	4.657	2.404	1.469	0.437	0.215	0.089	0.027
Long Beach Arpt.	270	4.819	2.506	1.538	0.463	0.229	0.095	0.029
Long Beach Arpt.	280	4.914	2.567	1.581	0.480	0.239	0.100	0.031
Long Beach Arpt.	290	4.914	2.565	1.579	0.479	0.239	0.100	0.031
Long Beach Arpt.	300	4.837	2.511	1.539	0.462	0.228	0.094	0.029
Long Beach Arpt.	310	4.746	2.444	1.489	0.440	0.215	0.088	0.027
Long Beach Arpt.	320	4.712	2.412	1.463	0.427	0.208	0.085	0.026
Long Beach Arpt.	330	4.773	2.441	1.480	0.431	0.209	0.085	0.026
Long Beach Arpt.	340	4.901	2.517	1.532	0.448	0.217	0.087	0.026
Long Beach Arpt.	350	5.034	2.603	1.592	0.471	0.229	0.092	0.027
Long Beach Arpt.	360	5.117	2.660	1.635	0.490	0.239	0.097	0.028
Los Angeles Int'l Arpt.	10	3.363	1.839	1.147	0.349	0.173	0.072	0.022
Los Angeles Int'l Arpt.	20	3.575	1.958	1.218	0.366	0.180	0.074	0.022
Los Angeles Int'l Arpt.	30	4.087	2.251	1.396	0.412	0.199	0.080	0.024
Los Angeles Int'l Arpt.	40	5.122	2.853	1.771	0.517	0.248	0.098	0.028
Los Angeles Int'l Arpt.	50	6.810	3.849	2.404	0.708	0.340	0.135	0.039
Los Angeles Int'l Arpt.	60	8.829	5.061	3.190	0.962	0.468	0.189	0.056
Los Angeles Int'l Arpt.	70	10.265	5.934	3.765	1.157	0.570	0.233	0.070
Los Angeles Int'l Arpt.	80	10.192	5.887	3.730	1.141	0.560	0.228	0.068
Los Angeles Int'l Arpt.	90	8.562	4.895	3.071	0.910	0.437	0.173	0.049
Los Angeles Int'l Arpt.	100	6.337	3.568	2.213	0.637	0.301	0.117	0.033
Los Angeles Int'l Arpt.	110	4.606	2.562	1.586	0.461	0.221	0.088	0.026
Los Angeles Int'l Arpt.	120	3.731	2.065	1.288	0.388	0.191	0.078	0.024
Los Angeles Int'l Arpt.	130	3.430	1.895	1.188	0.365	0.182	0.076	0.023
Los Angeles Int'l Arpt.	140	3.344	1.845	1.158	0.358	0.179	0.075	0.023
Los Angeles Int'l Arpt.	150	3.309	1.824	1.145	0.353	0.176	0.073	0.023
Los Angeles Int'l Arpt.	160	3.286	1.809	1.134	0.349	0.173	0.072	0.022

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Los Angeles Int'l Arpt.	170	3.274	1.800	1.128	0.346	0.172	0.071	0.022
Los Angeles Int'l Arpt.	180	3.292	1.809	1.132	0.347	0.173	0.072	0.022
Los Angeles Int'l Arpt.	190	3.356	1.845	1.155	0.354	0.176	0.073	0.022
Los Angeles Int'l Arpt.	200	3.469	1.909	1.196	0.367	0.182	0.076	0.023
Los Angeles Int'l Arpt.	210	3.630	2.001	1.255	0.386	0.192	0.080	0.024
Los Angeles Int'l Arpt.	220	3.845	2.126	1.335	0.411	0.204	0.085	0.026
Los Angeles Int'l Arpt.	230	4.126	2.293	1.443	0.445	0.221	0.092	0.028
Los Angeles Int'l Arpt.	240	4.461	2.498	1.578	0.490	0.244	0.101	0.031
Los Angeles Int'l Arpt.	250	4.787	2.702	1.716	0.539	0.270	0.113	0.035
Los Angeles Int'l Arpt.	260	5.015	2.845	1.813	0.575	0.290	0.123	0.038
Los Angeles Int'l Arpt.	270	5.066	2.874	1.831	0.581	0.293	0.124	0.039
Los Angeles Int'l Arpt.	280	4.921	2.777	1.762	0.552	0.277	0.116	0.036
Los Angeles Int'l Arpt.	290	4.631	2.590	1.632	0.502	0.249	0.103	0.031
Los Angeles Int'l Arpt.	300	4.283	2.373	1.486	0.451	0.222	0.091	0.027
Los Angeles Int'l Arpt.	310	3.961	2.180	1.360	0.411	0.202	0.083	0.025
Los Angeles Int'l Arpt.	320	3.708	2.034	1.269	0.385	0.190	0.078	0.024
Los Angeles Int'l Arpt.	330	3.525	1.930	1.204	0.367	0.181	0.075	0.023
Los Angeles Int'l Arpt.	340	3.398	1.858	1.160	0.353	0.175	0.072	0.022
Los Angeles Int'l Arpt.	350	3.321	1.815	1.133	0.346	0.171	0.071	0.022
Los Angeles Int'l Arpt.	360	3.302	1.805	1.126	0.344	0.171	0.071	0.022
Mission Viejo	10	8.628	4.298	2.598	0.767	0.377	0.155	0.047
Mission Viejo	20	8.706	4.349	2.634	0.781	0.384	0.158	0.048
Mission Viejo	30	8.705	4.349	2.635	0.781	0.384	0.158	0.048
Mission Viejo	40	8.633	4.304	2.603	0.769	0.377	0.155	0.047
Mission Viejo	50	8.513	4.229	2.552	0.750	0.367	0.151	0.046
Mission Viejo	60	8.371	4.143	2.494	0.730	0.357	0.146	0.045
Mission Viejo	70	8.227	4.058	2.437	0.712	0.348	0.143	0.044
Mission Viejo	80	8.105	3.988	2.393	0.698	0.342	0.141	0.043
Mission Viejo	90	8.042	3.954	2.371	0.692	0.340	0.140	0.043
Mission Viejo	100	8.069	3.970	2.381	0.695	0.341	0.141	0.043
Mission Viejo	110	8.170	4.028	2.419	0.706	0.346	0.142	0.044
Mission Viejo	120	8.296	4.103	2.470	0.723	0.354	0.145	0.044
Mission Viejo	130	8.403	4.170	2.517	0.741	0.364	0.149	0.045
Mission Viejo	140	8.466	4.211	2.546	0.754	0.371	0.153	0.047
Mission Viejo	150	8.476	4.216	2.549	0.755	0.372	0.153	0.047
Mission Viejo	160	8.433	4.186	2.526	0.745	0.366	0.150	0.046
Mission Viejo	170	8.351	4.129	2.485	0.728	0.356	0.146	0.045
Mission Viejo	180	8.246	4.061	2.437	0.710	0.347	0.143	0.044
Mission Viejo	190	8.138	3.996	2.395	0.699	0.343	0.141	0.044
Mission Viejo	200	8.050	3.947	2.366	0.693	0.341	0.141	0.044
Mission Viejo	210	7.996	3.918	2.350	0.691	0.341	0.142	0.044
Mission Viejo	220	7.967	3.902	2.341	0.689	0.340	0.141	0.044
Mission Viejo	230	7.940	3.887	2.331	0.686	0.338	0.141	0.044
Mission Viejo	240	7.909	3.870	2.321	0.683	0.337	0.140	0.043

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Mission Viejo	250	7.882	3.856	2.313	0.681	0.336	0.140	0.043
Mission Viejo	260	7.863	3.846	2.307	0.679	0.335	0.139	0.043
Mission Viejo	270	7.854	3.841	2.304	0.678	0.335	0.139	0.043
Mission Viejo	280	7.856	3.843	2.305	0.678	0.335	0.139	0.043
Mission Viejo	290	7.870	3.851	2.310	0.680	0.335	0.139	0.043
Mission Viejo	300	7.894	3.865	2.319	0.683	0.337	0.140	0.043
Mission Viejo	310	7.930	3.885	2.332	0.686	0.339	0.141	0.044
Mission Viejo	320	7.983	3.914	2.349	0.691	0.341	0.141	0.044
Mission Viejo	330	8.060	3.956	2.375	0.697	0.343	0.142	0.044
Mission Viejo	340	8.168	4.018	2.413	0.707	0.348	0.144	0.044
Mission Viejo	350	8.317	4.106	2.469	0.724	0.355	0.146	0.045
Mission Viejo	360	8.485	4.208	2.536	0.745	0.366	0.150	0.046
Ontario Arpt.	10	3.901	1.988	1.205	0.353	0.172	0.070	0.021
Ontario Arpt.	20	4.153	2.120	1.283	0.371	0.179	0.072	0.022
Ontario Arpt.	30	4.756	2.438	1.470	0.417	0.198	0.078	0.023
Ontario Arpt.	40	5.856	3.033	1.833	0.517	0.243	0.094	0.026
Ontario Arpt.	50	7.284	3.830	2.339	0.676	0.322	0.126	0.036
Ontario Arpt.	60	8.613	4.590	2.833	0.847	0.414	0.169	0.050
Ontario Arpt.	70	9.410	5.051	3.133	0.949	0.470	0.195	0.060
Ontario Arpt.	80	9.419	5.058	3.130	0.939	0.460	0.188	0.056
Ontario Arpt.	90	8.645	4.619	2.840	0.833	0.402	0.161	0.047
Ontario Arpt.	100	7.376	3.912	2.388	0.688	0.329	0.131	0.038
Ontario Arpt.	110	6.091	3.206	1.950	0.560	0.269	0.107	0.032
Ontario Arpt.	120	5.169	2.702	1.643	0.476	0.230	0.093	0.028
Ontario Arpt.	130	4.659	2.420	1.474	0.433	0.211	0.087	0.026
Ontario Arpt.	140	4.412	2.280	1.389	0.411	0.202	0.084	0.026
Ontario Arpt.	150	4.304	2.213	1.346	0.397	0.195	0.081	0.025
Ontario Arpt.	160	4.286	2.197	1.334	0.391	0.191	0.078	0.024
Ontario Arpt.	170	4.367	2.240	1.360	0.398	0.195	0.080	0.024
Ontario Arpt.	180	4.555	2.350	1.431	0.422	0.207	0.085	0.026
Ontario Arpt.	190	4.831	2.514	1.540	0.459	0.226	0.093	0.029
Ontario Arpt.	200	5.139	2.700	1.664	0.503	0.249	0.103	0.032
Ontario Arpt.	210	5.398	2.857	1.768	0.540	0.270	0.113	0.035
Ontario Arpt.	220	5.519	2.928	1.815	0.557	0.279	0.117	0.037
Ontario Arpt.	230	5.444	2.879	1.781	0.543	0.271	0.114	0.035
Ontario Arpt.	240	5.188	2.722	1.674	0.503	0.248	0.103	0.031
Ontario Arpt.	250	4.836	2.511	1.534	0.454	0.222	0.091	0.028
Ontario Arpt.	260	4.490	2.309	1.403	0.411	0.201	0.082	0.025
Ontario Arpt.	270	4.215	2.153	1.305	0.381	0.186	0.076	0.023
Ontario Arpt.	280	4.024	2.048	1.239	0.362	0.177	0.072	0.022
Ontario Arpt.	290	3.900	1.980	1.198	0.350	0.171	0.070	0.021
Ontario Arpt.	300	3.820	1.938	1.172	0.343	0.168	0.069	0.021
Ontario Arpt.	310	3.771	1.913	1.157	0.339	0.166	0.068	0.021
Ontario Arpt.	320	3.740	1.897	1.149	0.337	0.165	0.068	0.021

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Ontario Arpt.	330	3.721	1.889	1.145	0.337	0.165	0.068	0.021
Ontario Arpt.	340	3.717	1.889	1.145	0.337	0.165	0.068	0.021
Ontario Arpt.	350	3.733	1.899	1.152	0.339	0.166	0.068	0.021
Ontario Arpt.	360	3.788	1.928	1.170	0.344	0.168	0.069	0.021
Palm Springs Arpt.	10	3.939	1.937	1.149	0.324	0.156	0.063	0.019
Palm Springs Arpt.	20	3.899	1.916	1.136	0.321	0.154	0.062	0.019
Palm Springs Arpt.	30	3.884	1.906	1.130	0.318	0.153	0.062	0.018
Palm Springs Arpt.	40	3.887	1.905	1.129	0.317	0.152	0.061	0.018
Palm Springs Arpt.	50	3.899	1.911	1.132	0.319	0.153	0.061	0.018
Palm Springs Arpt.	60	3.916	1.921	1.139	0.322	0.155	0.062	0.019
Palm Springs Arpt.	70	3.939	1.933	1.147	0.325	0.157	0.064	0.019
Palm Springs Arpt.	80	3.977	1.951	1.158	0.328	0.158	0.064	0.019
Palm Springs Arpt.	90	4.042	1.981	1.174	0.331	0.159	0.064	0.019
Palm Springs Arpt.	100	4.108	2.013	1.192	0.334	0.160	0.064	0.019
Palm Springs Arpt.	110	4.182	2.054	1.216	0.340	0.162	0.064	0.019
Palm Springs Arpt.	120	4.396	2.179	1.293	0.359	0.170	0.067	0.019
Palm Springs Arpt.	130	4.887	2.478	1.486	0.417	0.197	0.077	0.022
Palm Springs Arpt.	140	5.573	2.910	1.777	0.521	0.253	0.101	0.029
Palm Springs Arpt.	150	6.153	3.279	2.031	0.620	0.310	0.130	0.041
Palm Springs Arpt.	160	6.325	3.384	2.100	0.642	0.321	0.135	0.043
Palm Springs Arpt.	170	6.008	3.175	1.947	0.574	0.279	0.113	0.033
Palm Springs Arpt.	180	5.392	2.785	1.680	0.474	0.224	0.088	0.025
Palm Springs Arpt.	190	4.781	2.419	1.442	0.401	0.189	0.075	0.022
Palm Springs Arpt.	200	4.380	2.191	1.303	0.364	0.174	0.070	0.021
Palm Springs Arpt.	210	4.190	2.085	1.239	0.348	0.167	0.067	0.020
Palm Springs Arpt.	220	4.115	2.044	1.214	0.341	0.164	0.066	0.020
Palm Springs Arpt.	230	4.113	2.042	1.213	0.341	0.163	0.066	0.020
Palm Springs Arpt.	240	4.190	2.085	1.237	0.346	0.166	0.067	0.020
Palm Springs Arpt.	250	4.372	2.186	1.298	0.362	0.172	0.069	0.020
Palm Springs Arpt.	260	4.667	2.350	1.398	0.389	0.185	0.073	0.022
Palm Springs Arpt.	270	5.036	2.558	1.527	0.427	0.203	0.081	0.024
Palm Springs Arpt.	280	5.399	2.764	1.657	0.466	0.222	0.088	0.026
Palm Springs Arpt.	290	5.649	2.907	1.749	0.495	0.236	0.094	0.027
Palm Springs Arpt.	300	5.695	2.934	1.768	0.502	0.240	0.095	0.028
Palm Springs Arpt.	310	5.517	2.835	1.707	0.486	0.233	0.093	0.028
Palm Springs Arpt.	320	5.181	2.644	1.587	0.451	0.217	0.088	0.026
Palm Springs Arpt.	330	4.793	2.420	1.446	0.407	0.195	0.078	0.023
Palm Springs Arpt.	340	4.446	2.219	1.318	0.368	0.175	0.069	0.020
Palm Springs Arpt.	350	4.188	2.071	1.227	0.342	0.163	0.065	0.019
Palm Springs Arpt.	360	4.025	1.982	1.174	0.329	0.158	0.063	0.019
Perris	10	7.607	3.836	2.332	0.694	0.342	0.142	0.044
Perris	20	7.541	3.798	2.307	0.686	0.338	0.140	0.043
Perris	30	7.458	3.754	2.280	0.679	0.335	0.139	0.043
Perris	40	7.377	3.712	2.254	0.672	0.332	0.138	0.043

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Perris	50	7.324	3.682	2.236	0.666	0.329	0.137	0.043
Perris	60	7.309	3.675	2.232	0.665	0.329	0.137	0.043
Perris	70	7.325	3.687	2.242	0.670	0.332	0.138	0.043
Perris	80	7.363	3.711	2.259	0.678	0.336	0.141	0.044
Perris	90	7.445	3.754	2.283	0.684	0.339	0.142	0.044
Perris	100	7.660	3.866	2.345	0.694	0.342	0.142	0.044
Perris	110	8.169	4.143	2.506	0.730	0.356	0.146	0.045
Perris	120	9.040	4.642	2.816	0.816	0.394	0.159	0.047
Perris	130	10.050	5.247	3.211	0.945	0.459	0.186	0.055
Perris	140	10.745	5.673	3.499	1.051	0.517	0.213	0.065
Perris	150	10.793	5.697	3.515	1.059	0.523	0.216	0.066
Perris	160	10.254	5.359	3.289	0.980	0.481	0.197	0.060
Perris	170	9.464	4.882	2.977	0.878	0.429	0.175	0.053
Perris	180	8.734	4.456	2.706	0.795	0.388	0.159	0.049
Perris	190	8.219	4.165	2.524	0.741	0.363	0.149	0.046
Perris	200	7.939	4.012	2.432	0.717	0.351	0.145	0.045
Perris	210	7.839	3.965	2.408	0.714	0.351	0.145	0.045
Perris	220	7.822	3.966	2.415	0.721	0.356	0.148	0.046
Perris	230	7.790	3.954	2.412	0.724	0.359	0.150	0.047
Perris	240	7.692	3.898	2.376	0.713	0.354	0.148	0.046
Perris	250	7.544	3.809	2.319	0.694	0.344	0.143	0.045
Perris	260	7.397	3.723	2.263	0.676	0.335	0.139	0.043
Perris	270	7.283	3.658	2.223	0.664	0.329	0.137	0.043
Perris	280	7.210	3.618	2.198	0.658	0.326	0.136	0.043
Perris	290	7.179	3.601	2.188	0.655	0.325	0.136	0.042
Perris	300	7.191	3.607	2.190	0.655	0.324	0.135	0.042
Perris	310	7.247	3.635	2.206	0.658	0.325	0.135	0.042
Perris	320	7.337	3.684	2.237	0.666	0.329	0.136	0.042
Perris	330	7.446	3.746	2.277	0.679	0.335	0.139	0.043
Perris	340	7.549	3.806	2.316	0.692	0.342	0.142	0.044
Perris	350	7.618	3.846	2.342	0.701	0.347	0.144	0.045
Perris	360	7.638	3.856	2.347	0.701	0.346	0.144	0.045
Pico Rivera	10	7.872	3.954	2.390	0.701	0.342	0.139	0.042
Pico Rivera	20	8.094	4.074	2.464	0.721	0.350	0.142	0.042
Pico Rivera	30	8.247	4.161	2.519	0.736	0.357	0.144	0.042
Pico Rivera	40	8.292	4.191	2.541	0.745	0.362	0.146	0.043
Pico Rivera	50	8.208	4.148	2.516	0.741	0.361	0.146	0.043
Pico Rivera	60	8.003	4.032	2.442	0.718	0.350	0.142	0.042
Pico Rivera	70	7.711	3.862	2.329	0.679	0.330	0.134	0.040
Pico Rivera	80	7.377	3.668	2.202	0.637	0.309	0.125	0.038
Pico Rivera	90	7.052	3.485	2.086	0.603	0.294	0.120	0.036
Pico Rivera	100	6.792	3.346	2.003	0.583	0.285	0.118	0.036
Pico Rivera	110	6.632	3.266	1.958	0.573	0.282	0.117	0.036
Pico Rivera	120	6.565	3.233	1.940	0.570	0.281	0.116	0.036

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Pico Rivera	130	6.550	3.225	1.936	0.570	0.281	0.116	0.036
Pico Rivera	140	6.552	3.226	1.937	0.570	0.281	0.116	0.036
Pico Rivera	150	6.569	3.235	1.942	0.571	0.281	0.117	0.036
Pico Rivera	160	6.608	3.256	1.954	0.574	0.282	0.117	0.036
Pico Rivera	170	6.664	3.287	1.974	0.579	0.285	0.118	0.036
Pico Rivera	180	6.728	3.324	1.998	0.587	0.289	0.119	0.037
Pico Rivera	190	6.786	3.358	2.021	0.596	0.294	0.121	0.037
Pico Rivera	200	6.830	3.385	2.040	0.604	0.298	0.124	0.038
Pico Rivera	210	6.853	3.398	2.049	0.608	0.300	0.125	0.039
Pico Rivera	220	6.854	3.398	2.048	0.607	0.300	0.124	0.038
Pico Rivera	230	6.833	3.385	2.039	0.602	0.297	0.123	0.038
Pico Rivera	240	6.791	3.360	2.022	0.595	0.293	0.121	0.037
Pico Rivera	250	6.735	3.329	2.001	0.589	0.290	0.120	0.037
Pico Rivera	260	6.677	3.297	1.982	0.583	0.287	0.119	0.037
Pico Rivera	270	6.629	3.271	1.966	0.579	0.286	0.118	0.037
Pico Rivera	280	6.599	3.254	1.955	0.576	0.284	0.118	0.036
Pico Rivera	290	6.589	3.247	1.950	0.574	0.283	0.117	0.036
Pico Rivera	300	6.600	3.252	1.952	0.573	0.282	0.117	0.036
Pico Rivera	310	6.650	3.278	1.967	0.577	0.284	0.117	0.036
Pico Rivera	320	6.754	3.335	2.001	0.586	0.287	0.119	0.036
Pico Rivera	330	6.924	3.426	2.057	0.601	0.294	0.121	0.037
Pico Rivera	340	7.144	3.548	2.133	0.623	0.305	0.125	0.038
Pico Rivera	350	7.385	3.684	2.220	0.650	0.318	0.130	0.040
Pico Rivera	360	7.629	3.821	2.307	0.677	0.331	0.135	0.041
Redlands	10	7.965	3.986	2.416	0.722	0.358	0.149	0.046
Redlands	20	7.983	3.995	2.421	0.722	0.358	0.149	0.046
Redlands	30	8.049	4.030	2.441	0.726	0.359	0.150	0.046
Redlands	40	8.233	4.128	2.497	0.738	0.364	0.151	0.047
Redlands	50	8.649	4.350	2.627	0.769	0.377	0.155	0.048
Redlands	60	9.347	4.732	2.859	0.832	0.405	0.165	0.050
Redlands	70	10.199	5.216	3.167	0.927	0.451	0.183	0.055
Redlands	80	10.941	5.654	3.457	1.028	0.505	0.207	0.063
Redlands	90	11.324	5.885	3.614	1.087	0.538	0.222	0.068
Redlands	100	11.236	5.832	3.578	1.074	0.530	0.219	0.067
Redlands	110	10.739	5.535	3.379	1.001	0.490	0.200	0.061
Redlands	120	10.023	5.116	3.104	0.908	0.442	0.179	0.054
Redlands	130	9.299	4.707	2.845	0.829	0.404	0.165	0.050
Redlands	140	8.716	4.387	2.650	0.776	0.380	0.156	0.048
Redlands	150	8.322	4.175	2.524	0.745	0.367	0.152	0.047
Redlands	160	8.090	4.052	2.453	0.729	0.360	0.150	0.047
Redlands	170	7.972	3.988	2.416	0.721	0.357	0.149	0.046
Redlands	180	7.922	3.961	2.400	0.717	0.356	0.149	0.046
Redlands	190	7.904	3.951	2.395	0.716	0.355	0.148	0.046
Redlands	200	7.901	3.949	2.394	0.716	0.356	0.149	0.046

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Redlands	210	7.901	3.949	2.395	0.717	0.356	0.149	0.046
Redlands	220	7.900	3.949	2.395	0.717	0.356	0.149	0.046
Redlands	230	7.897	3.946	2.393	0.716	0.356	0.149	0.046
Redlands	240	7.900	3.946	2.392	0.715	0.355	0.148	0.046
Redlands	250	7.912	3.953	2.395	0.716	0.355	0.148	0.046
Redlands	260	7.932	3.965	2.404	0.719	0.356	0.149	0.046
Redlands	270	7.953	3.980	2.415	0.724	0.360	0.150	0.047
Redlands	280	7.969	3.991	2.424	0.728	0.363	0.152	0.048
Redlands	290	7.977	3.996	2.427	0.729	0.363	0.152	0.048
Redlands	300	7.978	3.995	2.425	0.727	0.361	0.151	0.047
Redlands	310	7.973	3.990	2.420	0.723	0.358	0.149	0.047
Redlands	320	7.964	3.984	2.415	0.721	0.357	0.149	0.046
Redlands	330	7.955	3.979	2.412	0.720	0.357	0.149	0.046
Redlands	340	7.953	3.979	2.413	0.721	0.357	0.149	0.046
Redlands	350	7.957	3.982	2.414	0.721	0.358	0.149	0.046
Redlands	360	7.960	3.984	2.415	0.722	0.358	0.149	0.046
Riverside Arpt.	10	4.400	2.263	1.381	0.412	0.204	0.084	0.026
Riverside Arpt.	20	4.480	2.309	1.408	0.420	0.207	0.086	0.026
Riverside Arpt.	30	4.636	2.400	1.465	0.436	0.215	0.089	0.027
Riverside Arpt.	40	4.946	2.577	1.572	0.466	0.229	0.094	0.029
Riverside Arpt.	50	5.639	2.962	1.802	0.522	0.253	0.103	0.031
Riverside Arpt.	60	6.988	3.725	2.270	0.646	0.306	0.120	0.035
Riverside Arpt.	70	8.866	4.826	2.979	0.868	0.414	0.162	0.046
Riverside Arpt.	80	10.507	5.817	3.644	1.112	0.548	0.225	0.068
Riverside Arpt.	90	11.008	6.109	3.846	1.197	0.600	0.253	0.079
Riverside Arpt.	100	10.177	5.568	3.477	1.060	0.524	0.215	0.065
Riverside Arpt.	110	8.614	4.604	2.831	0.830	0.400	0.159	0.046
Riverside Arpt.	120	7.012	3.663	2.221	0.632	0.299	0.117	0.033
Riverside Arpt.	130	5.735	2.950	1.777	0.502	0.238	0.094	0.027
Riverside Arpt.	140	4.908	2.510	1.513	0.435	0.210	0.085	0.026
Riverside Arpt.	150	4.507	2.307	1.399	0.411	0.202	0.083	0.025
Riverside Arpt.	160	4.417	2.267	1.380	0.409	0.202	0.083	0.026
Riverside Arpt.	170	4.524	2.326	1.417	0.420	0.207	0.085	0.026
Riverside Arpt.	180	4.769	2.457	1.497	0.442	0.217	0.089	0.027
Riverside Arpt.	190	5.108	2.641	1.609	0.475	0.232	0.095	0.029
Riverside Arpt.	200	5.476	2.844	1.736	0.513	0.250	0.102	0.031
Riverside Arpt.	210	5.809	3.033	1.858	0.553	0.271	0.111	0.033
Riverside Arpt.	220	6.065	3.187	1.962	0.591	0.292	0.121	0.037
Riverside Arpt.	230	6.217	3.284	2.031	0.620	0.309	0.129	0.040
Riverside Arpt.	240	6.248	3.308	2.050	0.630	0.315	0.133	0.042
Riverside Arpt.	250	6.156	3.258	2.016	0.616	0.307	0.128	0.040
Riverside Arpt.	260	5.955	3.144	1.941	0.588	0.291	0.120	0.037
Riverside Arpt.	270	5.691	2.999	1.849	0.558	0.276	0.114	0.035
Riverside Arpt.	280	5.424	2.854	1.759	0.532	0.264	0.110	0.034

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Riverside Arpt.	290	5.196	2.729	1.682	0.509	0.252	0.105	0.032
Riverside Arpt.	300	5.005	2.622	1.614	0.488	0.242	0.101	0.031
Riverside Arpt.	310	4.834	2.523	1.551	0.469	0.233	0.097	0.030
Riverside Arpt.	320	4.681	2.432	1.492	0.450	0.223	0.093	0.029
Riverside Arpt.	330	4.551	2.354	1.441	0.433	0.214	0.089	0.027
Riverside Arpt.	340	4.453	2.295	1.402	0.420	0.208	0.086	0.027
Riverside Arpt.	350	4.393	2.260	1.380	0.413	0.204	0.085	0.026
Riverside Arpt.	360	4.375	2.250	1.373	0.411	0.203	0.084	0.026
Santa Clarita	10	7.378	3.738	2.273	0.675	0.332	0.136	0.042
Santa Clarita	20	7.026	3.551	2.159	0.643	0.317	0.131	0.040
Santa Clarita	30	6.766	3.417	2.080	0.623	0.308	0.128	0.039
Santa Clarita	40	6.608	3.338	2.034	0.612	0.304	0.126	0.039
Santa Clarita	50	6.529	3.298	2.010	0.606	0.301	0.126	0.039
Santa Clarita	60	6.492	3.279	2.000	0.604	0.300	0.125	0.039
Santa Clarita	70	6.477	3.272	1.996	0.603	0.300	0.125	0.039
Santa Clarita	80	6.475	3.272	1.996	0.604	0.301	0.126	0.039
Santa Clarita	90	6.490	3.279	2.001	0.605	0.301	0.126	0.039
Santa Clarita	100	6.531	3.302	2.014	0.608	0.302	0.126	0.039
Santa Clarita	110	6.608	3.344	2.040	0.616	0.306	0.127	0.039
Santa Clarita	120	6.721	3.409	2.081	0.628	0.312	0.130	0.040
Santa Clarita	130	6.867	3.495	2.136	0.645	0.321	0.134	0.041
Santa Clarita	140	7.030	3.596	2.203	0.668	0.332	0.138	0.043
Santa Clarita	150	7.172	3.688	2.264	0.689	0.343	0.143	0.045
Santa Clarita	160	7.247	3.736	2.296	0.699	0.349	0.146	0.045
Santa Clarita	170	7.244	3.731	2.290	0.694	0.345	0.144	0.044
Santa Clarita	180	7.204	3.699	2.265	0.682	0.338	0.140	0.043
Santa Clarita	190	7.176	3.676	2.247	0.674	0.333	0.138	0.042
Santa Clarita	200	7.160	3.663	2.239	0.672	0.332	0.138	0.042
Santa Clarita	210	7.109	3.632	2.219	0.666	0.329	0.136	0.042
Santa Clarita	220	6.985	3.560	2.173	0.652	0.322	0.133	0.041
Santa Clarita	230	6.805	3.457	2.108	0.632	0.313	0.130	0.040
Santa Clarita	240	6.625	3.355	2.045	0.614	0.304	0.127	0.039
Santa Clarita	250	6.491	3.280	1.999	0.602	0.299	0.125	0.039
Santa Clarita	260	6.426	3.243	1.976	0.596	0.297	0.124	0.039
Santa Clarita	270	6.451	3.254	1.981	0.596	0.296	0.124	0.039
Santa Clarita	280	6.620	3.338	2.028	0.606	0.300	0.125	0.039
Santa Clarita	290	6.995	3.532	2.142	0.634	0.312	0.129	0.040
Santa Clarita	300	7.559	3.836	2.328	0.687	0.336	0.137	0.042
Santa Clarita	310	8.177	4.179	2.547	0.755	0.370	0.151	0.046
Santa Clarita	320	8.655	4.449	2.721	0.814	0.400	0.164	0.049
Santa Clarita	330	8.834	4.547	2.784	0.834	0.410	0.168	0.050
Santa Clarita	340	8.680	4.454	2.722	0.812	0.398	0.162	0.049
Santa Clarita	350	8.286	4.232	2.580	0.767	0.376	0.154	0.046
Santa Clarita	360	7.812	3.972	2.417	0.718	0.352	0.144	0.044

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Santa Monica Arpt.	10	6.477	3.296	1.981	0.565	0.272	0.110	0.033
Santa Monica Arpt.	20	7.495	3.865	2.330	0.660	0.315	0.125	0.037
Santa Monica Arpt.	30	8.691	4.555	2.769	0.792	0.377	0.149	0.043
Santa Monica Arpt.	40	9.647	5.131	3.150	0.922	0.444	0.177	0.051
Santa Monica Arpt.	50	9.893	5.294	3.266	0.971	0.473	0.192	0.057
Santa Monica Arpt.	60	9.236	4.907	3.013	0.886	0.429	0.173	0.051
Santa Monica Arpt.	70	7.965	4.152	2.519	0.719	0.342	0.134	0.038
Santa Monica Arpt.	80	6.652	3.394	2.037	0.572	0.271	0.106	0.031
Santa Monica Arpt.	90	5.734	2.883	1.726	0.490	0.235	0.095	0.028
Santa Monica Arpt.	100	5.285	2.638	1.583	0.457	0.223	0.091	0.028
Santa Monica Arpt.	110	5.113	2.546	1.530	0.446	0.219	0.090	0.028
Santa Monica Arpt.	120	5.045	2.512	1.512	0.443	0.218	0.090	0.028
Santa Monica Arpt.	130	5.033	2.508	1.510	0.443	0.218	0.090	0.028
Santa Monica Arpt.	140	5.054	2.520	1.518	0.446	0.219	0.091	0.028
Santa Monica Arpt.	150	5.084	2.536	1.528	0.449	0.221	0.091	0.028
Santa Monica Arpt.	160	5.115	2.553	1.538	0.452	0.222	0.092	0.028
Santa Monica Arpt.	170	5.142	2.567	1.548	0.455	0.224	0.093	0.028
Santa Monica Arpt.	180	5.161	2.578	1.555	0.457	0.225	0.093	0.029
Santa Monica Arpt.	190	5.173	2.585	1.559	0.459	0.226	0.093	0.029
Santa Monica Arpt.	200	5.177	2.588	1.562	0.459	0.226	0.093	0.029
Santa Monica Arpt.	210	5.175	2.589	1.563	0.460	0.226	0.093	0.029
Santa Monica Arpt.	220	5.171	2.589	1.563	0.461	0.227	0.093	0.029
Santa Monica Arpt.	230	5.167	2.589	1.565	0.462	0.227	0.094	0.029
Santa Monica Arpt.	240	5.166	2.590	1.566	0.463	0.228	0.094	0.029
Santa Monica Arpt.	250	5.166	2.591	1.567	0.464	0.228	0.094	0.029
Santa Monica Arpt.	260	5.163	2.589	1.566	0.463	0.228	0.094	0.029
Santa Monica Arpt.	270	5.155	2.585	1.563	0.462	0.227	0.094	0.029
Santa Monica Arpt.	280	5.143	2.577	1.558	0.459	0.226	0.093	0.028
Santa Monica Arpt.	290	5.127	2.568	1.551	0.457	0.225	0.093	0.028
Santa Monica Arpt.	300	5.109	2.557	1.544	0.455	0.224	0.092	0.028
Santa Monica Arpt.	310	5.094	2.548	1.538	0.453	0.223	0.092	0.028
Santa Monica Arpt.	320	5.093	2.546	1.536	0.452	0.222	0.092	0.028
Santa Monica Arpt.	330	5.125	2.561	1.543	0.452	0.222	0.092	0.028
Santa Monica Arpt.	340	5.220	2.610	1.571	0.458	0.224	0.092	0.028
Santa Monica Arpt.	350	5.424	2.719	1.635	0.475	0.232	0.095	0.029
Santa Monica Arpt.	360	5.806	2.928	1.760	0.507	0.246	0.100	0.030
Temecula	10	6.982	3.735	2.306	0.689	0.337	0.138	0.042
Temecula	20	7.708	4.141	2.564	0.770	0.377	0.154	0.046
Temecula	30	7.928	4.263	2.642	0.793	0.388	0.158	0.047
Temecula	40	7.517	4.022	2.482	0.735	0.356	0.142	0.041
Temecula	50	6.635	3.517	2.153	0.624	0.298	0.117	0.033
Temecula	60	5.627	2.956	1.799	0.515	0.245	0.097	0.028
Temecula	70	4.816	2.520	1.535	0.444	0.213	0.085	0.026
Temecula	80	4.333	2.270	1.388	0.408	0.199	0.081	0.025

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Temecula	90	4.124	2.164	1.327	0.394	0.193	0.079	0.024
Temecula	100	4.084	2.145	1.316	0.392	0.192	0.079	0.024
Temecula	110	4.142	2.178	1.337	0.397	0.194	0.080	0.024
Temecula	120	4.256	2.245	1.379	0.410	0.200	0.082	0.025
Temecula	130	4.378	2.319	1.428	0.426	0.209	0.085	0.026
Temecula	140	4.440	2.358	1.455	0.436	0.214	0.088	0.027
Temecula	150	4.391	2.331	1.438	0.432	0.213	0.088	0.027
Temecula	160	4.251	2.249	1.386	0.415	0.204	0.084	0.026
Temecula	170	4.093	2.162	1.331	0.399	0.197	0.081	0.025
Temecula	180	3.987	2.109	1.303	0.395	0.196	0.081	0.025
Temecula	190	3.958	2.102	1.303	0.399	0.199	0.083	0.026
Temecula	200	4.007	2.136	1.328	0.408	0.204	0.085	0.026
Temecula	210	4.146	2.222	1.384	0.427	0.213	0.089	0.028
Temecula	220	4.467	2.409	1.502	0.462	0.230	0.096	0.030
Temecula	230	5.318	2.931	1.831	0.552	0.271	0.111	0.034
Temecula	240	7.333	4.333	2.794	0.862	0.419	0.168	0.049
Temecula	250	10.380	6.738	4.614	1.612	0.828	0.347	0.105
Temecula	260	12.400	8.471	6.026	2.335	1.284	0.591	0.200
Temecula	270	11.384	7.582	5.301	1.969	1.057	0.472	0.154
Temecula	280	8.427	5.111	3.348	1.057	0.513	0.202	0.056
Temecula	290	6.075	3.373	2.108	0.629	0.307	0.125	0.038
Temecula	300	5.010	2.702	1.680	0.510	0.252	0.104	0.032
Temecula	310	4.585	2.444	1.514	0.458	0.226	0.094	0.029
Temecula	320	4.444	2.355	1.455	0.441	0.218	0.091	0.028
Temecula	330	4.522	2.396	1.481	0.448	0.222	0.092	0.028
Temecula	340	4.800	2.549	1.575	0.476	0.235	0.097	0.030
Temecula	350	5.310	2.824	1.744	0.524	0.259	0.107	0.033
Temecula	360	6.079	3.239	1.997	0.597	0.293	0.121	0.037
Upland	10	7.319	3.637	2.194	0.647	0.318	0.132	0.041
Upland	20	7.537	3.752	2.262	0.663	0.325	0.134	0.041
Upland	30	7.932	3.960	2.385	0.694	0.338	0.138	0.042
Upland	40	8.511	4.270	2.574	0.746	0.361	0.146	0.044
Upland	50	9.165	4.633	2.805	0.817	0.395	0.159	0.047
Upland	60	9.723	4.955	3.018	0.892	0.434	0.176	0.052
Upland	70	10.038	5.143	3.146	0.942	0.463	0.190	0.057
Upland	80	10.033	5.139	3.144	0.943	0.465	0.191	0.058
Upland	90	9.708	4.943	3.010	0.892	0.437	0.179	0.054
Upland	100	9.134	4.605	2.784	0.811	0.394	0.160	0.048
Upland	110	8.450	4.216	2.533	0.730	0.353	0.143	0.043
Upland	120	7.824	3.878	2.324	0.672	0.327	0.134	0.041
Upland	130	7.389	3.652	2.192	0.640	0.314	0.130	0.040
Upland	140	7.168	3.541	2.130	0.628	0.310	0.129	0.040
Upland	150	7.094	3.504	2.111	0.624	0.309	0.129	0.040
Upland	160	7.083	3.499	2.108	0.624	0.309	0.129	0.040

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Upland	170	7.094	3.506	2.113	0.626	0.310	0.129	0.040
Upland	180	7.118	3.519	2.121	0.628	0.311	0.130	0.040
Upland	190	7.151	3.538	2.133	0.632	0.313	0.130	0.041
Upland	200	7.190	3.561	2.147	0.636	0.315	0.131	0.041
Upland	210	7.229	3.583	2.162	0.641	0.317	0.132	0.041
Upland	220	7.256	3.599	2.172	0.645	0.319	0.133	0.041
Upland	230	7.261	3.601	2.174	0.645	0.319	0.133	0.041
Upland	240	7.245	3.592	2.167	0.643	0.318	0.132	0.041
Upland	250	7.216	3.574	2.155	0.638	0.316	0.131	0.041
Upland	260	7.185	3.556	2.144	0.635	0.314	0.130	0.040
Upland	270	7.160	3.543	2.135	0.632	0.312	0.130	0.040
Upland	280	7.145	3.535	2.131	0.631	0.312	0.130	0.040
Upland	290	7.136	3.531	2.128	0.630	0.312	0.130	0.040
Upland	300	7.131	3.528	2.127	0.630	0.312	0.130	0.040
Upland	310	7.127	3.527	2.126	0.630	0.311	0.130	0.040
Upland	320	7.125	3.526	2.126	0.630	0.311	0.130	0.040
Upland	330	7.127	3.528	2.127	0.630	0.311	0.130	0.040
Upland	340	7.136	3.534	2.131	0.631	0.312	0.130	0.040
Upland	350	7.159	3.548	2.140	0.633	0.313	0.130	0.040
Upland	360	7.211	3.578	2.158	0.638	0.315	0.131	0.040
Van Nuys Arpt.	10	5.086	2.616	1.580	0.453	0.218	0.087	0.026
Van Nuys Arpt.	20	4.617	2.345	1.413	0.408	0.198	0.080	0.024
Van Nuys Arpt.	30	4.392	2.218	1.338	0.390	0.191	0.078	0.024
Van Nuys Arpt.	40	4.313	2.174	1.313	0.386	0.189	0.078	0.024
Van Nuys Arpt.	50	4.299	2.166	1.309	0.385	0.189	0.078	0.024
Van Nuys Arpt.	60	4.309	2.171	1.313	0.386	0.190	0.078	0.024
Van Nuys Arpt.	70	4.327	2.181	1.319	0.389	0.191	0.078	0.024
Van Nuys Arpt.	80	4.346	2.191	1.325	0.391	0.192	0.079	0.024
Van Nuys Arpt.	90	4.360	2.198	1.330	0.393	0.193	0.079	0.024
Van Nuys Arpt.	100	4.365	2.201	1.332	0.393	0.193	0.080	0.024
Van Nuys Arpt.	110	4.366	2.201	1.331	0.392	0.193	0.079	0.024
Van Nuys Arpt.	120	4.385	2.211	1.336	0.392	0.192	0.079	0.024
Van Nuys Arpt.	130	4.466	2.261	1.366	0.399	0.195	0.080	0.024
Van Nuys Arpt.	140	4.678	2.395	1.453	0.425	0.207	0.084	0.025
Van Nuys Arpt.	150	5.074	2.650	1.621	0.479	0.234	0.096	0.029
Van Nuys Arpt.	160	5.594	2.986	1.845	0.553	0.272	0.112	0.034
Van Nuys Arpt.	170	5.987	3.241	2.013	0.608	0.300	0.124	0.038
Van Nuys Arpt.	180	5.993	3.247	2.015	0.607	0.298	0.123	0.037
Van Nuys Arpt.	190	5.625	3.012	1.859	0.553	0.271	0.110	0.033
Van Nuys Arpt.	200	5.145	2.705	1.658	0.490	0.239	0.097	0.029
Van Nuys Arpt.	210	4.778	2.471	1.505	0.444	0.217	0.089	0.027
Van Nuys Arpt.	220	4.558	2.331	1.416	0.417	0.205	0.084	0.026
Van Nuys Arpt.	230	4.432	2.252	1.365	0.403	0.198	0.082	0.025
Van Nuys Arpt.	240	4.368	2.210	1.338	0.394	0.193	0.080	0.024

Table 4: Annual Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{ton/yr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Van Nuys Arpt.	250	4.354	2.197	1.328	0.389	0.191	0.078	0.024
Van Nuys Arpt.	260	4.413	2.224	1.341	0.391	0.191	0.078	0.024
Van Nuys Arpt.	270	4.630	2.341	1.409	0.406	0.197	0.080	0.024
Van Nuys Arpt.	280	5.121	2.622	1.581	0.452	0.217	0.086	0.025
Van Nuys Arpt.	290	5.938	3.104	1.889	0.546	0.262	0.104	0.030
Van Nuys Arpt.	300	6.960	3.719	2.288	0.677	0.330	0.134	0.040
Van Nuys Arpt.	310	7.890	4.278	2.652	0.796	0.391	0.161	0.049
Van Nuys Arpt.	320	8.400	4.578	2.840	0.848	0.414	0.168	0.050
Van Nuys Arpt.	330	8.317	4.520	2.793	0.822	0.397	0.158	0.046
Van Nuys Arpt.	340	7.700	4.151	2.551	0.742	0.357	0.142	0.041
Van Nuys Arpt.	350	6.780	3.610	2.207	0.639	0.307	0.123	0.036
Van Nuys Arpt.	360	5.836	3.056	1.856	0.534	0.256	0.103	0.030

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Anaheim	10	146.949	83.357	53.290	16.929	8.414	3.387	0.924
Anaheim	20	149.965	84.040	53.101	16.554	8.278	3.428	1.009
Anaheim	30	162.021	94.825	59.330	16.015	7.864	3.118	0.863
Anaheim	40	202.143	122.121	79.240	24.570	11.691	4.344	1.090
Anaheim	50	203.815	123.280	80.103	24.972	11.940	4.474	1.144
Anaheim	60	166.327	97.704	61.391	17.111	8.537	3.497	1.014
Anaheim	70	133.479	76.334	48.639	14.742	6.891	2.458	0.632
Anaheim	80	145.907	84.894	55.109	17.929	8.921	3.553	0.943
Anaheim	90	137.549	79.117	50.727	15.744	7.515	2.781	0.631
Anaheim	100	110.607	61.074	37.472	9.832	4.772	2.087	0.644
Anaheim	110	83.067	46.045	30.098	10.523	5.619	2.487	0.776
Anaheim	120	90.473	50.513	32.691	10.897	5.502	2.185	0.543
Anaheim	130	92.938	52.398	34.241	11.850	6.196	2.624	0.753
Anaheim	140	86.010	48.999	32.973	11.517	5.840	2.323	0.703
Anaheim	150	79.630	47.437	31.540	10.539	5.138	1.906	0.494
Anaheim	160	73.615	41.812	26.551	8.028	4.032	1.631	0.454
Anaheim	170	70.814	36.036	23.193	7.318	3.557	1.450	0.454
Anaheim	180	96.138	50.077	30.428	8.396	3.997	1.570	0.454
Anaheim	190	117.531	63.404	40.040	12.819	6.511	2.714	0.771
Anaheim	200	120.691	65.423	41.534	13.570	7.027	3.037	0.936
Anaheim	210	115.142	63.505	40.762	13.604	7.093	3.073	0.950
Anaheim	220	111.272	62.750	40.283	13.081	6.585	2.698	0.811
Anaheim	230	107.708	60.864	40.232	13.790	7.127	2.996	0.854
Anaheim	240	120.948	73.760	50.949	18.209	9.996	4.777	1.745
Anaheim	250	131.764	76.521	52.957	19.113	10.303	4.755	1.691
Anaheim	260	139.335	87.747	60.369	23.084	13.009	6.320	2.383
Anaheim	270	135.014	85.138	58.359	21.856	12.120	5.746	2.089
Anaheim	280	137.031	84.811	57.729	21.721	12.175	5.888	2.213
Anaheim	290	132.981	81.673	55.502	20.729	11.487	5.422	2.004
Anaheim	300	157.508	92.550	59.216	21.462	12.010	5.762	2.117
Anaheim	310	182.941	110.070	72.319	23.887	11.975	4.809	1.271
Anaheim	320	178.272	106.816	69.856	22.659	11.177	4.362	1.085
Anaheim	330	156.526	93.426	60.782	19.449	9.543	3.731	0.976
Anaheim	340	145.733	86.080	55.352	16.930	7.982	2.998	0.830
Anaheim	350	128.508	70.449	43.896	12.949	6.060	2.184	0.749
Anaheim	360	158.974	88.542	55.877	17.511	8.809	3.688	1.103
Azusa	10	128.637	74.261	47.736	17.096	9.325	4.301	1.471
Azusa	20	146.865	86.963	57.438	22.205	12.537	6.089	2.288
Azusa	30	151.316	91.207	59.920	19.852	10.864	5.014	1.702
Azusa	40	145.441	84.330	59.303	22.873	12.832	6.189	2.313
Azusa	50	169.642	95.573	61.678	24.263	13.793	6.736	2.540
Azusa	60	205.568	116.367	73.181	25.448	14.467	7.074	2.681
Azusa	70	244.713	149.714	97.145	30.601	15.079	7.245	2.742
Azusa	80	234.946	143.183	92.469	28.599	14.195	6.903	2.606

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Azusa	90	180.354	110.174	71.116	24.171	13.661	6.602	2.436
Azusa	100	172.948	108.205	69.803	26.086	14.910	7.324	2.782
Azusa	110	166.135	104.687	67.577	24.717	14.096	6.914	2.626
Azusa	120	151.519	94.846	64.886	25.467	14.387	6.947	2.561
Azusa	130	162.233	96.366	61.360	17.774	8.692	3.653	1.091
Azusa	140	168.163	100.449	64.402	19.093	8.901	3.306	0.935
Azusa	150	155.671	91.884	58.050	16.273	7.428	3.005	0.954
Azusa	160	126.738	72.579	44.371	13.577	6.522	2.501	0.861
Azusa	170	141.449	78.243	48.793	14.438	6.853	2.571	0.676
Azusa	180	157.530	88.306	55.905	17.504	8.750	3.601	1.037
Azusa	190	169.202	107.076	70.978	22.930	11.212	4.335	1.073
Azusa	200	207.110	121.048	79.436	26.839	13.656	5.657	1.615
Azusa	210	204.415	119.360	76.263	23.846	11.838	4.854	1.403
Azusa	220	167.722	104.370	68.367	21.282	10.491	5.068	1.893
Azusa	230	201.675	127.625	85.465	29.125	15.038	6.405	1.928
Azusa	240	194.871	122.924	81.974	27.461	13.952	5.772	1.784
Azusa	250	150.245	92.602	59.889	17.693	9.795	4.613	1.632
Azusa	260	140.610	75.763	47.610	15.092	7.670	3.243	1.130
Azusa	270	137.642	79.166	55.493	20.768	11.389	5.326	1.896
Azusa	280	129.260	79.166	55.493	20.768	11.389	5.326	1.896
Azusa	290	122.564	68.639	46.027	17.192	9.651	4.657	1.735
Azusa	300	119.866	72.094	48.802	18.355	10.280	4.949	1.837
Azusa	310	115.049	68.565	45.246	14.904	7.797	3.371	1.014
Azusa	320	109.118	64.103	41.651	12.971	6.114	2.212	0.623
Azusa	330	119.323	68.520	44.403	14.659	7.437	3.061	0.904
Azusa	340	119.323	68.520	44.403	15.942	8.619	3.925	1.312
Azusa	350	112.713	70.649	48.208	18.099	10.117	4.877	1.827
Azusa	360	131.292	70.493	44.050	14.954	7.952	3.521	1.139
Banning	10	144.612	84.377	58.053	20.594	11.462	5.510	2.057
Banning	20	145.863	103.848	68.992	25.738	14.557	7.077	2.657
Banning	30	180.941	131.414	88.715	29.122	16.380	7.853	2.853
Banning	40	185.490	119.750	80.691	30.061	17.019	8.307	3.143
Banning	50	190.375	150.227	104.340	33.904	17.505	8.605	3.278
Banning	60	171.695	125.221	85.537	31.530	17.969	8.812	3.352
Banning	70	179.110	129.099	89.913	31.994	18.269	8.974	3.412
Banning	80	185.035	116.543	81.150	32.164	18.367	9.025	3.436
Banning	90	176.141	114.919	81.006	32.102	18.315	8.989	3.419
Banning	100	180.759	119.936	80.334	26.667	15.060	7.323	2.756
Banning	110	154.931	97.471	67.416	26.099	14.783	7.207	2.719
Banning	120	156.031	98.976	68.135	25.988	14.698	7.164	2.712
Banning	130	188.052	111.647	71.076	24.576	13.887	6.764	2.559
Banning	140	162.540	95.690	64.237	24.737	13.968	6.798	2.570
Banning	150	140.526	89.014	61.292	23.017	12.759	6.061	2.173
Banning	160	138.785	85.897	58.368	21.737	12.055	5.835	2.185

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Banning	170	159.652	97.739	65.953	23.623	12.615	6.084	2.285
Banning	180	179.468	115.727	81.216	31.969	18.119	8.837	3.313
Banning	190	184.667	119.607	83.696	33.246	19.033	9.372	3.574
Banning	200	189.192	123.240	86.358	34.153	19.511	9.596	3.658
Banning	210	188.492	121.398	84.759	33.550	19.203	9.456	3.609
Banning	220	160.407	100.819	69.587	26.120	14.775	7.199	2.725
Banning	230	162.439	99.641	68.401	26.309	14.876	7.245	2.733
Banning	240	161.838	102.178	70.584	27.273	15.459	7.550	2.859
Banning	250	165.152	102.354	70.024	26.865	15.231	7.436	2.814
Banning	260	169.843	116.893	77.743	27.652	15.607	7.592	2.865
Banning	270	204.003	142.543	95.188	29.831	16.983	8.326	3.165
Banning	280	206.127	133.163	86.953	29.639	16.747	8.170	3.103
Banning	290	206.127	133.163	86.953	29.754	16.958	8.325	3.168
Banning	300	167.180	106.602	73.755	28.526	16.157	7.886	2.987
Banning	310	161.405	98.849	67.717	25.759	14.398	6.857	2.556
Banning	320	141.313	89.624	62.132	23.523	13.124	6.304	2.349
Banning	330	152.105	117.721	83.948	28.408	13.988	6.530	2.403
Banning	340	158.761	92.549	65.288	23.213	12.918	6.110	2.170
Banning	350	138.440	85.115	53.792	15.512	7.651	3.599	1.313
Banning	360	150.505	90.653	62.480	19.774	9.138	4.109	1.441
Burbank Arpt.	10	111.850	61.620	38.778	11.614	5.767	2.315	0.628
Burbank Arpt.	20	108.606	59.857	37.445	11.577	5.781	2.352	0.694
Burbank Arpt.	30	108.579	58.649	36.843	11.648	5.898	2.446	0.694
Burbank Arpt.	40	100.608	53.132	32.328	9.739	4.696	1.787	0.435
Burbank Arpt.	50	124.631	73.453	46.956	16.500	8.817	3.938	1.268
Burbank Arpt.	60	149.079	97.170	63.499	19.674	10.996	5.304	1.991
Burbank Arpt.	70	148.975	94.340	59.669	19.010	10.670	5.164	1.942
Burbank Arpt.	80	157.585	100.872	65.322	19.547	10.677	5.161	1.938
Burbank Arpt.	90	138.746	88.866	57.403	19.805	11.121	5.385	2.024
Burbank Arpt.	100	112.456	68.273	45.702	16.196	8.611	3.800	1.188
Burbank Arpt.	110	84.332	49.003	31.329	9.478	4.515	1.799	0.516
Burbank Arpt.	120	77.362	44.065	28.447	9.111	4.476	1.755	0.459
Burbank Arpt.	130	85.805	50.112	32.296	10.182	5.068	2.010	0.518
Burbank Arpt.	140	110.874	67.240	44.923	15.944	8.545	3.844	1.258
Burbank Arpt.	150	120.445	74.195	50.430	18.819	10.499	5.055	1.893
Burbank Arpt.	160	176.031	133.661	93.439	31.423	15.620	6.281	1.890
Burbank Arpt.	170	152.327	114.907	79.549	25.699	12.298	5.041	1.889
Burbank Arpt.	180	124.260	79.112	54.151	20.268	11.318	5.478	2.062
Burbank Arpt.	190	129.274	80.591	55.170	20.995	11.820	5.736	2.160
Burbank Arpt.	200	127.741	78.664	54.070	20.588	11.576	5.611	2.111
Burbank Arpt.	210	122.960	79.049	54.092	20.100	11.288	5.462	2.046
Burbank Arpt.	220	106.500	66.112	44.585	15.845	8.387	3.663	1.120
Burbank Arpt.	230	93.635	51.018	31.923	9.764	4.761	1.864	0.481
Burbank Arpt.	240	136.820	75.068	46.103	12.382	5.596	1.919	0.423

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Burbank Arpt.	250	168.218	95.946	61.398	19.329	9.423	3.623	0.989
Burbank Arpt.	260	171.295	98.043	62.973	20.109	9.930	3.906	1.196
Burbank Arpt.	270	158.947	101.047	64.811	18.436	9.884	4.762	1.784
Burbank Arpt.	280	154.450	98.011	62.690	17.966	9.991	4.796	1.794
Burbank Arpt.	290	133.277	80.542	51.766	17.799	9.874	4.730	1.764
Burbank Arpt.	300	145.407	88.392	56.156	18.078	10.016	4.814	1.801
Burbank Arpt.	310	149.502	93.976	60.670	18.300	9.937	4.762	1.774
Burbank Arpt.	320	145.635	92.318	59.591	17.840	9.938	4.785	1.790
Burbank Arpt.	330	153.253	97.428	63.140	19.194	9.823	4.717	1.762
Burbank Arpt.	340	152.745	85.766	54.354	17.083	8.551	3.518	1.092
Burbank Arpt.	350	141.003	78.366	49.105	14.782	7.112	2.742	0.831
Burbank Arpt.	360	142.221	78.048	48.963	15.224	7.633	3.177	0.936
Catalina Arpt.	10	238.434	140.684	90.178	28.409	14.168	5.835	1.686
Catalina Arpt.	20	219.885	132.848	90.920	29.479	14.197	5.368	1.365
Catalina Arpt.	30	194.316	139.013	95.484	31.426	15.342	5.941	1.508
Catalina Arpt.	40	175.600	104.878	67.818	20.800	10.241	4.127	1.487
Catalina Arpt.	50	175.564	106.441	68.775	21.658	10.762	4.398	1.467
Catalina Arpt.	60	184.806	125.848	83.564	26.364	12.939	5.241	1.767
Catalina Arpt.	70	171.754	107.536	69.807	21.534	10.403	4.875	1.822
Catalina Arpt.	80	166.847	108.306	70.512	21.229	10.189	4.852	1.818
Catalina Arpt.	90	177.500	116.363	76.159	23.416	11.272	4.785	1.790
Catalina Arpt.	100	139.647	81.792	52.125	15.960	7.824	3.456	1.111
Catalina Arpt.	110	147.852	83.226	52.402	15.989	7.769	3.057	1.116
Catalina Arpt.	120	179.914	103.872	66.292	20.698	10.202	4.075	1.137
Catalina Arpt.	130	157.979	89.681	56.175	16.341	7.553	3.122	1.147
Catalina Arpt.	140	134.273	77.518	49.731	14.715	7.223	3.164	1.160
Catalina Arpt.	150	146.015	83.720	53.144	16.376	7.995	3.158	1.157
Catalina Arpt.	160	135.634	78.971	49.876	14.668	6.850	2.874	1.051
Catalina Arpt.	170	128.711	73.335	46.229	14.021	6.802	2.864	1.047
Catalina Arpt.	180	136.090	77.313	48.153	14.093	6.980	2.920	1.062
Catalina Arpt.	190	162.143	95.052	60.606	18.723	9.216	3.716	1.083
Catalina Arpt.	200	155.454	90.810	57.665	17.943	8.799	3.505	1.084
Catalina Arpt.	210	145.292	86.485	55.380	16.998	8.233	3.392	1.251
Catalina Arpt.	220	136.838	81.314	51.866	15.770	7.600	3.369	1.241
Catalina Arpt.	230	130.078	75.368	47.348	13.653	7.189	3.378	1.244
Catalina Arpt.	240	147.905	92.499	59.791	18.217	8.741	4.027	1.491
Catalina Arpt.	250	157.866	97.001	61.885	17.981	8.457	4.024	1.492
Catalina Arpt.	260	130.916	79.251	49.580	15.254	8.356	3.970	1.470
Catalina Arpt.	270	156.618	91.687	58.158	17.803	8.753	4.001	1.488
Catalina Arpt.	280	141.741	82.444	51.870	15.365	7.328	3.037	1.069
Catalina Arpt.	290	128.095	73.194	46.211	13.798	7.253	3.201	1.053
Catalina Arpt.	300	156.476	91.438	57.894	17.047	9.105	4.352	1.620
Catalina Arpt.	310	166.533	104.748	67.887	21.076	10.340	4.365	1.628
Catalina Arpt.	320	156.332	102.571	67.475	20.625	9.729	4.304	1.599

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Catalina Arpt.	330	165.093	109.155	73.091	23.145	11.279	5.050	1.895
Catalina Arpt.	340	187.032	118.997	78.760	25.012	12.176	5.139	1.929
Catalina Arpt.	350	172.366	101.943	65.743	20.179	10.520	5.083	1.907
Catalina Arpt.	360	172.281	102.136	65.307	19.986	10.351	4.976	1.866
Central L.A.	10	117.208	76.688	52.585	18.745	9.785	4.143	1.182
Central L.A.	20	140.146	93.885	66.075	25.931	14.702	7.163	2.697
Central L.A.	30	129.913	86.153	59.960	22.581	12.356	5.667	1.892
Central L.A.	40	153.535	106.538	71.953	23.390	11.557	4.626	1.275
Central L.A.	50	156.979	104.363	72.973	27.433	14.788	6.540	2.006
Central L.A.	60	175.438	119.360	85.372	34.732	20.000	9.883	3.770
Central L.A.	70	148.421	97.546	67.443	24.383	12.724	5.331	1.475
Central L.A.	80	129.838	79.732	53.927	19.467	10.393	4.580	1.415
Central L.A.	90	142.335	89.313	61.683	23.943	13.583	6.629	2.503
Central L.A.	100	135.361	88.744	62.852	24.082	13.209	6.273	2.341
Central L.A.	110	169.390	112.247	78.942	30.785	17.206	8.109	2.941
Central L.A.	120	174.001	115.916	81.952	32.552	18.477	8.938	3.278
Central L.A.	130	165.583	108.684	76.540	30.510	17.461	8.586	3.262
Central L.A.	140	143.278	91.185	62.309	22.534	12.787	6.235	2.349
Central L.A.	150	152.349	97.636	68.493	27.045	15.422	7.566	2.876
Central L.A.	160	159.423	99.606	67.412	23.694	12.250	5.087	1.555
Central L.A.	170	187.295	121.477	85.193	33.827	19.347	9.510	3.611
Central L.A.	180	169.719	110.403	74.849	26.670	14.252	6.252	1.900
Central L.A.	190	232.368	163.769	118.139	48.092	27.584	13.542	5.104
Central L.A.	200	201.902	138.448	98.129	40.182	23.151	11.420	4.328
Central L.A.	210	178.752	121.074	85.451	32.692	17.796	7.979	2.775
Central L.A.	220	135.068	83.353	57.031	21.922	12.358	5.970	2.211
Central L.A.	230	164.375	107.096	74.955	28.856	16.260	7.778	2.794
Central L.A.	240	198.029	155.513	117.885	51.352	30.061	14.987	5.713
Central L.A.	250	227.660	164.765	121.086	51.108	29.785	14.873	5.732
Central L.A.	260	285.972	213.876	159.342	68.388	40.245	20.315	7.915
Central L.A.	270	265.081	216.225	166.910	74.749	44.225	22.292	8.618
Central L.A.	280	200.943	154.745	113.083	41.985	22.644	11.219	4.295
Central L.A.	290	196.578	134.258	95.785	38.204	21.557	10.271	3.635
Central L.A.	300	196.578	134.258	107.615	50.569	29.646	14.471	5.196
Central L.A.	310	140.011	119.491	97.886	44.391	25.237	11.689	3.781
Central L.A.	320	95.413	54.906	38.317	14.048	7.268	3.122	1.131
Central L.A.	330	109.797	62.611	40.618	13.172	6.444	2.438	0.688
Central L.A.	340	115.966	67.545	44.736	15.659	8.197	3.492	1.017
Central L.A.	350	113.558	65.602	43.103	14.648	7.470	3.039	0.820
Central L.A.	360	105.097	57.989	37.316	12.520	6.529	2.814	0.850
Chino Arpt.	10	224.807	141.763	91.633	30.126	16.979	8.276	3.142
Chino Arpt.	20	208.511	127.550	81.793	29.650	16.917	8.303	3.155
Chino Arpt.	30	223.422	140.087	91.145	33.777	19.333	9.496	3.595
Chino Arpt.	40	211.839	149.775	101.916	34.450	19.760	9.740	3.714

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Chino Arpt.	50	222.399	155.576	102.816	34.600	19.795	9.743	3.718
Chino Arpt.	60	208.867	143.750	99.189	36.228	20.827	10.288	3.936
Chino Arpt.	70	198.199	147.267	100.148	36.611	21.049	10.395	3.970
Chino Arpt.	80	231.367	159.700	103.502	37.346	21.352	10.482	3.986
Chino Arpt.	90	231.367	159.700	103.502	36.623	21.030	10.377	3.960
Chino Arpt.	100	200.435	150.963	109.896	37.252	20.319	9.986	3.802
Chino Arpt.	110	188.176	123.026	86.255	34.593	19.846	9.792	3.741
Chino Arpt.	120	197.841	124.891	86.207	34.681	19.865	9.762	3.698
Chino Arpt.	130	167.600	99.553	67.949	24.967	13.221	5.682	1.699
Chino Arpt.	140	166.213	99.094	63.601	19.826	9.810	3.992	1.332
Chino Arpt.	150	189.065	116.913	76.191	24.173	11.973	4.831	1.416
Chino Arpt.	160	173.743	106.677	68.920	21.132	10.138	3.863	1.423
Chino Arpt.	170	119.213	69.187	43.145	14.872	8.168	3.880	1.435
Chino Arpt.	180	169.087	104.180	67.862	21.271	10.304	3.987	1.478
Chino Arpt.	190	181.688	115.095	75.831	24.174	11.980	4.857	1.333
Chino Arpt.	200	186.585	118.456	78.267	26.255	14.066	6.181	1.880
Chino Arpt.	210	182.980	119.787	84.970	34.093	19.550	9.640	3.683
Chino Arpt.	220	190.515	123.218	86.759	34.468	19.684	9.654	3.652
Chino Arpt.	230	191.755	125.405	96.978	34.565	19.429	9.564	3.644
Chino Arpt.	240	230.708	175.222	133.173	50.684	25.857	10.563	3.782
Chino Arpt.	250	209.266	158.253	105.916	35.152	20.138	9.920	3.780
Chino Arpt.	260	229.310	176.021	121.919	39.635	19.718	9.725	3.713
Chino Arpt.	270	187.303	125.827	85.866	34.246	19.585	9.637	3.677
Chino Arpt.	280	187.121	127.571	87.105	34.794	19.910	9.797	3.732
Chino Arpt.	290	188.451	122.091	85.666	34.107	19.442	9.561	3.650
Chino Arpt.	300	185.217	136.909	94.945	33.793	19.296	9.462	3.578
Chino Arpt.	310	198.628	153.164	106.577	34.730	16.820	7.789	2.951
Chino Arpt.	320	156.149	106.734	72.673	27.413	15.551	7.600	2.883
Chino Arpt.	330	161.178	103.824	72.255	28.219	16.039	7.853	2.982
Chino Arpt.	340	185.317	143.643	100.478	32.994	16.250	7.931	2.998
Chino Arpt.	350	173.019	133.653	93.031	29.931	16.206	7.936	3.011
Chino Arpt.	360	206.226	128.728	83.494	30.168	17.204	8.442	3.207
Desert Hot Springs Arpt.	10	132.518	78.016	49.741	15.283	7.564	3.568	1.314
Desert Hot Springs Arpt.	20	138.243	80.159	50.139	14.142	7.527	3.567	1.318
Desert Hot Springs Arpt.	30	145.119	81.755	51.263	14.777	7.832	3.724	1.379
Desert Hot Springs Arpt.	40	158.352	88.683	55.511	16.937	8.369	3.696	1.363
Desert Hot Springs Arpt.	50	127.679	76.559	48.537	14.299	7.827	3.703	1.363
Desert Hot Springs Arpt.	60	142.096	84.594	54.198	16.167	8.342	3.979	1.478
Desert Hot Springs Arpt.	70	185.016	105.428	65.878	18.524	8.191	3.899	1.446
Desert Hot Springs Arpt.	80	219.645	128.683	82.827	26.080	12.763	4.981	1.499
Desert Hot Springs Arpt.	90	196.038	112.749	71.154	20.780	11.444	5.492	2.052
Desert Hot Springs Arpt.	100	140.082	92.827	61.164	20.534	11.466	5.530	2.075
Desert Hot Springs Arpt.	110	152.708	92.186	58.443	20.486	11.358	5.467	2.043
Desert Hot Springs Arpt.	120	143.540	92.054	59.242	20.493	11.450	5.522	2.071

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Desert Hot Springs Arpt.	130	189.798	131.627	87.535	26.430	12.220	5.365	2.002
Desert Hot Springs Arpt.	140	236.480	165.885	112.175	36.231	17.827	7.123	1.978
Desert Hot Springs Arpt.	150	169.650	116.988	77.149	22.517	10.835	5.217	1.953
Desert Hot Springs Arpt.	160	135.193	74.434	46.329	15.990	8.476	3.742	1.185
Desert Hot Springs Arpt.	170	137.955	80.140	50.858	15.272	7.247	3.017	1.096
Desert Hot Springs Arpt.	180	129.974	73.619	46.229	13.336	6.369	2.982	1.090
Desert Hot Springs Arpt.	190	156.458	87.188	54.939	17.102	8.554	3.551	1.054
Desert Hot Springs Arpt.	200	138.379	76.126	47.255	13.897	6.599	2.576	0.933
Desert Hot Springs Arpt.	210	140.817	80.989	51.372	15.622	7.497	2.877	1.044
Desert Hot Springs Arpt.	220	131.524	74.973	47.087	13.785	6.399	2.866	1.042
Desert Hot Springs Arpt.	230	113.340	64.417	40.596	13.992	7.504	3.386	1.117
Desert Hot Springs Arpt.	240	115.960	68.391	45.439	16.148	8.848	4.248	1.584
Desert Hot Springs Arpt.	250	117.479	70.178	46.638	16.719	9.171	4.385	1.632
Desert Hot Springs Arpt.	260	145.374	83.709	52.172	16.694	9.225	4.395	1.620
Desert Hot Springs Arpt.	270	186.752	109.312	69.573	21.475	10.600	4.395	1.637
Desert Hot Springs Arpt.	280	167.997	97.646	61.571	18.334	8.765	3.623	1.331
Desert Hot Springs Arpt.	290	142.547	84.861	54.299	16.379	7.752	3.569	1.316
Desert Hot Springs Arpt.	300	158.047	88.864	55.043	15.960	7.564	3.552	1.305
Desert Hot Springs Arpt.	310	181.295	106.006	67.636	21.021	10.414	4.252	1.326
Desert Hot Springs Arpt.	320	170.314	103.007	66.431	20.708	10.169	4.062	1.342
Desert Hot Springs Arpt.	330	172.148	98.522	63.274	19.408	9.451	3.835	1.304
Desert Hot Springs Arpt.	340	166.831	94.850	59.816	18.197	8.877	3.527	1.098
Desert Hot Springs Arpt.	350	130.761	76.294	48.583	14.660	6.963	3.008	1.097
Desert Hot Springs Arpt.	360	119.900	69.928	44.457	13.897	7.572	3.569	1.314
Fontana	10	172.683	112.097	74.530	23.241	10.941	3.982	1.269
Fontana	20	180.572	106.119	70.063	21.249	9.755	3.643	1.284
Fontana	30	171.263	113.424	75.733	23.569	10.965	3.882	1.284
Fontana	40	191.130	127.875	86.502	28.376	13.840	5.329	1.374
Fontana	50	222.386	143.964	95.546	30.955	15.403	6.244	1.747
Fontana	60	206.036	134.858	87.639	26.508	12.738	5.180	1.885
Fontana	70	247.310	164.430	108.981	33.726	15.984	5.997	1.912
Fontana	80	204.481	139.194	95.133	29.557	13.632	5.182	1.939
Fontana	90	209.136	140.863	94.908	30.091	14.424	6.533	2.455
Fontana	100	198.856	128.790	85.071	27.314	13.603	5.973	2.252
Fontana	110	164.002	97.788	62.988	21.158	11.743	5.635	2.116
Fontana	120	165.151	95.663	61.217	21.991	12.284	5.923	2.222
Fontana	130	173.000	98.966	61.196	19.735	11.076	5.356	2.005
Fontana	140	153.269	90.254	57.286	20.933	11.744	5.683	2.135
Fontana	150	230.711	158.411	105.835	32.068	14.649	5.090	1.785
Fontana	160	270.777	188.179	127.788	41.367	20.046	7.721	1.979
Fontana	170	227.602	156.118	104.161	33.327	16.498	6.607	1.823
Fontana	180	181.906	127.051	85.732	27.008	12.840	4.800	1.736
Fontana	190	181.342	110.525	70.730	20.503	10.124	4.863	1.815
Fontana	200	193.700	118.951	76.827	23.091	10.805	4.844	1.808

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Fontana	210	237.606	149.037	97.322	29.995	14.218	5.273	1.820
Fontana	220	217.630	135.080	87.141	26.451	12.811	4.894	1.670
Fontana	230	241.875	155.736	102.508	32.886	16.445	6.835	2.044
Fontana	240	161.661	101.597	64.797	19.821	9.440	4.356	1.607
Fontana	250	143.729	87.841	56.868	16.846	8.205	3.870	1.415
Fontana	260	180.574	113.478	73.516	21.943	10.136	4.011	1.483
Fontana	270	218.760	139.859	92.497	29.957	14.934	6.053	1.671
Fontana	280	167.615	104.648	67.261	19.458	8.729	3.124	1.148
Fontana	290	133.197	74.842	46.652	13.409	6.766	3.185	1.170
Fontana	300	118.623	64.529	39.357	12.502	6.764	3.167	1.158
Fontana	310	119.259	66.804	41.444	12.439	5.996	2.552	0.919
Fontana	320	124.124	70.061	43.841	12.679	5.981	2.636	0.916
Fontana	330	143.462	86.312	54.531	15.275	7.271	3.439	1.266
Fontana	340	195.812	121.217	79.237	25.368	12.626	5.119	1.418
Fontana	350	173.802	106.404	68.643	20.868	9.896	3.677	1.229
Fontana	360	144.566	92.021	59.674	16.852	7.367	3.466	1.267
Fullerton Arpt.	10	172.434	96.497	60.518	18.531	9.160	3.751	1.083
Fullerton Arpt.	20	165.848	92.493	57.771	17.403	8.472	3.372	0.972
Fullerton Arpt.	30	152.463	81.685	49.136	14.099	6.944	2.940	0.948
Fullerton Arpt.	40	216.483	121.481	77.005	24.196	12.032	4.858	1.293
Fullerton Arpt.	50	223.230	125.795	80.119	25.660	12.996	5.436	1.568
Fullerton Arpt.	60	168.161	91.240	57.676	17.881	8.543	3.206	0.962
Fullerton Arpt.	70	138.161	78.910	50.735	16.114	7.879	3.050	0.854
Fullerton Arpt.	80	128.213	72.036	45.519	13.540	6.765	2.882	0.893
Fullerton Arpt.	90	159.211	91.363	58.172	18.055	8.817	3.455	0.894
Fullerton Arpt.	100	159.211	91.363	58.172	18.055	8.817	3.455	0.894
Fullerton Arpt.	110	128.722	71.648	44.797	13.214	6.192	2.244	0.796
Fullerton Arpt.	120	145.621	82.481	52.550	16.663	8.350	3.419	0.955
Fullerton Arpt.	130	120.882	66.698	41.309	12.438	6.092	2.388	0.618
Fullerton Arpt.	140	115.037	64.049	40.694	12.850	6.357	2.535	0.679
Fullerton Arpt.	150	101.227	56.902	36.422	11.309	5.382	1.994	0.552
Fullerton Arpt.	160	125.625	72.698	46.166	13.203	5.775	2.116	0.611
Fullerton Arpt.	170	144.593	84.810	55.513	17.793	8.613	3.237	0.869
Fullerton Arpt.	180	191.092	108.554	69.322	21.846	10.749	4.205	1.042
Fullerton Arpt.	190	199.794	114.366	73.635	23.956	12.143	5.015	1.400
Fullerton Arpt.	200	166.644	92.521	57.637	16.496	7.418	2.462	0.609
Fullerton Arpt.	210	136.572	76.951	49.113	15.546	7.656	3.013	0.820
Fullerton Arpt.	220	122.407	67.485	42.106	12.227	5.748	2.286	0.592
Fullerton Arpt.	230	129.000	79.436	53.511	19.123	10.259	4.583	1.464
Fullerton Arpt.	240	154.127	110.906	75.053	23.821	13.353	6.452	2.416
Fullerton Arpt.	250	167.853	122.664	83.413	26.545	13.549	6.592	2.490
Fullerton Arpt.	260	167.853	122.664	83.413	26.545	13.485	6.535	2.453
Fullerton Arpt.	270	208.871	136.417	88.278	25.334	13.191	6.358	2.397
Fullerton Arpt.	280	201.202	131.040	84.476	23.869	12.984	6.264	2.353

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Fullerton Arpt.	290	177.793	116.190	75.915	22.726	12.740	6.181	2.331
Fullerton Arpt.	300	141.915	86.752	59.432	22.492	12.611	6.092	2.281
Fullerton Arpt.	310	127.118	75.709	50.344	17.719	9.399	4.135	1.297
Fullerton Arpt.	320	126.903	71.722	45.930	14.357	6.922	2.613	0.757
Fullerton Arpt.	330	121.589	67.818	42.854	12.751	5.887	2.290	0.608
Fullerton Arpt.	340	140.444	77.320	48.761	15.249	7.596	3.084	0.899
Fullerton Arpt.	350	137.010	75.141	47.192	14.530	7.135	2.823	0.735
Fullerton Arpt.	360	134.213	73.957	45.902	13.715	6.867	2.856	0.953
Hawthorne Arpt.	10	68.151	34.233	21.384	7.089	3.563	1.414	0.436
Hawthorne Arpt.	20	68.151	37.403	24.013	7.319	3.345	1.393	0.436
Hawthorne Arpt.	30	72.282	40.946	27.074	9.196	4.622	1.829	0.496
Hawthorne Arpt.	40	84.187	48.311	31.033	9.850	5.230	2.274	0.675
Hawthorne Arpt.	50	115.458	72.678	46.350	15.110	8.096	3.636	1.192
Hawthorne Arpt.	60	162.601	102.507	66.416	20.554	10.075	4.793	1.794
Hawthorne Arpt.	70	146.897	92.820	59.874	18.002	10.033	4.826	1.805
Hawthorne Arpt.	80	156.852	100.241	64.997	19.861	9.979	4.805	1.802
Hawthorne Arpt.	90	167.988	107.916	70.297	21.904	10.779	4.784	1.792
Hawthorne Arpt.	100	114.658	69.773	43.686	14.779	7.869	3.491	1.107
Hawthorne Arpt.	110	129.485	71.307	45.059	14.271	7.206	3.005	0.883
Hawthorne Arpt.	120	121.534	66.316	41.491	12.656	6.175	2.423	0.626
Hawthorne Arpt.	130	99.017	54.405	34.395	10.718	5.225	2.033	0.543
Hawthorne Arpt.	140	95.025	51.703	32.362	9.715	4.584	1.683	0.475
Hawthorne Arpt.	150	89.777	49.777	31.413	9.671	4.687	1.822	0.490
Hawthorne Arpt.	160	90.921	49.443	31.082	9.727	4.843	1.968	0.550
Hawthorne Arpt.	170	92.346	51.124	32.188	9.761	4.669	1.784	0.493
Hawthorne Arpt.	180	90.090	49.621	31.076	9.243	4.349	1.615	0.449
Hawthorne Arpt.	190	77.142	41.186	24.968	6.943	3.332	1.399	0.436
Hawthorne Arpt.	200	68.151	35.330	21.443	6.504	3.284	1.393	0.436
Hawthorne Arpt.	210	70.749	37.380	22.648	6.504	3.284	1.393	0.436
Hawthorne Arpt.	220	92.133	49.606	30.744	9.004	4.185	1.498	0.436
Hawthorne Arpt.	230	98.967	54.079	34.025	10.547	5.155	2.018	0.542
Hawthorne Arpt.	240	88.839	47.477	29.202	8.758	4.218	1.706	0.465
Hawthorne Arpt.	250	89.909	49.128	31.768	10.303	5.150	2.121	0.588
Hawthorne Arpt.	260	120.708	72.547	44.865	15.733	8.453	3.802	1.237
Hawthorne Arpt.	270	148.232	97.644	64.082	19.760	10.322	4.990	1.875
Hawthorne Arpt.	280	163.442	108.331	71.278	21.871	10.407	5.009	1.882
Hawthorne Arpt.	290	142.488	86.960	54.491	19.046	10.642	5.126	1.914
Hawthorne Arpt.	300	162.724	102.358	66.261	20.296	10.020	4.836	1.807
Hawthorne Arpt.	310	106.519	65.031	42.199	14.818	7.871	3.483	1.101
Hawthorne Arpt.	320	81.284	45.717	29.321	9.280	4.608	1.836	0.482
Hawthorne Arpt.	330	68.151	34.233	21.073	7.123	3.642	1.465	0.436
Hawthorne Arpt.	340	68.151	34.306	22.686	8.199	4.471	2.029	0.654
Hawthorne Arpt.	350	68.151	34.233	21.602	7.467	3.901	1.634	0.483
Hawthorne Arpt.	360	68.151	34.233	22.056	7.500	3.857	1.595	0.457

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
John Wayne Int'l Arpt.	10	163.880	103.597	72.196	28.305	16.116	7.902	3.004
John Wayne Int'l Arpt.	20	204.310	138.506	91.814	28.712	15.978	7.827	2.970
John Wayne Int'l Arpt.	30	187.363	126.337	83.180	27.476	15.587	7.617	2.889
John Wayne Int'l Arpt.	40	143.699	88.007	58.347	21.156	11.253	4.934	1.570
John Wayne Int'l Arpt.	50	105.002	60.366	39.120	12.875	6.488	2.632	0.707
John Wayne Int'l Arpt.	60	110.870	59.900	37.878	12.031	5.994	2.379	0.636
John Wayne Int'l Arpt.	70	114.715	62.491	39.854	13.077	6.719	2.823	0.810
John Wayne Int'l Arpt.	80	99.851	52.625	32.431	9.338	4.239	1.706	0.463
John Wayne Int'l Arpt.	90	103.214	56.229	35.854	11.727	5.978	2.466	0.673
John Wayne Int'l Arpt.	100	101.528	55.072	34.962	11.245	5.643	2.298	0.632
John Wayne Int'l Arpt.	110	99.488	54.459	34.577	11.123	5.611	2.298	0.632
John Wayne Int'l Arpt.	120	85.173	45.083	27.664	7.845	3.610	1.432	0.446
John Wayne Int'l Arpt.	130	68.802	37.440	23.923	7.866	4.005	1.644	0.446
John Wayne Int'l Arpt.	140	69.609	38.017	24.379	8.126	4.190	1.760	0.498
John Wayne Int'l Arpt.	150	70.388	36.950	23.088	7.556	3.692	1.430	0.446
John Wayne Int'l Arpt.	160	80.783	44.279	28.395	9.376	4.764	1.936	0.505
John Wayne Int'l Arpt.	170	89.805	46.172	28.966	9.708	5.002	2.085	0.575
John Wayne Int'l Arpt.	180	109.188	57.926	36.257	11.535	5.878	2.492	0.742
John Wayne Int'l Arpt.	190	109.188	57.926	36.257	11.535	5.878	2.492	0.742
John Wayne Int'l Arpt.	200	93.286	49.247	30.107	10.030	5.282	2.374	0.793
John Wayne Int'l Arpt.	210	141.402	78.986	49.350	14.486	6.773	2.841	1.040
John Wayne Int'l Arpt.	220	154.924	87.671	55.549	17.188	8.430	3.338	1.042
John Wayne Int'l Arpt.	230	136.536	86.031	58.820	21.560	11.605	5.178	1.635
John Wayne Int'l Arpt.	240	156.196	98.084	67.685	26.433	15.029	7.358	2.793
John Wayne Int'l Arpt.	250	156.175	99.670	69.146	26.921	15.287	7.475	2.832
John Wayne Int'l Arpt.	260	168.592	108.340	70.625	26.411	15.017	7.352	2.790
John Wayne Int'l Arpt.	270	154.386	96.477	67.013	26.030	14.745	7.167	2.676
John Wayne Int'l Arpt.	280	135.915	82.732	55.686	19.932	10.599	4.646	1.433
John Wayne Int'l Arpt.	290	143.196	87.292	58.910	21.324	11.453	5.106	1.619
John Wayne Int'l Arpt.	300	169.842	108.035	70.222	25.882	14.674	7.169	2.715
John Wayne Int'l Arpt.	310	156.754	100.140	66.726	25.974	14.747	7.208	2.729
John Wayne Int'l Arpt.	320	156.452	97.461	66.882	25.949	14.725	7.199	2.730
John Wayne Int'l Arpt.	330	157.671	97.997	67.679	26.289	14.937	7.317	2.778
John Wayne Int'l Arpt.	340	174.717	105.782	69.266	26.679	15.078	7.382	2.802
John Wayne Int'l Arpt.	350	156.945	103.414	68.854	26.754	15.167	7.395	2.795
John Wayne Int'l Arpt.	360	164.801	102.267	71.176	27.856	15.879	7.787	2.955
Long Beach Arpt.	10	104.323	56.973	35.864	11.239	5.585	2.287	0.668
Long Beach Arpt.	20	102.101	56.220	35.401	10.921	5.316	2.073	0.603
Long Beach Arpt.	30	94.383	49.779	30.760	9.361	4.696	1.947	0.559
Long Beach Arpt.	40	70.761	36.159	23.523	7.736	3.852	1.638	0.487
Long Beach Arpt.	50	68.698	35.622	23.061	7.468	3.794	1.668	0.537
Long Beach Arpt.	60	68.698	37.393	24.061	8.142	4.261	1.835	0.547
Long Beach Arpt.	70	84.742	50.107	32.502	10.184	4.945	1.915	0.507
Long Beach Arpt.	80	107.965	66.837	45.255	16.234	8.737	3.939	1.283

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Long Beach Arpt.	90	128.661	81.910	52.809	19.298	10.798	5.212	1.957
Long Beach Arpt.	100	174.802	114.746	74.930	23.078	11.227	5.412	2.037
Long Beach Arpt.	110	146.614	94.222	61.426	19.920	11.127	5.358	2.011
Long Beach Arpt.	120	152.859	97.905	64.196	23.390	13.244	6.462	2.447
Long Beach Arpt.	130	180.176	125.775	84.218	26.550	13.069	6.376	2.414
Long Beach Arpt.	140	140.708	95.610	61.644	23.269	13.140	6.417	2.430
Long Beach Arpt.	150	135.654	87.080	60.516	23.386	13.212	6.429	2.428
Long Beach Arpt.	160	144.280	95.569	62.629	23.202	13.107	6.369	2.397
Long Beach Arpt.	170	139.392	88.930	61.524	23.751	13.424	6.528	2.455
Long Beach Arpt.	180	132.150	84.582	58.912	22.821	12.952	6.325	2.392
Long Beach Arpt.	190	117.665	74.149	50.873	18.800	10.173	4.578	1.472
Long Beach Arpt.	200	116.174	63.907	40.871	13.512	7.009	3.018	0.925
Long Beach Arpt.	210	111.707	60.948	38.647	12.370	6.229	2.543	0.696
Long Beach Arpt.	220	93.379	49.156	30.014	8.332	3.703	1.455	0.450
Long Beach Arpt.	230	96.618	51.404	30.824	10.345	5.490	2.469	0.825
Long Beach Arpt.	240	109.107	61.978	38.920	11.702	6.322	2.981	1.093
Long Beach Arpt.	250	110.269	61.865	38.245	12.183	6.627	3.116	1.141
Long Beach Arpt.	260	135.839	78.103	48.857	17.922	9.676	4.351	1.401
Long Beach Arpt.	270	141.841	82.360	56.625	21.651	12.161	5.896	2.229
Long Beach Arpt.	280	132.384	84.546	58.259	22.291	12.556	6.096	2.298
Long Beach Arpt.	290	148.464	94.682	61.142	22.400	12.643	6.141	2.306
Long Beach Arpt.	300	158.071	99.893	63.588	22.194	12.446	5.981	2.200
Long Beach Arpt.	310	129.157	80.672	50.384	16.975	9.088	4.026	1.258
Long Beach Arpt.	320	117.664	64.793	40.350	11.863	5.562	2.240	0.679
Long Beach Arpt.	330	136.652	74.238	46.502	14.335	7.070	2.816	0.736
Long Beach Arpt.	340	143.507	78.528	49.584	15.762	8.005	3.366	0.992
Long Beach Arpt.	350	117.535	62.480	38.767	12.261	6.211	2.595	0.761
Long Beach Arpt.	360	103.327	56.427	35.528	11.140	5.539	2.232	0.657
Los Angeles Int'l Arpt.	10	176.871	115.044	75.160	23.025	11.028	4.412	1.645
Los Angeles Int'l Arpt.	20	139.445	88.498	57.094	16.867	9.270	4.424	1.648
Los Angeles Int'l Arpt.	30	135.985	83.719	53.713	17.052	9.428	4.516	1.686
Los Angeles Int'l Arpt.	40	129.754	82.295	53.304	17.230	9.558	4.580	1.708
Los Angeles Int'l Arpt.	50	183.132	125.989	84.187	26.752	13.118	5.268	1.701
Los Angeles Int'l Arpt.	60	175.329	114.351	73.785	21.686	10.241	4.716	1.758
Los Angeles Int'l Arpt.	70	221.690	145.621	95.028	29.229	14.230	5.734	1.768
Los Angeles Int'l Arpt.	80	165.006	107.734	70.330	21.660	10.516	4.781	1.789
Los Angeles Int'l Arpt.	90	161.342	108.254	71.270	21.936	10.565	4.702	1.756
Los Angeles Int'l Arpt.	100	132.923	82.202	52.734	17.506	9.706	4.664	1.743
Los Angeles Int'l Arpt.	110	147.315	95.399	62.161	18.989	9.874	4.731	1.766
Los Angeles Int'l Arpt.	120	146.723	93.102	60.214	18.493	9.602	4.572	1.702
Los Angeles Int'l Arpt.	130	130.600	74.827	47.020	17.082	9.456	4.531	1.691
Los Angeles Int'l Arpt.	140	132.676	76.086	46.230	16.788	9.282	4.464	1.670
Los Angeles Int'l Arpt.	150	114.645	68.600	45.593	16.689	9.219	4.394	1.631
Los Angeles Int'l Arpt.	160	144.052	91.926	59.692	18.239	9.020	4.331	1.616

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Los Angeles Int'l Arpt.	170	152.179	96.681	62.842	19.187	9.162	4.297	1.592
Los Angeles Int'l Arpt.	180	132.681	86.036	55.856	16.848	9.352	4.485	1.673
Los Angeles Int'l Arpt.	190	154.801	101.193	66.403	20.753	10.149	4.506	1.682
Los Angeles Int'l Arpt.	200	115.334	70.857	47.725	17.484	9.678	4.628	1.724
Los Angeles Int'l Arpt.	210	116.437	72.806	46.779	17.035	9.383	4.498	1.683
Los Angeles Int'l Arpt.	220	114.792	72.515	47.117	17.300	9.594	4.596	1.714
Los Angeles Int'l Arpt.	230	175.999	116.304	76.603	23.973	11.725	4.698	1.691
Los Angeles Int'l Arpt.	240	145.422	95.242	61.922	20.811	11.700	5.671	2.136
Los Angeles Int'l Arpt.	250	126.157	79.947	54.986	20.787	11.722	5.695	2.146
Los Angeles Int'l Arpt.	260	146.357	99.296	65.666	21.044	11.875	5.775	2.180
Los Angeles Int'l Arpt.	270	149.021	93.407	60.087	20.913	11.748	5.688	2.139
Los Angeles Int'l Arpt.	280	167.658	131.211	91.330	29.521	14.156	5.423	2.043
Los Angeles Int'l Arpt.	290	158.389	123.979	86.018	27.420	12.986	5.474	2.062
Los Angeles Int'l Arpt.	300	182.070	128.301	86.870	27.565	13.172	5.396	2.029
Los Angeles Int'l Arpt.	310	166.862	117.002	78.656	24.232	11.276	4.399	1.641
Los Angeles Int'l Arpt.	320	172.684	110.316	71.619	22.181	10.891	4.444	1.626
Los Angeles Int'l Arpt.	330	142.843	88.259	56.653	16.994	9.169	4.376	1.631
Los Angeles Int'l Arpt.	340	142.533	89.108	57.866	17.580	9.369	4.484	1.671
Los Angeles Int'l Arpt.	350	139.171	90.189	58.456	17.472	9.068	4.357	1.627
Los Angeles Int'l Arpt.	360	176.871	115.044	75.160	23.025	11.028	4.349	1.619
Mission Viejo	10	159.797	102.505	71.205	27.675	15.662	7.606	2.839
Mission Viejo	20	167.133	100.132	69.975	27.530	15.680	7.684	2.916
Mission Viejo	30	170.925	99.103	68.195	26.402	14.870	7.167	2.696
Mission Viejo	40	211.690	121.287	77.242	23.721	11.428	4.647	1.492
Mission Viejo	50	235.655	137.028	88.789	29.102	14.882	6.289	1.883
Mission Viejo	60	212.597	126.321	83.711	26.554	12.870	4.957	1.238
Mission Viejo	70	213.399	139.547	93.302	30.683	15.367	6.270	1.767
Mission Viejo	80	224.723	146.605	97.711	31.485	15.389	6.017	1.582
Mission Viejo	90	218.981	142.555	94.744	30.188	14.613	5.621	1.430
Mission Viejo	100	187.212	113.214	73.235	22.900	11.145	4.344	1.121
Mission Viejo	110	151.130	95.604	63.127	20.078	9.717	3.744	0.971
Mission Viejo	120	162.563	95.600	60.960	17.961	8.274	3.017	1.001
Mission Viejo	130	213.776	120.322	76.208	23.877	11.899	4.875	1.385
Mission Viejo	140	217.108	122.412	77.692	24.540	12.321	5.220	1.594
Mission Viejo	150	230.576	130.905	83.574	26.881	13.688	5.815	1.776
Mission Viejo	160	196.149	109.248	68.205	20.331	9.912	3.882	1.019
Mission Viejo	170	166.426	98.912	63.886	20.047	9.731	3.736	0.938
Mission Viejo	180	165.517	98.298	63.438	19.843	9.604	3.668	1.105
Mission Viejo	190	139.600	82.260	52.573	15.931	7.556	3.116	1.141
Mission Viejo	200	133.115	75.959	48.013	14.662	7.152	3.035	1.106
Mission Viejo	210	116.381	64.066	39.469	12.166	6.587	3.087	1.129
Mission Viejo	220	130.645	71.393	44.534	13.193	6.175	2.632	0.954
Mission Viejo	230	140.269	80.249	50.703	17.352	9.043	3.829	1.096
Mission Viejo	240	155.944	90.926	63.105	24.222	13.588	6.528	2.400

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Mission Viejo	250	143.583	92.872	64.544	24.937	14.037	6.764	2.492
Mission Viejo	260	148.218	95.453	66.392	25.860	14.663	7.149	2.693
Mission Viejo	270	149.450	96.026	66.731	25.934	14.672	7.123	2.659
Mission Viejo	280	174.181	100.413	64.103	20.205	10.110	4.161	1.188
Mission Viejo	290	154.059	90.464	58.864	19.417	10.321	4.527	1.389
Mission Viejo	300	182.896	105.457	68.135	24.946	14.043	6.793	2.549
Mission Viejo	310	203.103	114.351	71.563	25.134	14.183	6.891	2.590
Mission Viejo	320	244.439	141.074	90.827	29.516	15.078	6.868	2.600
Mission Viejo	330	228.159	136.864	88.803	28.632	14.442	7.038	2.651
Mission Viejo	340	219.511	141.981	94.959	30.817	14.988	7.143	2.691
Mission Viejo	350	216.444	139.787	93.307	30.043	14.591	7.123	2.693
Mission Viejo	360	178.115	112.462	73.061	27.101	15.342	7.470	2.813
Ontario Arpt.	10	95.664	52.229	31.878	8.882	4.512	1.821	0.549
Ontario Arpt.	20	88.788	47.422	30.049	9.653	4.810	1.929	0.552
Ontario Arpt.	30	93.878	50.971	32.861	11.296	6.016	2.665	0.825
Ontario Arpt.	40	93.120	48.946	31.216	10.380	5.228	2.088	0.626
Ontario Arpt.	50	127.731	73.034	45.344	13.902	7.414	3.332	1.096
Ontario Arpt.	60	162.771	94.976	60.352	18.642	9.236	4.193	1.560
Ontario Arpt.	70	153.513	92.548	58.756	17.054	8.687	4.121	1.532
Ontario Arpt.	80	185.491	113.564	73.472	22.964	11.274	4.804	1.580
Ontario Arpt.	90	174.162	110.890	71.375	24.851	14.005	6.797	2.551
Ontario Arpt.	100	173.959	119.634	80.413	25.511	14.188	6.890	2.586
Ontario Arpt.	110	159.158	111.282	74.477	24.716	13.933	6.775	2.560
Ontario Arpt.	120	158.617	95.752	65.309	24.623	13.830	6.702	2.523
Ontario Arpt.	130	190.437	123.782	81.144	25.387	12.843	6.195	2.318
Ontario Arpt.	140	164.656	106.098	68.774	22.624	12.629	6.125	2.308
Ontario Arpt.	150	177.463	112.242	72.940	22.870	12.767	6.148	2.304
Ontario Arpt.	160	223.143	143.259	95.015	31.032	15.630	6.488	1.912
Ontario Arpt.	170	191.743	121.878	79.745	24.660	11.801	4.472	1.250
Ontario Arpt.	180	161.209	92.770	58.804	20.535	11.510	5.559	2.084
Ontario Arpt.	190	157.742	93.183	58.346	21.091	11.748	5.635	2.088
Ontario Arpt.	200	148.641	87.284	55.814	20.912	11.711	5.653	2.121
Ontario Arpt.	210	139.101	83.445	56.447	21.137	11.863	5.746	2.162
Ontario Arpt.	220	144.947	88.999	57.483	21.522	12.068	5.842	2.198
Ontario Arpt.	230	138.891	84.076	56.679	21.278	11.935	5.776	2.170
Ontario Arpt.	240	172.344	103.865	66.895	21.010	11.583	5.591	2.098
Ontario Arpt.	250	229.121	148.895	97.025	28.786	13.189	4.590	1.686
Ontario Arpt.	260	295.779	195.907	130.730	42.811	21.554	8.977	2.645
Ontario Arpt.	270	201.141	129.477	83.373	23.539	10.286	4.505	1.676
Ontario Arpt.	280	143.308	78.981	48.464	14.306	7.555	3.546	1.297
Ontario Arpt.	290	152.035	88.638	56.577	17.199	8.163	3.437	1.266
Ontario Arpt.	300	140.562	80.997	51.042	14.769	7.232	3.407	1.252
Ontario Arpt.	310	117.528	64.676	40.646	12.171	6.046	2.675	0.867
Ontario Arpt.	320	129.155	78.409	50.435	14.741	6.609	2.275	0.717

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Ontario Arpt.	330	156.617	97.169	64.262	20.937	10.293	4.016	1.025
Ontario Arpt.	340	163.364	101.858	67.788	22.632	11.360	4.591	1.257
Ontario Arpt.	350	147.855	91.127	59.758	18.838	9.006	3.351	0.777
Ontario Arpt.	360	116.707	68.121	43.059	12.627	6.276	2.632	0.759
Palm Springs Arpt.	10	141.249	84.023	53.842	16.287	7.700	2.889	1.047
Palm Springs Arpt.	20	141.249	84.023	53.842	16.287	7.700	2.978	1.082
Palm Springs Arpt.	30	128.662	74.405	47.517	14.811	7.254	2.877	1.042
Palm Springs Arpt.	40	116.165	65.713	41.335	12.180	5.692	2.222	0.709
Palm Springs Arpt.	50	146.803	81.953	51.924	16.164	7.908	3.086	0.780
Palm Springs Arpt.	60	154.535	87.056	55.686	17.974	9.083	3.753	1.070
Palm Springs Arpt.	70	136.881	75.491	47.220	14.001	6.558	2.371	0.734
Palm Springs Arpt.	80	106.848	58.962	37.031	10.820	5.334	2.180	0.739
Palm Springs Arpt.	90	109.232	58.097	36.131	11.198	5.612	2.338	0.726
Palm Springs Arpt.	100	89.056	46.160	29.759	9.818	4.981	2.045	0.569
Palm Springs Arpt.	110	83.867	47.164	30.567	10.268	5.290	2.230	0.654
Palm Springs Arpt.	120	81.899	44.961	28.657	9.288	4.687	1.915	0.525
Palm Springs Arpt.	130	99.917	56.602	35.975	11.172	5.452	2.099	0.562
Palm Springs Arpt.	140	129.822	78.103	51.448	18.161	9.716	4.348	1.399
Palm Springs Arpt.	150	158.926	102.457	66.887	22.052	12.314	5.938	2.227
Palm Springs Arpt.	160	184.323	125.100	83.282	26.412	12.982	5.900	2.192
Palm Springs Arpt.	170	142.406	90.307	59.361	21.836	12.194	5.886	2.209
Palm Springs Arpt.	180	145.078	94.617	62.622	22.141	12.347	5.943	2.233
Palm Springs Arpt.	190	146.685	89.246	60.490	22.733	12.747	6.162	2.307
Palm Springs Arpt.	200	166.500	114.264	75.577	22.464	12.570	6.084	2.290
Palm Springs Arpt.	210	186.197	128.450	85.677	26.368	14.118	6.878	2.602
Palm Springs Arpt.	220	153.694	102.172	67.045	25.073	14.122	6.859	2.587
Palm Springs Arpt.	230	158.080	96.992	66.167	25.211	14.226	6.922	2.613
Palm Springs Arpt.	240	158.855	107.196	70.386	24.778	13.947	6.773	2.553
Palm Springs Arpt.	250	164.106	110.927	73.041	23.473	13.182	6.399	2.414
Palm Springs Arpt.	260	148.349	90.877	61.620	23.054	12.877	6.191	2.312
Palm Springs Arpt.	270	239.724	163.763	108.689	32.684	14.962	6.094	2.283
Palm Springs Arpt.	280	266.283	183.554	123.187	38.706	18.443	6.918	2.288
Palm Springs Arpt.	290	173.491	115.359	74.028	22.386	12.520	6.046	2.270
Palm Springs Arpt.	300	169.135	104.913	67.457	24.178	13.540	6.574	2.484
Palm Springs Arpt.	310	183.143	114.259	72.037	24.223	13.599	6.589	2.480
Palm Springs Arpt.	320	155.192	102.436	66.849	24.461	13.776	6.695	2.529
Palm Springs Arpt.	330	151.920	94.463	62.854	23.719	13.332	6.466	2.434
Palm Springs Arpt.	340	170.598	93.531	58.243	18.974	10.043	4.398	1.359
Palm Springs Arpt.	350	197.023	110.665	70.762	22.905	11.660	4.876	1.401
Palm Springs Arpt.	360	170.598	93.531	58.243	17.025	7.870	2.897	1.052
Perris	10	199.638	122.513	79.943	24.760	11.736	4.666	1.730
Perris	20	183.239	112.213	74.371	24.191	11.903	4.888	1.562
Perris	30	220.710	153.316	103.672	33.810	16.785	7.950	2.968
Perris	40	213.809	148.749	99.943	31.790	14.869	6.749	2.485

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Perris	50	237.433	166.624	113.194	36.163	17.245	8.206	3.116
Perris	60	202.263	151.764	105.027	33.987	16.286	7.910	2.999
Perris	70	204.416	153.461	106.286	34.509	18.509	9.124	3.483
Perris	80	190.653	159.042	112.716	35.742	18.933	9.274	3.521
Perris	90	204.410	147.799	100.818	32.138	15.646	7.615	2.856
Perris	100	199.487	140.746	95.691	30.081	14.226	6.581	2.483
Perris	110	191.272	120.800	79.262	24.640	13.827	6.699	2.510
Perris	120	181.255	115.745	77.611	29.315	16.679	8.168	3.099
Perris	130	199.178	138.869	99.952	40.777	20.488	8.440	3.207
Perris	140	240.092	162.051	112.525	45.422	23.248	9.210	3.240
Perris	150	218.406	146.158	96.897	32.114	17.383	8.494	3.214
Perris	160	233.818	168.008	115.142	38.298	19.189	7.883	2.270
Perris	170	201.437	145.994	100.668	33.355	16.389	6.426	2.026
Perris	180	179.913	113.872	74.481	23.040	11.296	5.425	2.029
Perris	190	162.619	103.937	67.903	21.099	10.628	5.095	1.901
Perris	200	153.358	93.956	60.390	19.796	10.604	5.100	1.908
Perris	210	215.554	141.502	92.924	29.047	14.238	6.641	2.506
Perris	220	217.357	158.024	106.887	38.804	19.633	7.699	2.421
Perris	230	240.478	175.929	120.012	40.344	20.548	8.152	2.560
Perris	240	207.092	140.224	96.781	31.330	14.896	6.400	2.413
Perris	250	202.869	152.237	109.753	38.217	19.197	7.827	2.335
Perris	260	166.751	112.512	76.336	24.422	11.653	5.568	2.037
Perris	270	234.877	143.480	92.250	28.006	15.664	7.644	2.893
Perris	280	263.776	162.676	105.855	33.713	16.814	7.525	2.831
Perris	290	224.789	153.938	100.720	28.397	15.138	7.412	2.811
Perris	300	199.943	136.548	88.364	30.044	17.145	8.415	3.198
Perris	310	190.736	113.728	75.397	29.946	17.101	8.398	3.193
Perris	320	229.297	138.014	90.459	28.805	15.207	7.370	2.740
Perris	330	234.127	151.290	103.620	34.711	17.203	7.230	2.731
Perris	340	208.569	123.079	78.363	23.420	10.993	4.786	1.770
Perris	350	230.732	137.838	89.001	28.068	13.851	5.516	2.012
Perris	360	178.144	108.716	70.025	20.932	10.985	5.164	1.835
Pico Rivera	10	148.763	82.397	51.990	16.252	8.121	3.330	0.941
Pico Rivera	20	143.000	79.712	49.575	14.422	6.964	2.758	0.751
Pico Rivera	30	164.840	94.027	59.912	18.710	9.172	3.614	0.948
Pico Rivera	40	150.025	85.228	54.462	17.078	8.410	3.356	0.974
Pico Rivera	50	159.566	94.466	61.166	19.264	9.325	3.575	0.975
Pico Rivera	60	156.908	93.402	59.913	18.622	8.925	3.632	1.069
Pico Rivera	70	183.237	114.192	75.098	23.828	11.508	4.398	1.092
Pico Rivera	80	180.068	111.998	73.475	23.091	11.058	4.164	1.002
Pico Rivera	90	144.594	91.977	60.718	18.460	8.533	3.082	0.777
Pico Rivera	100	149.241	96.613	64.134	19.944	9.406	3.518	0.877
Pico Rivera	110	136.927	88.103	57.881	17.257	7.839	2.747	0.802
Pico Rivera	120	108.120	68.487	43.787	11.688	5.146	2.193	0.782

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Pico Rivera	130	109.409	61.029	38.354	11.758	5.777	2.319	0.755
Pico Rivera	140	112.191	59.938	37.144	11.377	5.657	2.334	0.697
Pico Rivera	150	115.048	64.993	39.758	11.094	5.881	2.688	0.954
Pico Rivera	160	125.346	71.480	44.284	12.260	5.796	2.680	0.961
Pico Rivera	170	121.886	71.660	45.620	13.569	6.363	2.738	1.003
Pico Rivera	180	116.372	68.085	43.070	12.511	5.855	2.697	0.972
Pico Rivera	190	119.030	66.281	41.565	12.396	5.872	2.288	0.693
Pico Rivera	200	114.969	63.632	39.648	11.546	5.358	1.949	0.673
Pico Rivera	210	104.651	63.102	40.054	11.135	5.367	2.057	0.696
Pico Rivera	220	116.542	72.954	47.191	13.590	6.078	2.176	0.707
Pico Rivera	230	140.263	78.520	50.307	15.523	7.373	2.928	0.861
Pico Rivera	240	174.069	100.818	64.164	20.818	10.061	4.082	1.402
Pico Rivera	250	176.303	102.236	65.756	23.193	11.541	4.760	1.778
Pico Rivera	260	152.091	99.712	67.132	21.892	10.689	4.865	1.822
Pico Rivera	270	129.768	83.979	55.477	18.762	10.515	5.081	1.907
Pico Rivera	280	111.689	69.943	47.526	17.559	9.695	4.611	1.722
Pico Rivera	290	109.675	67.120	45.431	16.908	9.417	4.513	1.671
Pico Rivera	300	141.530	84.056	53.696	16.980	9.468	4.529	1.663
Pico Rivera	310	140.761	83.548	53.333	15.973	7.501	2.878	0.976
Pico Rivera	320	122.573	73.881	46.360	12.884	6.203	2.642	0.965
Pico Rivera	330	181.507	111.914	72.437	22.593	11.130	4.510	1.290
Pico Rivera	340	211.096	132.486	86.565	27.326	13.445	5.367	1.454
Pico Rivera	350	196.315	122.483	79.446	24.370	11.674	4.442	1.184
Pico Rivera	360	144.157	86.793	55.247	16.146	7.420	2.925	1.074
Redlands	10	200.686	129.506	84.733	25.381	11.785	4.385	1.364
Redlands	20	187.468	120.381	78.164	23.197	11.448	4.586	1.419
Redlands	30	139.602	87.687	58.410	19.106	9.194	4.047	1.504
Redlands	40	177.083	105.769	66.709	20.283	10.014	4.127	1.512
Redlands	50	225.234	136.187	87.415	27.122	13.382	5.476	1.618
Redlands	60	285.763	183.335	120.858	38.773	19.272	7.843	2.218
Redlands	70	265.209	169.224	111.334	35.575	17.324	6.784	1.797
Redlands	80	258.175	164.896	107.501	33.758	16.713	6.887	2.062
Redlands	90	210.907	133.521	89.593	27.723	13.634	6.608	2.491
Redlands	100	218.700	148.680	100.530	32.107	15.581	6.479	2.413
Redlands	110	268.260	189.300	128.898	41.860	20.837	8.815	2.626
Redlands	120	221.530	174.636	125.636	44.525	22.710	9.438	2.728
Redlands	130	197.313	138.771	99.836	35.551	18.163	7.562	2.326
Redlands	140	169.863	99.156	62.554	21.325	11.889	5.688	2.134
Redlands	150	156.913	102.672	68.059	20.579	11.366	5.427	2.005
Redlands	160	184.184	124.308	84.380	27.282	13.012	4.839	1.367
Redlands	170	177.148	127.581	89.628	31.327	15.627	6.036	1.554
Redlands	180	184.735	133.589	94.401	33.850	17.301	6.985	2.086
Redlands	190	168.646	126.558	90.639	32.276	16.114	6.260	2.041
Redlands	200	187.356	124.119	83.463	26.948	12.993	4.930	1.519

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Redlands	210	228.148	150.983	100.915	31.836	15.055	5.994	2.060
Redlands	220	246.566	164.533	111.113	36.561	17.935	6.943	2.082
Redlands	230	199.290	130.027	85.384	25.057	11.496	5.520	2.059
Redlands	240	140.674	103.180	71.632	22.849	11.497	5.530	2.052
Redlands	250	135.994	99.605	68.932	21.674	10.047	4.650	1.700
Redlands	260	120.060	92.952	65.269	19.774	9.213	4.383	1.625
Redlands	270	160.300	121.759	87.610	29.540	14.015	4.999	1.588
Redlands	280	186.646	133.238	90.748	29.423	13.946	5.048	1.674
Redlands	290	183.601	131.029	89.129	27.438	14.997	6.792	2.062
Redlands	300	162.594	115.211	77.789	24.493	13.725	6.049	1.734
Redlands	310	190.227	135.352	92.478	29.537	14.019	5.241	1.803
Redlands	320	199.461	144.361	101.999	37.426	18.766	7.349	1.881
Redlands	330	197.354	140.937	97.040	31.607	15.211	5.952	1.623
Redlands	340	185.863	118.983	78.338	24.538	11.785	4.512	1.529
Redlands	350	187.260	124.854	83.300	25.434	11.720	4.273	1.575
Redlands	360	233.100	150.509	99.550	32.097	16.018	6.558	1.877
Riverside Arpt.	10	179.275	109.889	70.753	20.958	10.308	4.941	1.845
Riverside Arpt.	20	200.704	122.597	79.579	24.884	13.015	5.756	1.809
Riverside Arpt.	30	187.026	113.296	77.185	30.713	17.563	8.640	3.293
Riverside Arpt.	40	207.265	155.167	106.291	33.549	17.377	8.538	3.246
Riverside Arpt.	50	227.606	171.367	118.261	38.479	18.708	8.708	3.319
Riverside Arpt.	60	184.586	170.055	126.889	44.865	22.233	9.157	3.486
Riverside Arpt.	70	191.100	118.712	83.620	33.305	19.066	9.391	3.584
Riverside Arpt.	80	179.356	142.091	99.947	32.954	18.862	9.282	3.535
Riverside Arpt.	90	188.063	141.065	100.676	33.039	18.801	9.251	3.522
Riverside Arpt.	100	187.687	122.260	80.953	25.490	12.833	5.512	1.620
Riverside Arpt.	110	210.540	127.880	82.450	25.791	12.746	5.170	1.593
Riverside Arpt.	120	155.663	90.677	58.017	18.893	9.612	4.153	1.539
Riverside Arpt.	130	176.056	104.618	68.441	22.607	11.396	4.641	1.273
Riverside Arpt.	140	170.819	101.005	65.714	21.248	10.512	4.143	1.062
Riverside Arpt.	150	196.112	115.543	74.168	23.170	11.368	4.485	1.161
Riverside Arpt.	160	196.112	115.543	75.760	25.081	12.157	4.573	1.161
Riverside Arpt.	170	214.314	131.811	92.147	32.706	16.915	7.137	2.090
Riverside Arpt.	180	221.000	130.135	84.813	29.222	14.701	5.906	1.560
Riverside Arpt.	190	187.232	112.601	72.768	23.021	11.444	4.646	1.306
Riverside Arpt.	200	214.100	129.681	83.503	26.004	12.810	5.200	1.485
Riverside Arpt.	210	214.100	129.681	83.503	26.004	12.810	5.200	1.485
Riverside Arpt.	220	157.079	91.555	58.703	18.358	8.956	3.483	1.228
Riverside Arpt.	230	143.889	82.905	52.877	16.031	7.621	3.338	1.223
Riverside Arpt.	240	163.627	94.731	58.907	16.643	9.000	4.278	1.585
Riverside Arpt.	250	179.499	105.155	66.253	19.186	9.095	4.327	1.601
Riverside Arpt.	260	149.030	90.947	75.477	30.107	14.617	5.372	1.678
Riverside Arpt.	270	176.814	117.877	92.493	38.690	19.700	7.825	2.971
Riverside Arpt.	280	184.872	123.697	82.254	32.762	16.161	7.805	2.939

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Riverside Arpt.	290	180.477	124.666	87.911	28.136	15.963	7.804	2.961
Riverside Arpt.	300	171.400	138.777	98.556	32.126	17.331	8.513	3.240
Riverside Arpt.	310	170.962	112.468	78.844	31.005	17.645	8.643	3.282
Riverside Arpt.	320	179.241	113.672	79.133	31.078	17.722	8.702	3.312
Riverside Arpt.	330	172.283	110.501	76.835	29.917	17.064	8.373	3.181
Riverside Arpt.	340	171.885	105.867	68.594	22.816	12.112	5.863	2.204
Riverside Arpt.	350	162.324	99.519	64.109	21.242	11.797	5.677	2.119
Riverside Arpt.	360	167.571	104.810	68.181	21.407	11.155	5.370	1.999
Santa Clarita	10	154.894	86.928	54.470	16.187	8.378	3.704	1.164
Santa Clarita	20	168.549	96.323	61.094	18.797	9.199	3.650	0.974
Santa Clarita	30	182.634	105.150	67.306	21.459	10.857	4.576	1.391
Santa Clarita	40	166.504	97.869	63.108	19.665	9.434	3.560	0.862
Santa Clarita	50	173.012	102.383	66.504	21.299	10.461	4.111	1.082
Santa Clarita	60	155.743	90.486	57.618	17.126	7.890	2.777	0.805
Santa Clarita	70	186.107	107.035	68.200	21.296	10.568	4.304	1.227
Santa Clarita	80	180.578	103.538	65.729	20.244	9.923	3.955	1.078
Santa Clarita	90	177.617	100.534	63.831	20.037	10.018	4.122	1.183
Santa Clarita	100	141.195	77.787	47.944	14.766	7.196	2.851	0.826
Santa Clarita	110	144.113	79.789	50.629	16.038	8.020	3.258	0.893
Santa Clarita	120	132.286	72.904	45.334	13.614	6.645	3.015	1.095
Santa Clarita	130	134.375	74.151	46.180	13.953	6.850	3.069	1.124
Santa Clarita	140	149.352	90.401	62.792	18.528	9.651	4.308	1.370
Santa Clarita	150	194.012	162.193	116.309	39.272	19.282	7.597	2.264
Santa Clarita	160	165.542	131.085	92.904	29.851	13.996	6.032	2.261
Santa Clarita	170	150.912	93.737	59.471	22.399	12.583	6.087	2.281
Santa Clarita	180	138.662	91.398	60.449	21.817	12.230	5.938	2.233
Santa Clarita	190	145.079	87.848	56.354	20.056	11.243	5.425	2.029
Santa Clarita	200	172.773	118.872	76.525	21.653	11.096	5.320	1.957
Santa Clarita	210	206.228	142.190	92.785	27.686	13.100	4.914	1.628
Santa Clarita	220	202.319	139.460	90.867	25.022	11.110	5.284	1.990
Santa Clarita	230	162.482	111.718	71.593	18.191	9.760	4.490	1.550
Santa Clarita	240	185.549	112.643	71.769	21.713	11.184	5.393	2.016
Santa Clarita	250	123.168	73.655	48.270	16.086	8.860	4.202	1.542
Santa Clarita	260	143.023	110.855	78.896	26.102	12.189	4.301	1.083
Santa Clarita	270	165.376	128.885	92.797	32.314	15.811	6.059	1.505
Santa Clarita	280	146.180	113.394	80.842	26.951	12.673	4.527	0.972
Santa Clarita	290	129.345	75.152	50.898	15.649	8.354	3.742	1.216
Santa Clarita	300	115.961	72.524	49.748	18.641	10.387	4.993	1.869
Santa Clarita	310	123.839	75.192	51.196	19.240	10.773	5.203	1.953
Santa Clarita	320	151.222	86.096	54.595	20.279	11.063	5.286	1.962
Santa Clarita	330	165.970	98.032	69.174	25.888	14.819	7.286	2.770
Santa Clarita	340	183.139	163.159	121.827	39.966	18.272	6.410	1.812
Santa Clarita	350	178.825	171.052	128.021	42.501	19.650	7.034	1.723
Santa Clarita	360	178.158	110.571	81.021	24.141	10.808	5.227	1.963

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Santa Monica Arpt.	10	211.524	134.810	86.953	26.364	12.779	5.132	1.600
Santa Monica Arpt.	20	164.623	105.200	68.564	21.474	10.598	4.399	1.641
Santa Monica Arpt.	30	181.269	116.492	76.087	23.489	11.334	4.412	1.639
Santa Monica Arpt.	40	181.382	119.692	79.029	24.768	12.087	4.820	1.663
Santa Monica Arpt.	50	188.507	125.428	82.901	26.151	12.855	5.187	1.632
Santa Monica Arpt.	60	218.494	146.248	96.783	30.658	15.137	6.188	1.816
Santa Monica Arpt.	70	134.978	87.392	56.053	15.606	7.293	3.237	1.034
Santa Monica Arpt.	80	91.633	50.971	32.650	10.491	5.169	2.000	0.494
Santa Monica Arpt.	90	89.057	48.215	30.297	9.524	4.764	1.947	0.545
Santa Monica Arpt.	100	86.894	47.990	30.360	9.504	4.675	1.855	0.496
Santa Monica Arpt.	110	82.023	45.401	28.564	8.404	3.986	1.484	0.398
Santa Monica Arpt.	120	87.596	49.484	31.765	9.991	4.852	1.874	0.485
Santa Monica Arpt.	130	86.173	48.447	30.944	9.560	4.571	1.718	0.420
Santa Monica Arpt.	140	82.428	45.854	29.302	9.371	4.640	1.848	0.494
Santa Monica Arpt.	150	103.369	55.158	34.085	10.020	4.726	1.815	0.507
Santa Monica Arpt.	160	117.487	63.982	40.415	12.908	6.576	2.779	0.831
Santa Monica Arpt.	170	107.936	57.988	36.098	10.910	5.281	2.033	0.507
Santa Monica Arpt.	180	86.983	46.769	29.523	9.260	4.574	1.823	0.487
Santa Monica Arpt.	190	108.800	57.534	35.723	11.088	5.574	2.335	0.695
Santa Monica Arpt.	200	117.786	66.147	40.891	11.133	5.574	2.335	0.695
Santa Monica Arpt.	210	152.919	88.865	57.064	17.998	8.846	3.484	0.901
Santa Monica Arpt.	220	159.411	93.162	60.198	19.450	9.768	3.995	1.118
Santa Monica Arpt.	230	134.544	76.866	48.436	14.200	6.539	2.298	0.483
Santa Monica Arpt.	240	104.674	56.179	35.136	10.908	5.429	2.200	0.598
Santa Monica Arpt.	250	109.793	58.898	36.835	11.560	5.847	2.460	0.733
Santa Monica Arpt.	260	109.024	60.556	38.316	11.903	5.802	2.253	0.626
Santa Monica Arpt.	270	113.808	63.726	40.662	13.036	6.530	2.658	0.740
Santa Monica Arpt.	280	103.863	58.421	36.880	10.804	4.946	1.877	0.494
Santa Monica Arpt.	290	118.245	65.895	40.708	12.462	5.994	2.440	0.742
Santa Monica Arpt.	300	148.953	85.160	54.155	16.903	8.366	3.382	0.944
Santa Monica Arpt.	310	145.279	82.825	52.502	16.190	7.927	3.145	0.845
Santa Monica Arpt.	320	160.101	93.067	59.661	18.705	9.152	3.580	0.917
Santa Monica Arpt.	330	156.212	90.492	57.792	17.857	8.623	3.297	0.804
Santa Monica Arpt.	340	117.970	65.759	40.268	10.578	4.422	1.729	0.508
Santa Monica Arpt.	350	105.726	71.917	46.742	14.057	7.539	3.397	1.115
Santa Monica Arpt.	360	157.844	106.602	70.961	21.158	9.661	4.334	1.618
Temecula	10	161.954	97.381	64.590	19.874	9.325	3.915	1.445
Temecula	20	151.181	85.332	55.652	16.204	8.274	3.925	1.452
Temecula	30	154.008	90.151	57.469	17.616	8.525	3.896	1.424
Temecula	40	161.101	93.718	59.420	17.936	9.793	4.576	1.605
Temecula	50	162.323	94.509	59.978	18.406	10.211	4.852	1.759
Temecula	60	176.004	103.083	65.871	21.362	11.918	5.701	2.084
Temecula	70	151.417	95.435	66.002	25.576	14.487	7.057	2.655
Temecula	80	143.524	89.052	60.926	22.716	12.453	5.822	2.155

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Temecula	90	154.905	96.460	61.810	23.325	13.124	6.357	2.378
Temecula	100	157.626	90.442	57.207	18.360	9.952	4.704	1.707
Temecula	110	177.380	106.371	68.389	21.292	11.276	5.212	1.934
Temecula	120	165.728	103.769	68.556	26.041	14.744	7.169	2.690
Temecula	130	170.647	118.139	78.693	27.913	15.795	7.718	2.925
Temecula	140	187.010	145.148	99.856	30.772	15.581	7.576	2.865
Temecula	150	230.739	180.688	126.090	41.169	20.001	7.790	2.812
Temecula	160	156.170	104.922	70.701	21.486	11.573	5.589	2.102
Temecula	170	186.841	124.678	83.079	27.514	14.378	6.057	2.116
Temecula	180	231.901	147.236	104.166	42.849	24.719	12.268	4.684
Temecula	190	234.298	151.129	107.509	43.395	24.911	12.261	4.673
Temecula	200	234.484	152.231	107.778	44.632	25.841	12.838	4.930
Temecula	210	285.695	188.283	135.163	55.195	31.774	15.864	6.147
Temecula	220	287.362	189.697	135.508	55.957	32.593	16.233	6.220
Temecula	230	283.192	189.557	135.128	54.838	31.763	15.819	6.084
Temecula	240	325.543	217.142	156.003	64.029	37.034	18.389	7.052
Temecula	250	321.722	213.113	152.037	62.721	36.569	18.281	7.059
Temecula	260	333.305	217.291	155.318	63.896	37.260	18.650	7.213
Temecula	270	344.894	221.264	158.116	64.485	37.361	18.780	7.280
Temecula	280	260.878	152.600	104.947	37.122	18.342	8.264	3.135
Temecula	290	176.941	111.262	76.861	29.796	16.909	8.268	3.134
Temecula	300	176.164	111.456	77.059	29.906	16.982	8.313	3.158
Temecula	310	156.339	96.895	65.613	23.650	12.615	5.554	1.931
Temecula	320	134.343	82.100	52.561	18.757	10.402	4.972	1.851
Temecula	330	151.709	88.841	56.577	18.519	10.334	4.975	1.860
Temecula	340	152.505	86.579	53.921	16.206	8.898	4.226	1.566
Temecula	350	155.226	91.550	57.941	17.462	8.763	4.191	1.558
Temecula	360	146.440	92.564	60.996	18.276	8.899	4.233	1.573
Upland	10	190.346	110.462	69.541	20.233	10.159	4.184	1.190
Upland	20	239.470	142.232	92.018	29.823	15.182	6.453	1.966
Upland	30	203.781	130.925	87.398	28.751	14.268	5.676	1.509
Upland	40	168.476	106.335	69.381	20.823	9.721	3.837	1.010
Upland	50	194.628	113.394	72.416	21.939	10.317	3.830	0.992
Upland	60	201.616	118.160	75.946	23.586	11.341	4.291	1.186
Upland	70	193.044	111.841	71.440	22.067	10.659	4.081	1.240
Upland	80	197.385	113.716	72.766	22.977	11.403	4.569	1.357
Upland	90	215.734	124.599	79.028	24.564	12.233	5.730	2.141
Upland	100	200.092	122.278	79.110	24.343	11.634	4.811	1.730
Upland	110	217.840	134.317	87.805	28.145	13.970	5.612	1.515
Upland	120	163.083	97.593	61.611	17.431	8.558	3.409	1.068
Upland	130	145.762	85.507	54.812	15.961	7.296	2.639	0.778
Upland	140	158.446	100.302	66.279	21.085	10.174	3.876	0.964
Upland	150	166.221	105.655	70.221	22.856	11.244	4.427	1.176
Upland	160	147.577	92.867	60.849	18.721	8.780	3.188	0.720

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Upland	170	132.708	75.851	50.197	14.382	6.893	2.973	0.967
Upland	180	193.681	141.037	97.660	32.567	16.038	6.293	1.618
Upland	190	202.947	148.173	102.981	34.869	17.419	7.013	1.905
Upland	200	212.137	139.200	92.357	29.601	14.619	5.862	1.695
Upland	210	181.907	117.000	76.812	23.031	10.544	4.744	1.772
Upland	220	174.875	109.087	69.753	19.994	10.173	4.878	1.818
Upland	230	168.671	104.856	66.709	26.182	14.150	6.024	1.773
Upland	240	156.414	95.287	65.674	29.063	16.100	7.171	2.180
Upland	250	156.844	95.592	62.072	25.831	13.916	5.890	1.606
Upland	260	138.824	81.410	51.486	18.047	8.957	3.264	1.078
Upland	270	130.536	75.975	48.682	15.084	7.284	2.819	0.981
Upland	280	121.025	69.684	44.108	13.063	6.383	2.965	1.074
Upland	290	131.049	72.118	44.683	12.648	6.309	2.918	1.056
Upland	300	134.789	74.633	46.549	13.505	6.408	3.014	1.100
Upland	310	122.998	70.311	45.433	13.621	6.724	3.190	1.173
Upland	320	129.594	70.654	44.959	13.427	6.608	3.037	1.092
Upland	330	140.984	77.979	48.085	13.842	6.558	2.462	0.839
Upland	340	140.720	82.215	52.540	16.379	8.072	3.244	1.094
Upland	350	161.083	94.205	59.874	18.083	8.655	3.311	1.093
Upland	360	174.757	103.009	66.088	20.677	10.206	4.115	1.155
Van Nuys Arpt.	10	138.457	94.389	59.406	21.119	11.200	4.860	1.450
Van Nuys Arpt.	20	119.014	66.295	42.482	13.982	7.182	3.034	0.889
Van Nuys Arpt.	30	113.449	62.592	39.712	12.580	6.240	2.476	0.634
Van Nuys Arpt.	40	98.403	52.645	32.993	10.370	5.219	2.152	0.606
Van Nuys Arpt.	50	107.464	57.350	35.812	11.251	5.721	2.440	0.757
Van Nuys Arpt.	60	96.002	50.495	31.025	9.232	4.441	1.809	0.550
Van Nuys Arpt.	70	105.177	55.938	34.912	10.868	5.441	2.236	0.632
Van Nuys Arpt.	80	108.990	58.284	36.595	11.655	5.962	2.548	0.784
Van Nuys Arpt.	90	101.620	54.589	34.400	11.000	5.614	2.372	0.707
Van Nuys Arpt.	100	115.443	61.158	37.259	10.303	5.239	2.194	0.647
Van Nuys Arpt.	110	143.524	78.515	49.565	15.718	7.954	3.319	0.959
Van Nuys Arpt.	120	140.180	76.413	48.049	15.009	7.487	3.042	0.829
Van Nuys Arpt.	130	107.058	56.112	34.672	10.809	5.127	1.873	0.552
Van Nuys Arpt.	140	115.565	71.353	48.396	17.659	9.533	4.288	1.382
Van Nuys Arpt.	150	129.101	86.834	56.938	21.772	12.235	5.919	2.218
Van Nuys Arpt.	160	137.083	93.754	61.699	21.813	12.280	5.951	2.235
Van Nuys Arpt.	170	146.477	97.575	64.290	21.462	12.119	5.893	2.223
Van Nuys Arpt.	180	154.446	104.362	69.124	23.801	13.502	6.587	2.494
Van Nuys Arpt.	190	152.535	105.135	69.608	24.168	13.604	6.630	2.498
Van Nuys Arpt.	200	155.421	101.558	64.432	24.032	13.588	6.619	2.512
Van Nuys Arpt.	210	141.544	89.637	62.094	24.071	13.638	6.642	2.501
Van Nuys Arpt.	220	141.544	90.075	59.252	20.801	11.668	5.636	2.110
Van Nuys Arpt.	230	174.546	124.716	84.036	25.740	11.973	5.616	2.104
Van Nuys Arpt.	240	153.077	108.673	72.477	21.258	11.483	5.582	2.104

Table 5: Hourly Receptor Proximity Adjustment Factors $\left(\frac{\mu g/m^3}{lb/hr}\right)$ cont'd

Met Station	Angle	50 M	75 M	100 M	200 M	300 M	500 M	1,000 M
Van Nuys Arpt.	250	133.782	76.962	49.246	16.640	8.892	3.938	1.234
Van Nuys Arpt.	260	117.204	65.789	40.970	11.388	5.259	2.083	0.534
Van Nuys Arpt.	270	86.506	46.056	27.057	8.277	4.214	1.777	0.531
Van Nuys Arpt.	280	95.513	52.889	34.217	10.909	5.579	2.311	0.646
Van Nuys Arpt.	290	114.710	73.067	49.102	17.834	9.581	4.287	1.374
Van Nuys Arpt.	300	161.149	110.263	72.947	22.229	12.110	5.884	2.221
Van Nuys Arpt.	310	181.413	118.251	77.207	24.115	12.091	5.863	2.212
Van Nuys Arpt.	320	160.368	112.628	76.551	24.115	12.176	5.910	2.219
Van Nuys Arpt.	330	167.328	117.095	85.200	27.890	15.665	7.686	2.919
Van Nuys Arpt.	340	224.010	158.136	107.128	34.531	16.881	7.534	2.835
Van Nuys Arpt.	350	189.529	126.211	83.724	27.029	15.164	7.408	2.819
Van Nuys Arpt.	360	164.659	111.926	71.173	27.769	15.826	7.760	2.947

APPENDIX I
DERIVATION OF MULTIPATHWAY ADJUSTMENT FACTORS

Introduction
Toxic air contaminants (TACs) 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, health risk assessments often include a multipathway (MP) exposure analysis.

To simplify the screening health risk assessment, MP adjustment factors were developed. The inhalation risk is multiplied by the MP adjustment factors to account for the additional health risk due to other pathways of exposure.

Development of MP Adjustment Factors
The MP adjustment factors were developed using the Risk Assessment Standalone Tool (RAST), a computer software package that calculates risks based on ground level concentrations (GLC). Assumptions and parameters used to develop the MP adjustment 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 non-cancer 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.
- The cancer risk estimates, including the Derived equations (both OEHHA and Adjusted), are based on 30-year exposures.
- The chronic MP adjustment 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 2015 OEHHA Guidelines). PCB 126 (',3',',4',5Pentachlorobiphenyl, 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 adjustment factors can be used subject to South Coast AQMD approval.

To calculate the MP adjustment factor for each cancer and non-cancer (chronic) for residential and/or worker exposures, two separate RAST runs are performed– one for inhalation only and another using all recommended RAST options described above.

• For cancer risk:
a) sum the risks from all pathways in each scenario (this is provided as “RISK_SUM”)
b) calculate the ratio by dividing sum of risks from the all pathways by sum of risks from the inhalation-only pathway for each toxic air contaminant, for each scenario.

- For non-cancer chronic health risk:

a) find the maximum of all pathways ("CV", "CNS", "IMMUN", "KIDNEY", "GILV", "REPRO.DEVEL", "RESP", "SKIN", "EYE", "BONE.TEETH", "ENDO", "BLOOD", "ODOR", "GENERAL") in each scenario, and
b) calculate the ratio by dividing the max risks from the all pathways by the max risks from the inhalation-only pathway.

Attachment 3

South Coast Air Quality Management District

South Coast AQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402

December 2025

Table of Contents

I. Introduction 1

II. Background 1

III. When Public Notification Is Required 2

Public Notification for an Approved Health Risk Assessment 2

Public Notification for a Progress Report 2

IV. Making Health Risk Assessment Available to Public 3

V. Procedures to Distribute Public Notification Materials 4

Optional Facility Letter 4

Area of Impact 5

Distribution List 5

Schedule and Method of Distribution 5

Verification of Distribution 6

VI. Procedures for Public Meetings 6

VII. Costs Related to Public Notification 8

VIII. Public Notification Procedures for Facilities Participating in the Voluntary Risk Reduction Program 8

IX. Risk Communication Following Public Notification Process 9

X. Additional Resources 9

Appendix A – Verification Form for Distribution of Public Notification Materials 10

Appendix B – Sample South Coast AQMD Public Notification Materials 12

Appendix C – Sample South Coast AQMD Public Notification for Facilities Participating in the Voluntary Risk Reduction Program 17

I. Introduction

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) and its subsequent amendments established a statewide program to inventory emissions of toxic air contaminants (TACs) from individual facilities as well as requirements for risk assessment, public notification of potential health risks, and risk reduction. South Coast Air Quality Management District (South Coast AQMD) Rule 1402 – Control of Toxic Air Contaminants from Existing Sources establishes facility-wide requirements for existing facilities that emit TACs and implements AB 2588. This document specifies the South Coast AQMD's public notification procedures for any facility with an approved Health Risk Assessment (HRA) exceeding the Notification Risk Level of Rule 1402. This document also provides the public notification procedures for a facility that is participating in the Voluntary Risk Reduction Program under Rule 1402. The public notification procedures in this document apply to all AB 2588 and Rule 1402 facilities except for facilities in the industrywide inventory program.[1] Compliance with AB 2588 and Rule 1402 Public Notification requirements does not replace Proposition 65 and its Public Notification requirements or any other regulatory requirements. For questions regarding the public notification procedures, please contact the AB 2588 team at (909) 396-3616 or AB2588@aqmd.gov.

II. Background

Facility owners or operators subject to AB 2588 and Rule 1402 must submit a comprehensive TAC emissions inventory every four years (referred to as a "quadrennial update"). Based on this quadrennial update, along with other parameters such as receptor distance, potency, and multipathway exposures, South Coast AQMD staff prioritizes the facility and calculates a Total Facility Score.[2] Upon initial prioritization of facilities, South Coast AQMD staff conducts further auditing to verify the Total Facility Score. If the Total Facility Score is greater than 10, or if in the determination of the Executive Officer based upon investigation, that emission levels from the facility could potentially cause exceedance of the notification threshold, South Coast AQMD staff notifies the facility that they will be required to prepare an Air Toxics Inventory Report and if necessary, an HRA. If the health risk reported in the approved HRA is greater than or equal to the Rule 1402 Notification Risk Level, then the facility owner or operator must provide public notification. Public notification is also required for facilities that elect to participate in the Rule 1402 Voluntary Risk Reduction Program. Public notification informs the public of their exposure to TACs from facilities and the potential health risks associated with those exposures.

Under Health and Safety Code Section 44362(b), the operator of a facility must provide notice to all exposed persons if, in the judgment of the local air district, the facility's AB 2588 HRA indicates there is a "significant health risk" associated with TAC emissions from the facility. The South Coast AQMD Governing Board adopted the Rule 1402 Notification Risk Level which represents the "significant health risk" levels requiring public notification under AB 2588. Health and Safety

[1] Separate notification procedures were approved by the South Coast AQMD Governing Board in January 2007 for three industry-wide categories, including gas stations, dry cleaners using perchloroethylene, and emergency diesel engines. (Available here: http://www3.aqmd.gov/hb/2007/January/070128a.html)

[2] Total Facility Scores are calculated using South Coast AQMD's "Facility Prioritization Procedures for AB 2588".

Code Section 44362(b) specifies that the notification threshold and notification procedures be determined by each local air district.

III. When Public Notification Is Required

Rule 1402 establishes the health risk thresholds and specific conditions in which public notification is required. Pursuant to Rule 1402, there are two scenarios when public notification is required:

- An approved HRA shows the total facility risk is greater than or equal to the Rule 1402 Notification Risk Level pursuant to Rule 1402 (q)(1); or
- Total facility risk as determined through a Risk Reduction Plan Progress Report is greater than or equal to the Action Risk Level pursuant to Rule 1402 (q)(2).

Facility owners or operators required to conduct public notification will receive a directive from South Coast AQMD to perform public notification by certified mail. For approved HRAs, this notification may be in the form of the HRA approval. The following sub-sections provides more details regarding the public notification procedures for these two scenarios.

Public Notification for an Approved Health Risk Assessment

Pursuant to paragraph (q)(1) of Rule 1402, an owner or operator of any facility is required to provide public notification if the total facility risk, as determined through a South Coast AQMD approved or prepared HRA, is greater than or equal to the Notification Risk Level. The Rule 1402 Notification Risk Level is:

- A Maximum Individual Cancer Risk (MICR) of ten chances in-one-million (10×10^{-6});
- A total acute or chronic HI of one (1.0) for any target organ system at any receptor location; or
- The more stringent of either the NAAQS for lead or the applicable ambient lead concentration in a South Coast AQMD rule.

There are three public notification components that the owner or operator must complete: distribute Health Risk Assessment (see Section IV), distribute Public Notification Materials (see Section V), and conduct a Public Meeting (see Section VI).[3] Public Notification for a Progress Report

Under Rule 1402, a facility that is implementing a Risk Reduction Plan is required to submit for review annual progress reports. Pursuant to paragraph (q)(2) of Rule 1402, an owner or operator of any facility for which total facility risk, as determined through a Progress Report is greater than or equal to the Action Risk Level shall provide written 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. The Rule 1402 Action Risk Level is:

- A MICR of twenty-five chances in-one-million (25×10^{-6});

[3] When few or no parties are directly affected by public notification, South Coast AQMD may require the facility to conduct an alternative streamlined notification.

- A cancer burden of one half (0.5);
- A total acute or chronic HI of three (3.0) for any target organ system at any receptor location; or
- The NAAQS for lead.

For Progress Reports where the health risk is greater than the Action Risk Level, there is one public notification component: Distribute Public Notification Materials (see Section V).

Rule 1402 requires that an owner or operator of any facility for which total facility risk, as determined through a Progress Report, is greater than or equal to the Significant Risk Level[4] shall have public meetings conducted by South Coast AQMD. Under Rule 1402, the Significant Risk Level is:

- A MICR of one hundred chances in-one-million (100×10^{-6}); or
- A total acute or chronic HI of five (5.0) for any target organ system at any receptor location.

For Progress Reports where the health risk is greater than or equal to the Significant Risk Level, there are two public notification components: Distribute Public Notification Materials (see Section V) and Public Meetings (see Section VI).

I. Summary of Threshold Requirements for Public Notifications

Thresholds and Requirements for Public Notifications	Distribution of Health Risk Assessment	Distribution of Public Notification Materials	Public Meetings
Approved Health Risk Assessment ≥ Notification Risk Threshold	Yes	Yes	Yes
Progress Report ≥ Action Risk Threshold	No	Yes	No
Progress Report ≥ Significant Risk Threshold	No	Yes	Yes

IV. Making Health Risk Assessments Available to the Public

Within 10 days of the directive to conduct public notification, the owner or operator shall provide to South Coast AQMD staff a version of the approved HRA with any requested redactions of trade

[4] The Significant Risk Level under Rule 1402 is a separate definition than the "significant health risk" of Health and Safety Code Section 44362(b).

secrets.[5] South Coast AQMD staff will publish the HRA, with any necessary redactions, along with the HRA approval letter on the South Coast AQMD website. These documents shall be available on the website for no less than 18 months following approval of the HRA.

V. Procedures to Distribute Public Notification Materials

This section outlines the procedures for distributing Public Notification Materials. Distributing Public Notification Materials is required following the issuance of the directive to conduct public notification by South Coast AQMD. The Public Notification Materials must include a public notice developed by South Coast AQMD (sample provided in Appendix B). The public notice will include information about the facility such as facility address and type of business. The public notice will also include information about the specific TACs that are contributing substantially to the health risk, the health risk levels that are exceeding the Notification Risk Level, and the estimated health risks. If a public meeting is required, the public notice will include information about the time, date, location, and purpose of the public meeting. Translation for all languages spoken by ≥10% of a census tract in a public notification area may be required and is based on South Coast AQMD staff discretion. The schedule for producing the Public Notification Materials and the designated responsible party for each item is shown in Table 2.

Optional Facility Letter

The facility has the option of including a letter of its own authorship which has been reviewed and approved by the Executive Officer. If a facility operator chooses to include their own letter as part of the Public Notification Materials, a draft of the facility letter must be submitted to South Coast AQMD within 15 days of the directive to conduct public notification for review and approval.

The optional facility letter may be brief and simply refer to the enclosed South Coast AQMD materials or may be longer while providing additional information. In either case, the letter shall consist of brief paragraphs in non-technical language. Some acceptable information includes:

- A description of the facility and the products or services it provides that are relevant to the HRA;
- An explanation of why the facility emits toxic air contaminants;
- Steps the facility has taken or will take to reduce the emissions that were quantified in the HRA;
- Identification of the facility contact person with a phone number; and

[5] Trade secrets, with the exception of emission data, may include but are not limited to, any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented, which is known only to certain individuals within a commercial concern who are using it to fabricate, produce, or compound an article of trade or a service having commercial value, and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it. [*See* Gov. Code Sec. 7924.510 (formerly Gov. Code Sec. 6254.7)]. Requests to redact Trade Secrets determined to be "emission data" shall not be approved. "Emission Data" means measured or calculated concentrations or weights of air contaminants emitted into the ambient air. Data used to calculate emission data are not emission data.

- Other information directly relating to facility emissions or the HRA.

Certain content within the facility letter are not allowable, such as statements that undermine the risk assessment process or trivialize the risk associated with TACs. Furthermore, the facility letter shall not discredit the risk assessment methodology used in the AB 2588 Program or imply that it is overly conservative. As with all public notification material, the facility letter must be translated to other languages based on South Coast AQMD staff determination.

Area of Impact

For cancer risk, the area of impact is the geographic area encompassed by the ten chances in-one-million (10×10^{-6}) MICR isopleth.[6] For non-cancer health risk, the area of impact is the geographic area encompassed by the 1.0 HI isopleth or the isopleth corresponding to the lead threshold that triggered notification.

Distribution List

Within 15 days of the directive to conduct public notification, the facility owner or operator shall submit a list of all addresses (individual residences and workplaces) subject to notification to South Coast AQMD staff for review and approval. Within 25 days of the directive to conduct public notification, the facility owner or operator must inform South Coast AQMD staff of the exact method of distribution to parents of children attending schools in the area of impact.[7] Since distributing materials to students and parents can be a lengthy process, contacting school administrators, who are responsible for approving the distribution, should be one of the first steps. The method for informing students and parents of students attending schools in the notification area is left to the discretion of the school administrators. Some examples for distribution for school administrators include providing information on school website, providing a mailing list to South Coast AQMD for distribution by South Coast AQMD staff, or requesting Public Notification Materials in prepared envelopes for distribution by the school staff.

In addition, South Coast AQMD staff provide the notice materials to local government representatives with jurisdiction within the notification area.

Schedule and Method of Distribution

Unless directed otherwise in writing and based on the discretion of the Executive Officer, the following timelines are mandatory. Public Notification Materials must be distributed within 45 days of the directive to conduct public notification. The facility owner or operator is responsible for reproducing and distributing copies of the Public Notification Materials. All Public Notification Materials are to be enclosed in envelopes with South Coast AQMD return address labels. These envelopes may be obtained from South Coast AQMD for a fee and upon request.

[6] Note that the "area of impact" has a separate meaning than the "zone of impact" term used in HRAs.

[7] For the purpose of these public notification procedures, the definition of "school" under Health and Safety Code Section 42301.9 shall be used. Under this definition, "school" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grade 1 to 12, but does not include, any school in which education is primarily conducted in private homes.

Distribution of the Public Notification Materials must be conducted by a third party which specializes in mail or delivery services, such as the U.S. Postal Service or other mailing or distribution services. U.S. Postal Service regulations prohibit the use of individual's mail boxes by unauthorized persons.

Verification of Distribution

Within 15 days of the date of distribution of Public Notification Materials, the facility operator must verify distribution of the Public Notification Materials using the verification form provided in Appendix A. Proof of distribution must be included with the verification and may be in the form of receipts from delivery or mail service agencies or the post office which describe the boundaries of notification and/or the addresses included in the mailing.

II. Procedures For Public Notification Materials

Procedure	Schedule	Responsibility
Prepare public notice	After HRA is approved	South Coast AQMD staff
Determine if Public Notification Materials require translation.	Within 15 days following directive to conduct public notification	South Coast AQMD staff
Prepare a facility letter – (Optional).	Within 15 days following directive to conduct public notification	Owner or operator of facility
Provide a list of all addresses (individual residences and workplaces).	Within 15 days following directive to conduct public notification	Owner or operator of facility
Provide the exact method of distribution to the parents of children in schools within the area of impact.	Within 25 days following directive to conduct public notification	Owner or operator of facility
Reproduce and distribute Public Notification Materials to individual residences, workplaces, and parents of children attending school in the area of impact.	Within 45 days following directive to conduct public notification	Owner or operator of facility
Verification of distribution; such as receipts from delivery or mail service.	Within 15 days following distribution of Public Notification Materials	Owner or operator of facility

VI. Procedures for Public Meetings

This section establishes the procedures for scheduling and other logistics for public meetings (Table 3). Public meetings are required after the approval of a HRA where the health risk is greater than or equal to the Notification Risk Level or the health risk of a Risk Reduction Plan Progress Report is greater than or equal to the Significant Risk Level. Public meetings offer the public an opportunity to learn more about the results of the HRA and how health risk is determined and mitigated, and to directly ask questions of South Coast AQMD staff. While facility attendance at

the public meeting is required, participation in the presentation or question and answer session is optional and left to the facility's discretion. South Coast AQMD staff will work with the facility owner or operator to schedule a date for the public meeting that is typically within 30 days of distribution of Public Notification Materials, but acknowledges that occasions may arise that require additional time beyond the 30 days. The date, time, and location of a public meeting must be provided within the Public Notification Materials. South Coast AQMD staff will schedule the meeting on a weekday evening or weekend. The meeting will be held in virtual format or at a location that is ADA compliant. South Coast AQMD staff will prioritize selection of locations that are convenient for community members. South Coast AQMD staff will reserve a venue for the public meeting, arrange for audio and visual equipment and personnel, and language translation, if necessary.

Facility operators are encouraged to work closely with South Coast AQMD staff regarding the meeting agenda. The typical agenda includes a presentation followed by a question and answer period. The following topics are typically included in the presentation:

- Purpose of the meeting;
- Overview of the AB 2588 program;
- Description of the facility: type of operation, processes involved, and materials used or produced at the facility;
- Description of the health risk assessment process;
- Description of facility emissions and results of the Health Risk Assessment;
- Description of facility's recent and relevant compliance history with South Coast AQMD;
- Facility's projects or plans to reduce TAC emissions or risk; and
- Applicable current or future regulatory programs to reduce risks from TACs.

A pre-meeting should be arranged between South Coast AQMD and facility staff to finalize meeting plans, including the appropriate persons to attend and assist in the presentation. South Coast AQMD staff will be prepared to modify the meeting agenda in response to reasonable needs of the attendees. These sessions provide the public with an opportunity to ask questions directly to experts, learn more generally about toxic risk, and to provide feedback to South Coast AQMD staff and the facility. Informational materials should also be made available at the sessions.

III. Procedures for Public Meetings

Procedure	Schedule	Responsibility
Coordination meeting to identify the appropriate date for public meeting	Before distribution of Public Notification materials	South Coast AQMD staff and owner or operator of facility

Arrange for venue, audio visual equipment and personnel, translation (if necessary), parking, security, and any other meeting logistics.	Within 30 days of distribution of Public Notification Materials	South Coast AQMD staff
Pay for venue, audio visual equipment and personnel, translation, and any other costs	Within 60 days of facility's receipt of invoice	Owner or operator of facility
Participate in public meeting.	Public notification meeting	South Coast AQMD staff and owner or operator of facility

VII. Costs Related to Public Notification

Pursuant to Rule 307.1, the facility owner or operator is responsible for all costs relating to the public notification. Examples of these items include, but are not limited, to the following:

- Renting of the venue, audio visual equipment and personnel, translators, parking rental, security (if necessary);
- Printing and distribution of all Public Notification Material;
- Translation of all Public Notification Material;
- Envelopes necessary for public distribution of material: and
- Necessary postage.

VIII. Public Notification Procedures for Facilities Participating in the Voluntary Risk Reduction Program

This section provides the public notification procedures for facilities participating in the Rule 1402 Voluntary Risk Reduction Program. Pursuant to Rule 1402 (q)(3), South Coast AQMD staff will conduct public notification for facilities that are eligible and that elect to participate in the Rule 1402 Voluntary Risk Reduction Program. Under Rule 1402, facilities that elect to participate in the Voluntary Risk Reduction Program commit to implementing risk reduction measures that will reduce their total facility risk below the Rule 1402 Voluntary Risk Threshold, which is a Maximum Individual Cancer Risk of ten chances in-one-million (10×10^{-6}), a total acute or chronic HI of one (1.0) for any target organ system at any receptor location, or the more stringent of either the NAAQS for lead or applicable ambient lead concentration limit in a South Coast AQMD rule. The public notification for facilities participating in the Rule 1402 Voluntary Risk Reduction Program will be placed on South Coast AQMD's website and will be included in the AB 2588 annual report. The public notification will include the following information:

- Background information about the Voluntary Risk Reduction Program. An explanation that the facilities that are participating are committing to risk reductions that go beyond what is required through regulatory requirements.

- A list of participating facilities – Facility Name, Facility ID, and Street Address

IX. Risk Communication Following Public Notification Process

Facility operators may choose to continue their dialogue with the community after they have completed their notification requirements. This dialogue could take the form of newsletters, facility tours, or additional public meetings. South Coast AQMD encourages these efforts and requests that facilities keep South Coast AQMD informed about their communication activities.

X. Additional Resources

CARB AB 2588 Air Toxics "Hot Spots" Program

OEHHA Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments

South Coast AQMD Air Toxics "Hot Spots" Program (AB 2588)

South Coast AQMD Rule 307.1 - Alternative Fees for Air Toxics Emissions Inventory

South Coast AQMD Rule 1402 – Control of Toxic Substance from Existing Sources

Appendix A – Verification Form for Distribution of Public Notification Materials

South Coast Air Quality Management District

Form R1402

Verification Form for Distribution of Public Notices and Health Risk Assessments

Mail To:
South Coast AQMD - AB 2588 Program
21865 Copley Dr.
Diamond Bar, CA 91765

Tel: (909) 396-3616
www.aqmd.gov

Section A – Facility Information

Facility Name (Business Name of Operator):

South Coast AQMD Facility ID:

Facility Location Address:

Street Address

City , CA Zip Code

Facility Mailing Address:

☐ Check here if same as facility location address

Street Address

City , State Zip Code

Facility Contact:

Name Title Phone Number E-Mail

Section B – Verification of Public Notification Requirements

Dates of Distribution:

Public notice materials to all addresses in the area of impact.

Public notice materials to students and parents of students attending schools in the area of impact.

Section C – List of Attachments

The following documents have been attached:

☐ Proof of distribution of the notice materials to all addresses required.

☐ List of schools for which notices were distributed to parents of attending children.

Section D – Authorization/Signature: I hereby certify that all the information contained herein are true and correct.

Signature of Responsible Official:

Title of Responsible Official:

Print Name of Responsible Official:

Date Signed (mm/dd/yy):

Phone Number of Responsible Official:

Email Address of Responsible Official:

Sample

Appendix B – Sample South Coast AQMD Public Notification Materials

South Coast Air Quality Management District

NOTICE OF PUBLIC MEETING TO DISCUSS HEALTH RISK ASSESSMENT FOR A FACILITY IN YOUR NEIGHBORHOOD

The following business in your neighborhood has been emitting toxic air pollutants that could potentially cause a risk to public health. ***[FACILITY NAME]*** was required to conduct a Health Risk Assessment (HRA) to evaluate how emissions are released and dispersed from ***[FACILITY NAME]***, and the potential impact those releases may have to public health.

Business Name	Location Address	Type of Business
[FACILITY NAME]	***[FACILITY ADDRESS]***	***[TYPE OF BUSINESS]***

As the air pollution control agency for this area, South Coast Air Quality Management District (South Coast AQMD) will hold a public meeting to discuss the results of ***[FACILITY NAME] [APPROVAL YEAR]*** Approved HRA. The purpose of this meeting is to inform the public about the approved ***[APPROVAL YEAR]*** HRA, provide an opportunity to ask questions directly to staff, learn more about toxic risk and the AB 2588 Program, and to provide feedback to the South Coast AQMD and to the facility. A representative for ***[FACILITY NAME]*** will also attend the meeting to answer questions about their operations and future plans to reduce emissions impacting your neighborhood. Informational materials including the Approved HRA are available at https://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/health-risk-assessment. South Coast AQMD will hold the public meeting via video conferencing and by telephone. The audience will be able to participate during the public comment period.

Date & Time	Meeting Details
[DATE & TIME]	***[MEETING DETAILS]***

* Please note that the meeting will end once public participation has concluded or at 8:00 pm, whichever is earlier.

SAMPLE

INSTRUCTIONS FOR ELECTRONIC PARTICIPATION

Instructions for Participating in a Virtual Meeting as an Attendee

- As an attendee, you will have the opportunity to virtually raise your hand and provide public comment.
- Before joining the call, please silence your other communication devices such as your cell phone or desk phone. This will prevent any feedback or interruptions during the meeting.
- Please Note: During the meeting, all participants will be placed on mute by the host. You will not be able to mute or unmute your lines manually.
- Speakers will be limited to a total of three (3) minutes for their opportunity to provide comments. This time may be reduced if there are a large number of commenters to ensure that all comments can be heard. A countdown timer will be displayed on the screen for each public comment.
- Once you raise your hand to provide public comment, your name will be added to the speaker list. Your name will be called when it is your turn to comment. The host will then unmute your line.

Directions for Video Zoom on a Desktop/Laptop/Smartphone

- If you would like to make a public comment, please click the "Raise Hand" button at the bottom of the screen. This will signal to the host that you would like to provide a public comment and you will be added to the list.
- Please Note: At the bottom of your screen, please click the "Interpretation" button and select either "English" or "Spanish".

Directions for Telephone Line Only

- If you would like to make a public comment, please dial *9 on your keypad to signal that you would like to comment
- Please Note: There is no interpretation feature available when joining via telephone dial-in.

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
aqmd.gov • 1-800-CUT-SMOG

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South Coast Air Quality Management District

Summary of Health Risk Assessment

The approved HRA, which used ***[INVENTORY YEAR]*** emissions data, showed that emissions of toxic air pollutants called (***[PRIMARY TAC RISK DRIVER(s)]***) from ***[FACILITY NAME]*** may cause an increased health risk for people who live and work in the area as seen in the attached Facility Risk Map (Figure 1).

The attached information sheet provides additional background on the business, air pollutants and health risks. The following table shows the estimated, potential health risks from the ***[APPROVAL YEAR]*** Approved HRA.

	[APPROVAL YEAR] **Approved HRA**
Maximum probability of cancer for those living closest to the facility (30 year exposure)	***[XX]*** chances in-one-million
Maximum additional cases of cancer (70 year exposure)	***[XX]***
Maximum short-term non-cancer health effects (1 hour exposure)	***[XX]*** hazard index*

*A hazard index above 1.0 increases the probability of adverse human health effects.

For more information about South Coast AQMD programs to control toxic air pollution or the public meeting, please contact Victoria Moaveni of South Coast AQMD at (909) 396-2455 or vmoaveni@aqmd.gov. For more information about the facility, please contact ***[FACILITY CONTACT NAME]*** at ***[FACILITY CONTACT PHONE]*** or ***[FACILITY CONTACT EMAIL]***.

---

*Disability and language-related accommodations can be requested to allow participation in the **[FACILITY NAME]** Rule 1402 public notification meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't Code Section 54954.2(a)). In addition, other documents may be requested in alternative formats and languages. Any disability or language-related accommodation must be requested as soon as practicable. Requests will be accommodated unless providing the accommodation would result in a fundamental alteration or undue burden to the District. Please contact the AB 2588 Hotline at (909) 396-3610 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to AB2588@aqmd.gov.*

South Coast Air Quality Management District

***[APPROVAL YEAR]* Approved HRA Facility Risk Map (Figure 1)**

[FACILITY NAME]

(South Coast AQMD ID No. ***[FACILITY ID]***)
[FACILITY CITY], California

Public Notification Area Map

Residential cancer risk of at least 10 chances in-one-million (Inside Red Outline)

Worker cancer risk of at least 10 chances in-one-million (Inside Yellow Outline)

Facility Boundary (Blue Outline)

Public Notification is Required by South Coast AQMD Rule 1402 if any of the following criteria are met:

- Maximum probability of cancer for those living closest to the facility is greater than 10 chances in-one-million
- Maximum probability of cancer for those working closest to the facility is greater than 10 chances in-one-million
- Long-term non-cancer health effects have a hazard index greater than 1.0 for those working and living closest to the facility
- Short-term non-cancer health effects have a hazard index greater than 1.0 for those who are near the facility

BUSINESSES RECEIVING THIS NOTICE SHOULD POST IT WHERE IT IS MOST LIKELY TO BE READ BY EMPLOYEES.

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
aqmd.gov • 1-800-CUT-SMOG

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South Coast Air Quality Management District

INFORMATION SHEET

What are toxic air pollutants?

Chemicals that can cause cancer and other adverse health effects such as harm to the human respiratory system are known as toxic substances. When these toxic substances are released in the air, they are called toxic air pollutants. Toxic air pollutants come from a variety of sources including chemical plants, large manufacturers, businesses and cars and trucks. Many products used at home, such as cleaners and paint thinners also contain toxic air pollutants.

What toxic air pollutants does this facility emit and what are their health impacts?

Exposure to elevated concentrations of toxic air pollutants can have potential cancer and non-cancer health risks. Long and short term health-based levels have been established by the California Office of Environmental Health Hazard Assessment (OEHHA).

The facility emits the following toxic air pollutants as a result of ***[MAJOR FACILITY PROCESSES PRODUCING PRIMARY TAC DRIVERS]***:

Pollutants	Possible Health Effects

How was the health risk from this facility determined?

The ***[APPROVAL YEAR]*** Approved HRA used estimated amounts of pollutants released from operations at ***[FACILITY NAME].*** That information is inputted into a computer-based model that evaluates air quality dispersion and predicts air pollution concentrations throughout the community. The results are then measured against exposure levels determined by OEHHA to predict potential impacts to people's health, including the greater impacts that toxic air pollutants can have on children.

What did the Health Risk Assessment find?

An HRA is currently the best method for estimating the amount of exposure to a chemical over a long period of time and the potential health impacts.

The ***[APPROVAL YEAR]*** Approved HRA for ***[FACILITY NAME]*** was calculated using conservative exposure periods that assumed continuous exposure from the facility.

The ***[APPROVAL YEAR]*** Approved HRA, based on known information at the time, found that people who live in the area shown on the Facility Risk Map (Figure 1), if continuously exposed for 30 years, would have a maximum of ***[xx]*** chances in-one-million of developing cancer in the most impacted location. Those who work in the area would have a maximum increased risk of ***[XX]*** chances in-one-million of developing cancer in the most impacted location. The risk is primarily due to ***[PRIMARY TAC RISK DRIVER(S)]*** from ***[MAJOR FACILITY PROCESSES PRODUCING PRIMARY TAC DRIVERS]***.

What is being done to reduce the health risks from this facility?

South Coast AQMD Rule 1402 — Control of Toxic Air Contaminants from Existing Sources applies to facilities that exceed specific risk thresholds (e.g., cancer risk greater than 25 chances in-one-million) and requires the facility to submit a plan to reduce its risk below thresholds and implement this risk reduction plan within two and a half years after approval.

In this case, ***[FACILITY NAME]*** is required to conduct both public notification and risk reduction. South Coast AQMD has also developed other programs designed to prevent pollution and reduce exposure to toxic air pollution, such as air toxic regulations specific to certain sources.

What is the cancer risk from toxic air pollutants in general?

The Multiple Air Toxics Exposure Study V (MATES V) presents estimates of cancer risk and non-cancer chronic risk throughout South Coast AQMD's four-county jurisdiction. The estimated risk for cancer from all toxic air pollutants emitted from all sources (cars, trucks, factories, power plants, etc.) is about 455 chances in-one-million averaged over the region's population. The chronic non-cancer risk from all toxic air pollutants at the ten measurement sites located throughout the South Coast Air Basin in MATES V is approximately 5.5 (hazard index).

How can I get more information?

Table ES-2 of MATES V Executive Summary, available at: http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf

A copy of South Coast AQMD's approved health risk assessment for ***[FACILITY NAME]*** is available online at: ***[URL]***

Appendix C – Sample South Coast AQMD Public Notification for Facilities Participating in the Voluntary Risk Reduction Program

Notification of Facilities Participating in the Rule 1402 Voluntary Risk Reduction Program

Updated December 5, 2025

South Coast AQMD's Rule 1402 – Control of Toxic Air Contaminants from Existing Sources includes a Voluntary Risk Reduction Program. The Voluntary Risk Reduction Program provides an alternative path for facilities that meet specific requirements to reduce risk and comply with Rule 1402. Facilities that participate in the Voluntary Risk Reduction Program reduce their health risks sooner and below the levels required for AB2588 facilities that do not participate in this program.

Table 1 below lists the facilities that have elected to participate in the Voluntary Risk Reduction Program and have an approved Voluntary Risk Reduction Plan.

Questions about the South Coast AQMD's Voluntary Risk Reduction Program or this Notification can be directed to AB 2588 staff at (909) 396-3616 or AB2588@aqmd.gov.

Table 1
List of Facilities with an Approved Voluntary Risk Reduction Plan

South Coast AQMD Facility ID	Facility Name	Address

South Coast Air Quality Management District

AB 2588 and Rule 1402 Supplemental Guidelines

(Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)

December 2025

Preface

This document (Supplemental Guidelines) is a supplementary guide to the State of California Office of Environmental Health Hazard Assessment (OEHHA) document entitled *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (2015 OEHHA Guidance Manual). The 2015 OEHHA Guidance Manual contains several sections that refer users to their local air district for specific or additional requirements, and this document describes and clarifies the requirements for the South Coast Air Quality Management District (South Coast AQMD). This version of the Supplemental Guidelines updates the previous September 2024 version.

The Supplemental Guidelines are intended to be a "living" document, which staff will update periodically as needed. The major revisions to this document from the previous ember 2024 version include:

- Adding language to distinguish OEHHA Tier 1 HRAs from South Coast AQMD Tier 1 screening analysis;
- Including risk assessment guidelines in the HRA Review Checklist; and
- Including updated links and references.

Table of Contents

Preface ii
Table of Contents iii
List of Figures v
List of Tables v
Introduction 1
1. Emissions Reporting 4
1.1 Facilities Subject to AB 2588 Reporting Requirements 4
1.2 Quadrennial Emissions Reporting and Base Year Emissions Inventory 5
1.2.1 Toxic Air Contaminants Reporting Requirements 5
1.2.2 Diesel Particulate Matter Emissions 6
1.2.3 Control Efficiencies 6
1.3 Changes to Emissions and Process Data 6
1.3.1 Allowable Emission Modifications 6
1.3.2 Source Test Results 8
1.3.3 Change of Ownership/Operator 8
1.3.4 Facility Closures 9
1.4 Prioritization Procedure 9
1.4.1 Meteorological Stations 10
1.4.2 Receptor Distance 10
1.5 Notification for High Priority Score Facilities and Next Steps 10
2. Air Toxics Inventory Reports 12
2.1 ATIR Format 12
2.1.1 Written Report 12
2.1.2 Emissions Inventory Module 12
2.1.3 Supporting Documentation 13
3. Air Dispersion Modeling 14
3.1 Facility Description and Source Information 14
3.2 Model Selection and Model Options 15
3.3 Meteorological Data 16
3.4 Receptor Grid 17

3.5 Source Data 17
3.5.1 Point Sources 17
3.5.2 Area Sources 18
3.5.3 Volume Sources 18
3.6 Elevation Data 18
4. Health Risk Assessments 19
4.1 OEHHA Guidance 19
4.1.1 Calculating Risk 19
4.2 HRA Format 20
4.3 South Coast AQMD's Default Assumptions for HRAs 21
4.4 Receptors for Maximal Exposure and Point of Maximum Impact 24
4.5 Zone of Impact 24
4.6 Land Use Considerations 24
4.7 Maps 24
4.8 Public Notification 25
4.9 Emissions Differing from the Base Year Inventory 25
4.10 Uncertainty Analyses and Alternate HRA 25
5. Risk Reduction Plans 27
5.1 Risk Reduction Measures 27
5.2 Updated ATIR and HRA 27
5.3 Progress Reports 27
6. Potentially High Risk Level Facilities 28
Appendix A — Elements of an Air Toxics Inventory Report A-1
Appendix B — Outline for the HRA B-1
Appendix C — HRA Review Check List C-1
Appendix D — Elements of a Risk Reduction Plan D-1
Appendix E — Elements of a Risk Reduction Progress Report E-1
Appendix F — Elements of an Early Action Reduction Plan for Potentially High Risk Level Facilities F-1
Appendix G — List of Acronyms and Abbreviations G-1

List of Figures

Figure 1 — Overview of the AB 2588 Program 2

List of Tables

Table 1 — Priority Score Categories 10
Table 2 — Public Notification, Risk Reduction, and Voluntary Risk Reduction Levels 11
Table 3 — Required Facility Information 15
Table 4 — Required Source Information 15
Table 5 — Summary of South Coast AQMD Dispersion Modeling Guidance 16
Table 6 — Required Files for HRA Submittals 21
Table 7 — Summary of OEHHA Tier 1 HRA Scenarios Required by South Coast AQMD 22
Table 8 — Summary of South Coast AQMD Mandatory Exposure Pathways and Settings 23

Introduction

In 1987, the California legislature adopted the Air Toxics "Hot Spots" Information and Assessment Act; also known as AB 2588. The goals of the AB 2588 Program are to collect toxic air contaminant (TAC) emissions data, identify facilities having localized impacts, 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 Senate Bill 1731 (SB 1731), which requires facilities to develop and implement measures to reduce impacts if risks are found above thresholds specified by air districts. South Coast AQMD Rule 1402 - Control of Toxic Air Contaminants from Existing Sources implements various aspects of AB 2588 and SB 1731 including public notification and risk reduction requirements for facilities with health risks that are above specified thresholds.

Rule 1402 was amended on October 7, 2016, to include a provision to allow facilities to participate in a Voluntary Risk Reduction Program. This program is an alternative to complying with the traditional AB 2588 Program and Rule 1402 approach that provides qualifying facilities an opportunity to reduce health risks below the Notification Risk Level through a Voluntary Risk Reduction Plan (VRRP) and employ a Modified Public Notification approach as specified in Rule 1402. The Voluntary Risk Reduction Program will achieve risk reductions both sooner and beyond what is required in the traditional AB 2588, SB 1731, and Rule 1402 process.

There are five important components to the AB 2588 program as follows:

- *Emissions Reporting* - Facilities subject to the AB 2588 Program submit a streamlined air toxics inventory report every four years through South Coast AQMD's Annual Emissions Reporting (AER) Program. This is known as the quadrennial emissions report. Facilities are allowed to simplify AER reporting by aggregating common sources.

- *Prioritization* - From the streamlined reported TAC emissions submitted through AER, South Coast AQMD staff prioritizes facilities, using a procedure approved by the Governing Board, into three categories: high, intermediate, and low priority. High priority facilities[1] are then asked to prepare an ATIR. In contrast to the streamlined reporting allowed under AER, the ATIR requires greater detail, which includes process, device, and stack information for each piece of equipment.

- *Health Risk Assessment* - From the detailed reported TAC emissions submitted through the ATIR, high priority facilities must prepare an HRA. An HRA evaluates health risks from the reported TAC emissions and determines whether public notification and risk reduction measures are required.

- *Public Notice* - If the health risks reported in the HRA exceed specified public notification thresholds, then the facility is required to provide public notice to the affected community.

[1] A high priority facility has separate meaning from the Potentially High Risk Level Facility definition of Rule 1402 (see Chapter 6).

- *Risk Reduction* - If the health risks reported in the HRA exceed specified action risk levels in Rule 1402, then the facility is required to reduce their health risks below the action risk levels.

Figure 1 below provides an overview of the AB 2588 Program and the different paths a facility may follow under Rule 1402.

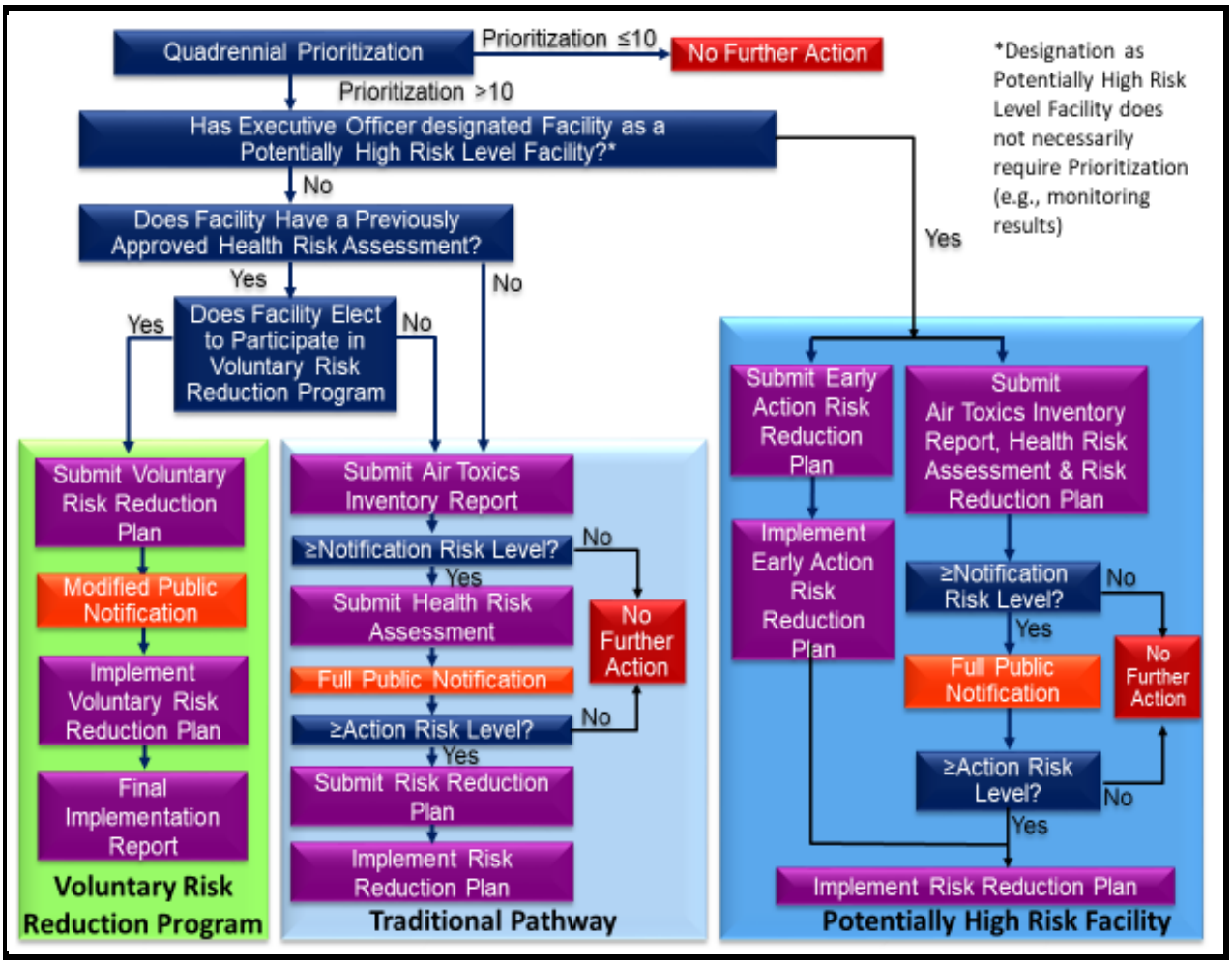

Figure 1 — Overview of the AB 2588 Program and illustration of the paths by which a facility may follow

These Supplemental Guidelines are to be used in conjunction with the 2015 OEHHA Guidance Manual prepared by OEHHA.[2] Facilities required to submit health risk assessments to the South Coast AQMD must follow the 2015 OEHHA Guidance Manual pursuant to Health and Safety Code 44360(b)(2). Since the 2015 OEHHA Guidance Manual defers to the local air district for specific, localized, or additional requirements, these Supplemental Guidelines address those areas

[2] https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

and other issues that have arisen during the implementation of the AB 2588 Program at South Coast AQMD.

A certification form signed by the responsible facility representative must be submitted to South Coast AQMD for ATIR, HRA, and RRP submittals. The certification form mandates that the facility disclose any confidential information included in the submittal. Facilities should note that certain information may not qualify as trade secret.[3] All relevant documents and correspondence relating to the submittal should also be included with the certification form.

Please visit South Coast AQMD's AB 2588 Program webpage provided below for additional information, documents, and any questions regarding this document, health risk assessment methodology, and other AB 2588 Program issues.[4] Questions may be emailed to AB2588@aqmd.gov or asked via phone at (909) 396-3610.

[3] https://www.aqmd.gov/docs/default-source/aqmd-forms/AB2588/ab2588-certification-form.pdf
[4] https://www.aqmd.gov/ab2588

1. Emissions Reporting

1.1 Facilities Subject to AB 2588 Reporting Requirements

South Coast AQMD's AER Program is used for all facilities subject to AER, including AB 2588 facilities, which are required to report their annual emissions of criteria pollutants and any of the TACs and ozone depleting compounds (ODC) specified in South Coast AQMD's Rule 301(e). The list of compounds can be found in Rule 301, Tables III and IV.[5] Where applicable, facilities are also required to report the compounds listed in the California Air Resources Board's (CARB) Criteria Pollutant and Toxic Emissions Reporting (CTR) regulation.[6]

AB 2588 facilities are subject to additional quadrennial (once in four years) reporting requirements within the AER webtool. The TACs that are required to be reported for the quadrennial emissions report can be found on the AER website.[7] This list is consistent with the compounds published in the California Air Resources Board's Emission Inventory Criteria Guidelines (EICG).[8]

Facilities subject to the AER Program estimate and report their emissions based on their throughput data (e.g., fuel usage, material usage, etc.), appropriate emission factors, and control efficiencies, if applicable. Instruction on the use of the AER web tool, and default emission factors/methodologies for estimating emissions are presented on South Coast AQMD's AER website. The data collected in the AER Program in addition to information from other sources (i.e., monitoring data, source specific information, etc.) are used to determine potential candidates for the AB 2588 Program. Facilities that meet one of the following AB 2588 Program qualification conditions are required to prepare and submit a quadrennial emissions report if:

- They emit 10 tons per year or more of VOC, NOx, SOx, or PM;
- They emit 25 tons per year or more of a combination of VOC, NOx, SOx, and PM;
- They emit less than 10 tons per year of VOC, NOx, SOx, or PM, but the facility activity is listed in CARB's Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program;
- Their emissions exceed one or more of the reporting thresholds in Table I or II in *Rule 1402 – Control of Toxic Air Contaminants From Existing Sources*;[9] or
- The Executive Officer of South Coast AQMD determines that emissions levels from the facility have the potential to cause an exceedance of risk reduction thresholds.

[5] https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-iii
[6] https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting
[7] https://www.aqmd.gov/aer
[8] https://ww2.arb.ca.gov/our-work/programs/ab-2588-air-toxics-hot-spots/hot-spots-inventory-guidelines
[9] https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1402.pdf

1.2 Quadrennial Emissions Reporting and Base Year Emissions Inventory

Facilities subject to the AB 2588 Program must provide a quadrennial emissions report for TACs using the AER web tool. Appendix A in CARB's EICG lists the degree of accuracy for each substance with reporting requirements under the AB 2588 Program. The degree of accuracy is a de minimis emission level for reporting. As a result, facility-wide emissions of the substances which are greater than one-half of their corresponding degree of accuracy must be inventoried and reported.

As part of the quadrennial emissions report for TACs, facilities are required to report details of the facility operating schedule such as operating hours per day, operating days per week, and operating weeks per year. Facilities must also provide distances to the nearest residential, worker, and sensitive receptor locations. The residential receptor distance is the closest distance between any source of TAC emissions at a facility and the property boundary of a residential receptor. Residential receptors include but are not limited to any one of the following receptors: house, apartment, convalescent home, trailer park, or other type of residence. The worker receptor distance is the closest distance between any source of TAC emissions at a facility and the property boundary of a worker receptor. Worker receptors include but are not limited to any one of the following receptors: other business or worksite, shopping center, or any other commercial site. As specified in Section 4.6.4 of the 2015 OEHHA HRA Guidelines, a sensitive receptor includes individuals who may be more sensitive to toxic exposures than the general population. The section states that locations with high densities of sensitive individuals should be identified (e.g. schools, nursing homes, residential care facilities, daycare centers, and hospitals) and reported in the HRA.

It is critical that facilities estimate their TAC emissions as precisely and accurately as possible. This information is used to prioritize the facility as discussed in Section 1.4. A facility's prioritization score determines its AB 2588 fees and whether it may be necessary to prepare an ATIR or VRRP (if eligible).

The quadrennial emissions report is designed to represent a 'snapshot' of the most recent quadrennial emissions reporting year. This is commonly referred to as the base year and is the basis for when a facility is required to prepare an ATIR or VRRP. This same base year emissions inventory is also used to prepare an HRA, Public Notice, and RRP, if applicable.

1.2.1 Toxic Air Contaminants Reporting Requirements

If an ATIR is required, facilities must follow the requirements specified in Section 2.1. ATIR shall include, at a minimum, the elements outlined in Appendix A of these Supplemental Guidelines. CARB has grouped the substances to be reported into three groups as shown in Appendix A of the EICG. 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 ATIR and HRA including those calculated in the ATIR 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 ATIR and HRA; however, facilities must report whether the substances are 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 ATIR and HRA if they are manufactured by the facility.

When an HRA is required, it is the intent of the AB 2588 Program that facilities performing HRAs use the process rates and emissions data submitted in the approved ATIR when preparing the HRA. However, as a general policy, South Coast AQMD staff will allow process and emission changes from the approved ATIR as discussed in Section 1.3.

1.2.2 Diesel Particulate Matter Emissions

Diesel particulate matter was identified as a TAC by CARB in 1998 and added to the list of compounds in South Coast AQMD *Rule 1401 – New Source Review* on March 7, 2008. Under the current AB 2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines Regulation, amended on March 21, 2022, facility operators are required to include health risks 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 requirement is essential because the South Coast AQMD Governing Board adopted separate public notification procedures for emergency DICEs on January 5, 2007.[10]

1.2.3 Control Efficiencies

Control efficiencies shall be included in emissions calculations when applicable. For example, spray booths may include a transfer efficiency and a filter efficiency. Some devices with air pollution control devices may have a capture efficiency and a collection efficiency. Control efficiencies may not apply to every type of TAC from a device, as some air pollution control devices are designed for only specific types of TACs.

Please note that control efficiency is an input to both AER and the Emission Inventory Module (EIM) in the Hot Spots Analysis and Reporting Program (HARP).[11] However, unlike the AER software, EIM currently does not use the control efficiency for any calculation purposes (i.e., controlled emissions are entered separately). Emissions calculations that include control efficiencies in the EIM shall be included as part of the supporting documentation for the ATIR.

1.3 Changes to Emissions and Process Data

1.3.1 Allowable Emission Modifications

It may be necessary to modify the base year emissions inventory due to allowable emission changes such as corrected computational errors. Upon approval of the ATIR or VRRP, any

[10] http://www3.aqmd.gov/hb/2007/January/070128a.html
[11] https://ww2.arb.ca.gov/our-work/programs/hot-spots-analysis-reporting-program

modifications to the base year inventory shall be reflected through an amendment to the quadrennial emissions report within the AER web tool, where appropriate.

Any emission modifications to the base year must be verified to be considered as an allowable change. Verification requirements include but are not limited to: facility records, conditions in South Coast AQMD's permit issued to the facility, a surrender of the existing South Coast AQMD permit, or reductions as required by South Coast AQMD rule(s). Letters of intent or internal memos mandating new company policy are not considered verifiable emission modifications.

Examples of verifiable emission modifications include:

- Misreporting of throughput or process information, inaccurate emission factors, and incorrect calculation methodologies. For this to be considered as a verifiable emissions modification, the facility must send a written request to South Coast AQMD staff providing the corrections and nature of the errors. The request should also include all supporting documentation for the corrections, such as copies of the original throughput records and calculation methodology to substantiate the corrected emissions.

- A previously operating permitted source has been shut down and therefore has no emissions. For this to be considered as a verified change, the facility must have surrendered the permit to South Coast AQMD by submitting a Form 200-C or provide necessary records to verify the source's operational status for the base year.

- A substance was no longer used and therefore not emitted in a process at the facility. For this to be considered a verified modification, the permit conditions must already be in place and reflect the change, or documentation must be provided to verify the substances used. If the permit modification is not yet available, a copy of the 400-A application form requesting a change of permit conditions and a copy of the check for the filing fee submitted to South Coast AQMD must be sent to South Coast AQMD staff.

- Air pollution control equipment that has been issued a Permit to Construct, has been installed, and was operational during the base year. A copy of the Permit to Construct (and Permit to Operate, if issued) calculations for emission modifications, and references for any emission factors used in the calculations must be provided. If source test data was used to calculate the emissions, a copy of the source test protocol, source test, and all documentation relating to the results must be provided.

- Requirements of new South Coast AQMD rules that have resulted in permanent and enforceable reductions. Documentation detailing how and when reductions were achieved must be provided.

Situations may arise where corrections to the emissions inventory are necessary for inclusion in an HRA. If initiated by the facility, written requests to correct the errors will be required and must include documentation of the nature of the error and calculations to show how the original values were determined and how correcting the computational error changes these values.

Please note that any changes in emissions estimates in years other than the quadrennial emissions reporting year cannot be used to re-categorize a facility for the given base year. See Section 4.9 for further details.

1.3.2 Source Test Results

Source test results may be used for quadrennial reporting only if they have been previously approved by South Coast AQMD. The source test must be representative of the current operating conditions of the equipment. Additional documentation may be required to demonstrate that the equipment or process has not changed since the time of the source test.

An adequate reference source is required to be used for emissions estimates. If a reference source is not provided or is considered inadequate by South Coast AQMD, a source test may be conducted voluntarily or required by South Coast AQMD in accordance with Rule 1402(d)(3)(A). Additionally, Appendix D of CARB's EICG lists source test requirements for certain sources or processes and therefore may be required by South Coast AQMD. The determination to deem a previous EICG-required testing as outdated or insufficient lies within the discretion of South Coast AQMD.

Facilities may conduct a source test after being notified to submit an ATIR. Under these circumstances, the ATIR must still be submitted by the original deadline for all other devices that are not being source tested. Facilities shall submit a source test protocol to South Coast AQMD staff for approval. Within 120 days of the source test protocol approval date, the facility shall submit a source test report based on the approved source test protocol. The actual source test must be scheduled as soon as possible since it may take some time to prepare the source test report once the source test is completed. Within 30 days of the source test report approval date, the facility shall submit the portion of the ATIR for the specific device or process for which the source test was conducted. Please refer to South Coast AQMD Rule 1402 (d)(3) for more information on source test requirements.

Data from any new or yet to be completed source tests will not be approved for use in the preparation of the required HRA once an ATIR has already been approved without the use of those source tests. In other words, data from any source tests after the approval of the ATIR cannot be used in the HRA. If a facility wishes to provide unapproved source test data, it must be presented in an alternate HRA for informational purposes only (i.e., as an appendix to the HRA). See Section 4.10 for information and requirements regarding alternate HRAs. 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.

1.3.3 Change of Ownership/Operator

If there has been a change in ownership or operator, the new owner/operator must submit the requested reports unless the facility no longer emits any substances required to be reported under AB 2588. In such case, the new facility owner/operator must provide South Coast AQMD staff the necessary documentation to be exempt from reporting requirements of the AB 2588 Program.

1.3.4 Facility Closures

If the entire facility is closed prior to High Priority classification or if a facility is scheduled for complete closure, this information must be reported to South Coast AQMD staff. Upon review, staff will decide whether the facility shall submit an ATIR. Factors that must be considered include the status of permits granted to the facility by South Coast AQMD and the nature of any ongoing activities at the facility. Unless a facility is informed by staff in writing that an ATIR is no longer required, the facility operator must submit an ATIR by the required date.

1.4 Prioritization Procedure

The AB 2588 Program requires South Coast AQMD staff to designate each facility as either high, intermediate, or low priority based on its individual priority score.

Per the requirements of the AB 2588 Program, South Coast AQMD's Prioritization Procedure considers the potency, toxicity, and quantity of hazardous materials released from the facility; the proximity of the facility to potential receptors (i.e. residential, worker, and sensitive); and any other factors that South Coast AQMD uses to determine that the facility may pose a significant risk to affected receptors. South Coast AQMD's Prioritization Procedure also includes adjustment factors for exposure period, averaging times, and the treatment of multi-pathway pollutants. The Prioritization Procedure is available at South Coast AQMD's website.[12]

Three categories are used in the ranking of facilities: high priority, intermediate priority, and low priority. Facilities designated as high priority are notified by South Coast AQMD staff of their priority score and are required to submit a comprehensive inventory of their air toxic emissions via an ATIR. Facilities ranked as intermediate priority are categorized as "District Tracking" facilities, which are required to submit a TAC emissions inventory once every four years (quadrennial emissions reporting), using the AER software. Facilities ranked as low priority are exempt from quadrennial emissions reporting. Priority scores are re-calculated each time a facility updates its quadrennial emissions report. Table 1 summarizes the priority score categories and the actions required by each category.

[12] https://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/prioritization

Table 1 — Priority Score Categories

Category	Facility Priority Score (PS)	Actions
High Priority	PS > 10	Prepare ATIR; update emissions quadrennially through AER
Intermediate Priority	1 < PS ≤ 10	Update emissions quadrennially through AER
Low Priority	PS ≤ 1	Exempt from quadrennial emissions reporting

1.4.1 Meteorological Stations

For prioritization purposes, data from the most representative meteorological station should be used. In most cases, this would be the nearest station by distance. However, an intervening terrain feature may dictate the use of an alternate station.

1.4.2 Receptor Distance

One of the factors considered when prioritizing facilities is the receptor distance. All facilities must report the distances to the nearest residential, worker, and sensitive receptors as part of their AER submittal. If there is a sensitive receptor closer to the facility than the nearest residential receptor, the distance to the nearest sensitive receptor will be used in place of the residential receptor. If receptor distances are not provided, default values (conservative receptor distances) are used by South Coast AQMD staff to prioritize that facility.

1.5 Notification for High Priority Score Facilities and Next Steps

Facilities with priority scores considered High Priority will be informed in writing to prepare an ATIR or a VRRP (if eligible). South Coast AQMD staff may allow High Priority facilities to be re-prioritized once any errors or other problems with their quadrennial emissions report are corrected and verified.

Pursuant to South Coast AQMD Rule 1402 (e), South Coast AQMD staff may require the facility to prepare an HRA if emission levels from the facility have the potential to exceed the Notification Risk Level. If the HRA determines that risks meet or exceed the Notification Risk Level, then public notification will be required. Additional information regarding South Coast AQMD's public notification procedures is available in Section 4.8 and on the AB 2588 website.[13] In addition, if the HRA determines that risks meet or exceed the Action Risk Level, then a RRP will also be required. Both the Notification Risk Level and the Action Risk Level as defined by South Coast AQMD Rule 1402 are summarized in Table 2 below.

Rule 1402 also includes a provision to allow facilities to participate in the Voluntary Risk Reduction Program. Participating facilities voluntarily reduce their health risk beyond the Action Risk Level to below the Voluntary Risk Threshold (note this is equivalent to the Notification Risk Level; see Table 2) in lieu of the traditional AB 2588 Program process. Facilities also perform a

[13] https://www.aqmd.gov/nav/about/public-notices/ab-2588-notices

modified public notification that does not require distribution of individual letters and public meetings as in the traditional AB 2588 Program approach. Additional information regarding qualifications and procedures for South Coast AQMD's Voluntary Risk Reduction Program are available on South Coast AQMD's website.[14]

Table 2 — Public Notification, Risk Reduction, and Voluntary Risk Reduction Levels[15]

Risk Level/Threshold	Cancer Risk	Non-cancer Risk	Cancer Burden
Public Notification Level	10 chances in-one-million	Hazard Index of 1	--
Action Risk Level	25 chances in-one-million	Hazard Index of 3	0.5
Significant Risk Level	100 chances in-one-million	Hazard Index of 5	--
Voluntary Risk Threshold	10 chances in-one-million	Hazard Index of 1	--

[14] https://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-vrrp-guidelines-201809.pdf
[15] See Rule 1402 for complete definitions as lead concentrations also apply for certain risk levels

2. Air Toxics Inventory Reports

2.1 ATIR Format

In general, the most recently approved version of CARB's HARP at the time of notification shall be used in the preparation of an ATIR. In specific instances where a newer version is released, South Coast AQMD will use discretion in deciding whether the more updated version shall be utilized.

In contrast to the more simplified reporting allowed under AER, an ATIR requires greater details for reporting including process, device, and stack information for each piece of equipment at the facility.

A complete ATIR submittal should include a written report, an EIM data file, and supporting documentation. See Appendix A for a detailed list of requirements.

It is critical for a submitted ATIR to be as accurate as possible. The emissions inventory of an approved ATIR determines whether an HRA is required, which in turn determines whether public notification and risk reduction are required. If an HRA is necessary, then the emissions inventory from the approved ATIR will be used to calculate risk. With very few exceptions, once an HRA is required, the emissions inventory from the approved ATIR may not be changed. Source tests that are conducted after approval of the ATIR may not be used as part of the resulting HRA. For more information on source tests and their usage in calculating emissions, see Section 1.3.2.

The facility shall identify in the certification form if there is any information that a facility deems as a trade secret or exempt from the public records act. Please note that the Process Data tab in EIM also allows for the facility to mark items as confidential.

2.1.1 Written Report

The written report summarizes the results and methodology of the ATIR. Important information about the facility and its processes is described here. Additionally, any significant changes between the AER and the submitted ATIR shall be described here. Facility plot plans showing emission source locations, property lines, and buildings shall be included. Flow diagrams where devices are clearly labeled shall also be included which show process flows (both product and emissions). Any supporting documentation included in the submittal shall also be listed and described.

2.1.2 Emissions Inventory Module

The EIM is the emissions inventory database tool for HARP. An ATIR submittal must include an associated EIM file that describes facility, device, process, emissions, and stack data.

An EIM file shall provide a complete profile of each TAC emitted at the facility. The EIM structure assumes a device operates and generates emissions through a process. The emissions are calculated using process data, emission factors, and control efficiencies data. Each device is also connected to a release point in EIM. The database format uses a relational data structure that makes it possible to describe the emissions inventory. Not all source types are currently supported by EIM. For example, EIM does not have an option for circular area sources and polygon area sources. For

these types of situations, the most representative source type should be selected in the EIM and further described in the written report. Any intent to model these situations under different source types in an HRA, if applicable, should be clearly communicated with South Coast AQMD staff. Please contact South Coast AQMD staff for questions on how to present data in a format that is not currently supported by EIM.

The emissions from each device and process should be clearly itemized instead of combined with other processes when possible. For example, a device that combusts more than one type of fuel should have a separate process for each type of fuel instead of combining all emissions from all types of fuel into one process. There are certain scenarios where entry to EIM may not be feasible. In such instances, a simplified version of the data may be inputted, with the actual calculations provided in the written report and supporting documentation of the ATIR. Facilities shall contact South Coast AQMD staff to discuss these situations prior to doing so.

2.1.3 Supporting Documentation

All documents necessary for reproducing the results of the ATIR shall be included in the ATIR submittal, such as assumptions and information required to substantiate each emissions calculation. For example, source tests approved by South Coast AQMD or material safety data sheets that were used to derive emission factors must be included. Any emissions calculations that were done outside EIM shall also be included.

3. Air Dispersion Modeling

Air dispersion modeling is performed for the exposure assessment component of the HRA. In this chapter, a basic understanding of dispersion modeling is presumed. For a more detailed overview of regulatory modeling procedures, refer to the 2015 OEHHA Guidance Manual and the U.S. EPA's "Guideline on Air Quality Models".[16] .

3.1 Facility Description and Source Information

The HRA must contain a brief description of the facility and its activities as shown in the detailed HRA outline provided in Appendix B. Table 3 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, worker, sensitive, etc.

The facility plot plan (including a scale) shall be provided showing all source locations, building dimensions, and the facility boundary. The operating schedule, the maximum hourly emission rates, the annual average emission rates, and the source parameters listed in Table 4 are required elements to accurately characterize the source emissions. Please refer to the detailed outline provided in Appendix B for additional information and guidance.

[16] https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

Table 3 — Required Facility Information

Information on the Facility and Its Surroundings • Location (i.e., address and Universal Transverse Mercator (UTM) coordinates in World Geodetic System 1984 (WGS84)) • Local land use (within 20 km) • Local topography (within 20 km) • Facility plot plan - Property and/or facility boundaries - Horizontal scale - Building heights (for building downwash calculations) - Source locations including elevations

Table 4 — Required Source Information

Point Source Information (stacks, vents, etc.) • Maximum hourly emission rates • Annual emissions • Stack location (in UTM coordinates in WGS84) on plot plan including elevation • Stack height and diameter • Stack gas flow • Stack gas exit temperature • Building dimensions, heights, and location Fugitive Source Information (area and volume sources) • Maximum hourly emission rates • Annual emissions • Source location (in UTM coordinates in WGS84) on plot plan including elevations • Source height • Area or volume dimensions

3.2 Model Selection and Model Options

All modeling files prepared for the AB 2588 Program shall use the most recent version of AERMOD (U.S. EPA's air quality dispersion model) at the time of notification to conduct an HRA. In certain cases where a newer version is released, South Coast AQMD will exercise discretion for determining whether the more updated version shall be utilized. AERMOD is included in HARP for the exposure assessment. AERMOD can also be obtained from U.S. EPA's website or through third party software programs and be used in its standalone form. 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. 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.[17] Table 5 summarizes the default dispersion modeling assumptions recommended by South Coast AQMD.

Table 5 — Summary of South Coast AQMD Dispersion Modeling Guidance

Parameter	Assumption
Model Control Options	
• Use Regulatory Default?	Yes
• Averaging Times	1-Hour and Period
• Urban or Rural?[18]	Urban
Source Options	
• Include Building Downwash?	Yes
Meteorology Options	
• Meteorological Data	AERMOD-ready data available on South Coast AQMD website. See Section 3.3.

South Coast AQMD policy for all air quality impact analyses in its jurisdiction requires use of the urban dispersion coefficient. The U.S. EPA regulatory default options shall be used for all projects. If non-default options are used, a justification shall be included. Please contact South Coast AQMD staff prior to using any non-default options.

Typically, facilities should model sources at the facility assuming continuous operation (24 hours/day, 7 days/week, and 52 weeks/year). If a facility plans on utilizing variable emissions for individual sources or for groups of sources, South Coast AQMD staff should be notified prior to any submittal. The facility must provide justification for review and approval. In cases where a variable emissions scenario is deemed appropriate, there may be situations where an associated permit condition, if not already in place, may be required.

3.3 Meteorological Data

The South Coast AQMD website has AERMOD-ready meteorological data for the South Coast Air Basin, including a map showing the locations of the meteorological stations, a list of years with data meeting quality assurance criteria, geographical information and surface characteristics for each station.[19] Generally, the nearest station to the facility is most appropriate; however, an intervening terrain feature may dictate the use of an alternate site.

If a facility intends to use a meteorological dataset outside of South Coast AQMD published data, they must notify South Coast AQMD staff prior to any submittal and obtain approval. Modelers shall provide justification regarding the representativeness of the data.

The most recently available meteorological dataset and most representative meteorological station should be chosen for modeling. In most cases, the nearest station will be considered the most

[17] https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_userguide.pdf

[18] See Section 4.4.1 of the 2015 OEHHA Guidance Manual for specific cases where different dispersion coefficients may be appropriate.

[19] https://www.aqmd.gov/home/air-quality/meteorological-data/data-for-aermod

representative; however, an intervening terrain feature may dictate the use of an alternate station. Modelers shall contact South Coast AQMD staff regarding the most representative meteorological station, if necessary. Staff may also require meteorological data that is not published on the South Coast AQMD website if staff determines the dataset is more appropriate and representative for dispersion modeling at the facility.

3.4 Receptor Grid

Air dispersion modeling is required to estimate (a) annual average concentrations and to locate the receptors showing the maximum cancer risks, the maximum non-cancer hazard indices (HI), the zones of impact, and cancer burden and (b) peak hourly concentrations to calculate the health impact from substances with non-cancer acute health effects. All receptors shall be set to elevation (i.e., no flagpole receptors), so that ground-level concentrations are analyzed.[20] For air dispersion modeling, an initial receptor grid centered on the facility with a maximum receptor spacing of 100 meters shall be used. This initial 100-meter receptor grid shall be placed so that individual grid points are located at UTM coordinates ending in "00" (e.g., grid point UTM East 572300 and UTM North 3731000). This receptor grid shall be of sufficient extent to clearly identify the zone of impact (see Section 4.5 for discussion on zone of impact). Additional receptor grids with finer spacing may be required to identify the points of maximum impact. If a finer receptor grid is warranted, the coarser grid need not overlap with the finer grid. All receptors shall be defined in terms of UTM coordinates and a WGS84 spatial reference system.

Receptors on the facility boundary must be placed along the boundary using 20 meters spacing. Sensitive receptors must be identified. Locations of the sensitive receptors shall also be provided by exact UTM coordinates. Elevations must be provided for all receptors using the AERMAP program provided by U.S. EPA in accordance with Section 3.6.

3.5 Source Data

Emission sources are categorized into four basic types: point, area, volume, and open pit sources. Please refer to the AERMOD User Guide and the HARP ADMRT User Manual for the required data for each type of source. [21] Some types of sources may have special situations that may require discussion with South Coast AQMD staff.

3.5.1 Point Sources

Emission release points with raincaps may be modeled as a capped source using the POINTCAP option in AERMOD. Horizontal releases may be modeled using the POINTHOR option. In general, if there is uncertainty on how to represent sources in a model, South Coast AQMD staff shall be consulted before proceeding with modeling.

[20] In instances where elevated receptor heights may be warranted, please consult with South Coast AQMD staff.
[21] https://ww3.arb.ca.gov/toxics/harp/docs2/harp2admrtuserguide.pdf

3.5.2 Area Sources

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 100 to 1. If this is exceeded, then the area must be subdivided to achieve a 100 to 1 or less aspect ratio for all sub-areas.

The EIM module currently is not capable of handling polygonal area sources. If use of any polygonal or area sources is needed, these must be addressed outside of EIM. Facilities shall submit all documentation necessary for modeling any such area sources, separately from EIM files.

3.5.3 Volume Sources

Receptor placement is important for volume sources that have "exclusion zones." Concentrations may not be correctly calculated for receptors located within the exclusion zone. The exclusion zone for any volume source is defined as 2.15 times the initial lateral dispersion coefficient (sigma y) + 1 meter from the center of the volume source.

3.6 Elevation Data

The AERMOD modeling system includes AERMAP, which is a terrain data pre-processor. Terrain data, available from the United States Geological Survey (USGS), is used by AERMAP to produce terrain base elevations for each receptor and source and a hill height scale value for each receptor.

The most recent version of AERMAP shall be used to determine elevations for receptors, sources, buildings, and terrain. It is highly recommended that National Elevation Dataset (NED) data in GeoTIFF format be used as input into AERMAP, per the recommendation in the U.S. EPA's AERMOD Implementation Guide.[22] A resolution of 1/3 arc-second (approximately 10 meters) is preferred, although 1 arc-second (approximately 30 meters) is also acceptable.

Although NED data is preferred as an input to AERMAP, Digital Elevation Model (DEM) data may still be used since the Air Dispersion Modeling and Risk Tool (ADMRT) module in HARP currently only supports DEM data. However, DEM data is static and has not been updated by USGS for a number of years. For facilities relying solely on HARP for dispersion modeling, DEM data will be allowed until the time when HARP is updated to support NED data.

[22] https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_implementation_guide.pdf

4. Health Risk Assessments

4.1 OEHHA Guidance

OEHHA's guidance for preparing HRAs is contained in the 2015 OEHHA Guidance Manual. This guidance manual has undergone public and peer review, was endorsed by the California Scientific Review Panel, and released in final version by OEHHA in March 2015.

The 2015 OEHHA Guidance Manual 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.

As described in the 2015 OEHHA HRA Guidelines, "Tier 1 is a standard point-estimate approach using the recommended point-estimates […]Tier 1 evaluations are required for all HRAs prepared for the Hot Spots Program to promote consistency across the state for all facility risk assessments and allow comparison across facilities.")[23]

As such, South Coast AQMD requires that all HRAs for the AB 2588 Program include an OEHHA Tier 1 evaluation. The results of the OEHHA 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 OEHHA Tier 1 evaluation. OEHHA Tier 2, Tier 3, and Tier 4 evaluations shall not be in the Executive Summary or main document; they may be prepared and presented as appendices to the main document. Site specific details for either an OEHHA Tier 2, Tier 3, or Tier 4 evaluation require review and approval by both South Coast AQMD and OEHHA. Lastly, the tiered HRA evaluations in this document follow OEHHA guidelines and differ from the tiered system in South Coast AQMD Rule 1401.

4.1.1 Calculating Risk

All HRAs prepared for the AB 2588 Program in accordance with OEHHA and CARB guidance shall use the latest approved version of HARP at the time of submittal. In certain cases where a newer version becomes available, South Coast AQMD will use discretion for determining if the more updated version shall be utilized. The OEHHA Guidelines 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 non-cancer chronic assessments, the Derived method uses high end exposures for the top three exposure pathways. CARB has developed an updated Risk Management Policy that includes recommendations for inhalation exposures,

[23] See Sections 2.5.3 and 8.1.1 of the 2015 OEHHA Guidance Manual

which recommends 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.[24] In accordance with these guidelines, South Coast AQMD requires use of CARB's Risk Management Policy in an HRA. CARB prepared HARP to facilitate the preparation and transmittal of a compliant ATIR and HRA. The details are provided below.

4.2 HRA Format

The format for the HRA must follow the detailed outline presented in Appendix B of these Supplemental Guidelines. The list of files that must also be submitted with an HRA are included in Table 6. Any emissions factor development, emission rate calculations, or approved source test protocol and reports must be submitted in standard readable electronic file format (e.g., in Microsoft Excel). For the items that have previously been submitted to South Coast AQMD (such as source test reports), please include an appropriate reference in the references section of the HRA report (see HRA format in Appendix B).

The detailed HRA outline provided in Appendix B also lists the HARP files to be included electronically with the HRA. All copies of electronic file(s) shall be sent to South Coast AQMD staff. The HRA shall also be submitted electronically (i.e., PDF format). Any trade secret or other public records act exempt information must be clearly identified for possible redaction since HRAs and all other documents submitted to the South Coast AQMD staff are subject to public records requests.[25]

A completed Risk Summary Form must be included in the Executive Summary of the HRA. Cancer risk values shall be reported to the nearest tenth and rounded up as necessary (e.g., 5.05 chances in-one-million is rounded up to 5.1 chances in-one-million). Non-cancer risk values shall be reported to the nearest hundredth and also rounded up as needed (e.g., an HI of 0.105 is rounded to 0.11).

[24] https://ww2.arb.ca.gov/sites/default/files/classic/toxics/rma/rmgssat.pdf
[25] http://www.aqmd.gov/docs/default-source/default-document-library/Guidelines/pra-guidelines.pdf

Table 6 — Required Files for HRA Submittals

File Type	Notes
HRA Input	All files created by CARB's ADMRT Module
HRA Output	
Dispersion Modeling Input	All AERMOD and BPIP files used in the HRA including terrain data.
Dispersion Modeling Output	
Emission Inventory Module file	The transaction file created by CARB's EIM, only if it is different from the approved ATIR.
Emission Calculations	Provided in standard electronic format (e.g., Excel) and documented references (i.e., sample calculations); applicable only if emissions vary from the approved ATIR.
Air Monitoring Data	South Coast AQMD station name and meteorological version; otherwise, all meteorological data files including any AERMET files if default South Coast AQMD meteorological data is not used.

4.3 South Coast AQMD's Default Assumptions for HRAs

All HRAs prepared for South Coast AQMD must include an OEHHA Tier 1 evaluation. Table 7 and Table 8 summarize the default assumptions required by South Coast AQMD for preparation of an OEHHA Tier 1 HRA. Certain deviations from these defaults may sometimes be necessary but must be approved by South Coast AQMD staff prior to their use.

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 shall be used for the non-inhalation pathways, and the dermal pathway shall use 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 shall be included 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 shall be used for estimating cancer risks at residential receptors. To estimate non-cancer chronic risks at residential receptors the "OEHHA Derived Method" risk calculation option shall be used. When evaluating risk from sensitive receptors, the default OEHHA Tier 1 HRA assumptions for residential risk scenarios should be applied. In some cases, sensitive receptor locations may warrant non-residential analyses as well. The non-cancer 8-hour chronic risk shall also be calculated for worker receptors for any source that operates at least 8 hours per day, 5 days per week.

A cancer burden analysis shall also be provided. While individual cancer risk assessments are based on an individual's specific exposure, cancer burden assessments evaluate the risks posed to

a community regardless of the amount of time any individual person spends in or out of the area. The zone of impact shall first be delineated from the results of the 70-year cancer analysis. All census receptors within the 70-year zone of impact shall be identified. The cancer burden is the sum of the 70-year cancer risk at each census receptor within the zone of impact multiplied by the population for each census receptor. Additionally, a population exposure analysis shall be included with the HRA. The number of people who reside within the 1×10^{-6}, 1×10^{-5}, and 1×10^{-4} 70-year cancer risk isopleths shall be provided. For non-cancer exposure, the number of people who reside within the 0.5, 1, and 5 HI isopleths shall likewise be reported. Use of HARP software to calculate the population exposure is preferred. Use of alternative methods must first be discussed and granted approval for use by the South Coast AQMD staff.

Table 7 — Summary of OEHHA Tier 1 HRA Scenarios Required by South Coast AQMD

Analysis Type	Exposure Period	Intake Rate Scenario
Residential cancer	30-year exposure	RMP using derived method
Worker cancer	25-year exposure	OEHHA derived method
Residential non-cancer chronic	N/A (REL only)[26]	OEHHA derived method
Worker non-cancer chronic	N/A (REL only)[26]	OEHHA derived method
Non-cancer chronic 8-hr	N/A (REL only)[26]	N/A
Non-cancer acute	N/A (REL only)[26]	N/A
Population-wide cancer burden	70-year exposure	RMP using derived method

[26] Based on Reference Exposure Levels; see 2015 OEHHA Guidance Manual for details

Table 8 — Summary of South Coast AQMD Mandatory Exposure Pathways and Settings

Parameter	Assumptions
Pathway	
Inhalation	Required for all HRA scenarios
Dermal	Required for all cancer and non-cancer chronic HRA scenarios
Soil	Required for all cancer and non-cancer chronic HRA scenarios
Homegrown Produce	Required for population-wide and residential cancer and
Mother's Milk	Required for population-wide residential cancer and non-cancer chronic HRA scenarios
Beef/Dairy	Site specific
Pigs, Chickens, and/or Eggs	Site specific
Deposition Rate	0.02 meters per second
Exposure Assumptions	Use HARP defaults except for dermal pathway which uses "warm" climate
Fraction of Time at Home (FAH)[27]	0.73 for 16-70 years

The concentration to which workers are exposed may be different than the annual average concentration calculated by AERMOD. The annual average estimated by AERMOD 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. However, the off-site worker may be impacted only during work hours. Thus, the model-predicted concentrations must be adjusted by a multiplying factor, the worker adjustment factor (WAF), 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 x 24/8).[28] These factors are entered into HARP by activating the WAF option in the Inhalation Pathway and entering the appropriate factor from either one of the tables. As a default assumption, it should be assumed that there is a full overlap between the facility and off-site worker operational schedules.

The WAF factors shall only be applied when estimating worker cancer risks and worker non-cancer chronic 8-hour HI for facilities that do not operate continuously (variable emissions scenarios). The adjustments are not applicable to residential cancer risks and to residential or worker non-cancer chronic risks.

[27] FAH only applies to residential inhalation cancer risk assessments. In cases where there is no school located within the 30-year cancer zone of impact, the younger age bin FAH values can be applied. OEHHA recommends 0.85 for 3rd Trimester and 0<2 years and 0.72 for 2<16 years.

[28] See Sections 4.12.2.1, 4.12.3.1, and 5.4.1.2 5.4.1.4 from the 2015 OEHHA Guidance Manual.

4.4 Receptors for Maximal Exposure and Point of Maximum Impact

The HRA shall include evaluations to show the following receptors: the Maximally Exposed Individual Resident (MEIR); the Maximally Exposed Individual Worker (MEIW); and the Point of Maximum Impact (PMI). As part of the evaluation, current land use and allowable land use shall be identified (residential, commercial/industrial, or mixed use). 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 risks and non-cancer chronic HIs must be provided for both the most exposed residential and the most exposed worker receptors. Non-cancer 8-hour chronic HI must be provided for only the most exposed worker receptor, unless otherwise specified by South Coast AQMD. The non-cancer acute HI must be provided for the offsite PMI. Additionally, cancer risk and HI values at each sensitive receptor located within the zone of impact must be presented in a table. The zone of impact is discussed in Section 4.5.

4.5 Zone of Impact

Using air dispersion modeling and risk analysis, a zone of impact shall be determined for cancer and for non-cancer risks. For cancer risk, the zone of impact shall encompass the entire geographic area subject to an added lifetime cancer risk (all pathways) of one chance in-one-million or greater (i.e., $\geq 1.0 \times 10^{-6}$). Likewise, for non-cancer risks, the analysis must bound the area subject to an HI greater than or equal to one half (≥ 0.5). Note that the zone of impact will vary by analysis. For example, when evaluating cancer risk for sensitive receptors, a 30-year OEHHA Tier 1 analysis shall be used, whereas cancer burden assessments shall use a 70-year OEHHA Tier 1 analysis. The air dispersion modeling and risk analysis process may be required to be repeated with a larger receptor grid to correctly determine the zone of impacts.

4.6 Land Use Considerations

Risk estimates are sensitive to land use (e.g., residential, commercial, undeveloped) since these factors can affect exposure assumptions. If residential or worker risks are not calculated at the PMI because the land is currently vacant or undeveloped, then a discussion of the location, zoning and potential future land uses shall be included in the HRA.

4.7 Maps

Maps showing the location of the facility and sources within the facility in relation to the zone of impact must be submitted. For cancer risk, total risk isopleths for facilities shall be plotted on the street map provided using HARP at cancer risk intervals of 1, 10, 25, and 100 chances in-one-million. Isopleths for non-cancer HI must include levels corresponding to an HI of 0.5, 1.0, 3.0, and 5.0.

Separate maps should be provided for each of the four risk variables: cancer risks, non-cancer acute risks, non-cancer chronic risks, and non-cancer 8-hour 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 worksites 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 receptors of maximal exposure and the PMI must be shown in detail. This may require a separate map. If sensitive receptors are located within the zone of impact, then cancer risk and HI values must also be presented in the form of a table including all the sensitive receptors.

4.8 Public Notification

Public notification shall be conducted when risk is found to exceed the Notification Risk Level of Rule 1402. See the *South Coast AQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402*[29] for details on the requirements and the notification process.

4.9 Emissions Differing from the Base Year Inventory

The AB 2588 Program takes a 'snapshot' of a base year emissions inventory, which is typically the most recent quadrennial emissions reporting year. The ATIR is developed for the base year and the HRA is conducted using this ATIR. In some cases, more recent emissions are substantially different than the base year emissions of a facility due to modifications. Facilities may include information about the more recent emission changes and how those affect health risks in a supplemental appendix to their HRA. If a facility includes supplemental information showing that emissions and health risks have been reduced since the base year, then this more recent emissions scenario can be used when comparing residual health risks against Rule 1402(c)(2) Risk Reduction thresholds, provided the new emissions scenario is based on emission reductions that are permanent, enforceable, and verifiable. The health risks from the base year will still be used when comparing against Rule 1402 (c)(12) Public Notification Thresholds. If public notification is required, then the information about reductions in health risk since the base year can be included as supplemental information in the notification materials.

The facility shall contact South Coast AQMD staff to obtain approval and determine if the changes occurring after the base year can be considered as verifiable, enforceable, and permanent emission reductions. Upon approval, the facility must estimate cancer risk, cancer burden, and hazard indices for both the base year and the estimated emissions following reductions. The two risk estimates must be presented separately in the HRA submitted to South Coast AQMD. The risk estimate determined from emissions not derived from the base year inventory shall be shown in a supplemental appendix to the HRA. Note that any emission increases due to process changes and/or new equipment must also be quantified.

4.10 Uncertainty Analyses and Alternate HRA

The 2015 OEHHA Guidance Manual describes uncertainty analyses and HRAs with alternate assumptions (i.e., alternate HRAs). These may be included only at the discretion of South Coast AQMD. Factors for allowing an Alternate HRA include whether the information provides value and if underlying assumptions are acceptable to staff. Alternate HRAs are not approved by South

[29] https://www.aqmd.gov/nav/about/public-notices/ab-2588-notices

Coast AQMD and are not allowable for determining the Rule 1402 Action Risk Level or Notification Risk Level.

Any alternate analysis that South Coast AQMD staff allows shall meet the following requirements:

- All analyses, discussion, and information relating to an alternate analysis (including any unapproved source test data) must appear under a separate title such as "Alternate Analysis" in an appendix to the HRA.
    - If an alternate HRA is integrated together with the HRA OEHHA Tier 1 analysis and not presented in a separate appendix of the document as required by OEHHA and South Coast AQMD guidelines, the HRA will be considered unacceptable and returned to the facility owner/operator for revision.
- 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.

Failure to comply with these guidelines are grounds for rejection of the primary HRA in accordance with Rule 1402(e).

5. Risk Reduction Plans

5.1 Risk Reduction Measures

An RRP shall propose risk reduction measures that reduce or eliminate risk associated with emissions of TACs that are real, permanent, quantifiable, and enforceable. Letters of intent or internal memos mandating new company policy are not considered verifiable emission reductions.

Risk reduction measures shall be as specific as possible with details on what actions will be taken to reduce or eliminate risk. Examples of risk reduction measures include permit modifications of a device generating a significant portion of the TACs contributing to the risk, installation of additional air pollution control devices, and conducting source tests to demonstrate that the facility's emissions will result in risks below the Action Risk Level. See Appendix D for a full list of items to be included in an RRP.

5.2 Updated ATIR and HRA

The RRP shall utilize the same base year as the approved HRA and include an updated ATIR and HRA that includes the proposed risk reduction measures. The updated ATIR and HRA must evaluate the risk due to facility emissions having increased above or decreased below the levels indicated in the previously approved HRA. The RRP must also demonstrate that the risk reduction measures will reduce or eliminate risk to below the Action Risk Level.

5.3 Progress Reports

Progress reports shall be submitted 12 months after RRP approval. The progress reports shall describe any progress that has been made in implementing the risk reduction measures and provide an updated timeline to full implementation. See Appendix E for a full list of items to be included in a Risk Reduction Progress Report.

6. Potentially High Risk Level Facilities

Potentially High Risk Level facilities are those facilities that have been determined to have a likely potential to either exceed or have exceeded the Significant Risk Level as specified in Rule 1402 (g)(1). Facilities are designated as Potentially High Risk Level facilities by South Coast AQMD. Prior to the official designation, staff will meet with the facility representatives to obtain any relevant information. The designation is in written form and will include information substantiating the designation such as findings from the evaluation of relevant ambient monitoring data, source test data, compliance data, emissions data as well as site visits.

Following the designation, a Potentially High Risk Level facility must submit the Initial Information for the ATIR, Early Action Reduction Plan, ATIR, HRA and RRP. With the exception of the Early Action Reduction Plan, facilities that are notified under the traditional path must also submit these documents. However, Potentially High Risk Level facilities are required to submit the HRA and RRP on an expedited timeline of 180 days following designation. The purpose of the expedited timeline is to quickly reduce potential health risk to the public.

The Early Action Reduction Plan shall identify risk reduction measure(s) to be implemented to quickly reduce risk. Note that these risk reduction measures may also be proposed for the final RRP. Examples of risk reduction measures include housekeeping provisions, process changes, physical modifications, as well as operational curtailments. These measures are not required to be permanent but must remain in place for the duration as stated in the Early Action Reduction Plan. See Appendix F for a full list of items to be included in an Early Action Reduction Plan.

Appendix A — Elements of an Air Toxics Inventory Report

I. Written Report

A. Facility name, Facility ID, and location

B. Facility plot plan identifying emission source location, facility boundary, horizontal scale, and building heights and dimensions

C. Report emission control equipment and efficiency by source and by substance.

D. Facility total emission rate by substance for all devices including the following information (2015 OEHHA Guidance Manual Appendix A-I Substances must be quantified in the inventory report):

1. Substance name and CAS number
2. Annual average emission for each substance (lb/yr)
3. Maximum one-hour emissions for each substance (lb/hr)

E. Report annual average and maximum hourly emission rates for each toxic substance for each source

F. Report emissions inventory methods indicating whether emissions are measured or estimated

G. A list of supporting documentation such as approved source test reports or safety data sheets included in the submittal along with a description of each supporting document and which emissions refer to it

II. EIM File Required Fields

A. Facility Identification

1. Facility Name
2. Reporting Year
3. Facility ID
4. County
5. Air Basin
6. District
7. SIC and NAICS

B. Facility Address and Location

1. Street Address
2. City
3. State
4. Zip
5. Coordinate System (UTM 11)
6. Datum (WGS84)
7. Zone (11)

8. Facility Location UTMs (km)

C. Contact and Employee Information

1. Contact Person
2. Contact Person Telephone Number
3. Mailing Address Information
   a) Company Name
   b) Mailing Address
   c) City
   d) State
   e) Zip

D. Building and Property Dimensions

1. Building Information
   a) Building ID(s)
   b) Description
   c) Building tiers and corresponding heights
   d) Relative coordinates of building polygon(s)
2. Property Data
   a) Relative coordinates for facility boundary polygon(s)

E. Release Data

1. Source type
2. Release ID
3. Release name
4. Release location UTMs (km)
5. Coordinate system (UTM 11)
6. Datum (WGS84)
7. Zone (11)
8. Release Parameters (where applicable)
   a) Release Height (ft)
   b) Stack diameter (ft)
   c) Gas temperature (F)
   d) Gas flow (ft^3/min)
   e) Gas velocity (ft/min)
   f) Initial vertical dimension (ft)
   g) Initial lateral dimension (ft)
   h) Length of side (ft)
   i) Orientation Angle (degree)

F. Device Information

1. Device ID
2. Device Name
3. Most current Local Permit ID for device (if applicable)
4. Equipment Size and Units (if applicable)

G. Process Information

1. Process Description

2. Corresponding Release ID
3. NAICS, SIC, and SCC codes
4. Process Rate and SCC Units (SCC Units/Yr)
5. Process Rate Origin Code (if applicable)

H. Toxic Emissions Data

1. Pollutant ID
2. Device and Process ID
3. Primary Control (if applicable)
4. Control Efficiency (if applicable)
5. Emission factor
6. Hourly and Annual emissions (lbs)
7. Emission calculation method

III. **Supporting Documentation (note these are separate from EIM):** emission calculations and documents used to substantiate emissions calculations. This includes, but is not limited to:

A. Source test reports approved by South Coast AQMD

B. Safety data sheets

C. Manufacturer specifications

D. Emissions calculations in which a simplified version was inputted into EIM. The full detailed emissions calculations and the basis for calculations shall be included here. Provide the spreadsheet calculations if they were used. Provide separate sample calculation details to substantiate methodology as needed. If spreadsheets were used for emissions calculations, they should be provided

E. Reference sources for emission factors that do not use South Coast AQMD defaults

F. Control efficiencies used in emissions calculations and the references and calculations used to determine the percentage. Clearly indicate control efficiencies used for each specific emissions calculation

Appendix B — Outline for the HRA

I. Table of Contents

A. Section headings with page numbers indicated

B. Tables and figures with page numbers indicated

C. Definitions and abbreviations. Must include a definition of acute, 8-hour chronic, chronic, and cancer health impacts

D. Appendices with page numbers indicated

II. Executive Summary

A. Name of facility and the location address

B. South Coast AQMD Facility ID number

C. Description of facility operations and a list identifying emitted substances, including a table of maximum 1-hour and annual emissions in units of lb/hr and lb/yr, respectively

D. List the multi-pathway substances and their pathways

E. Text presenting overview of dispersion modeling and exposure assessment

F. Text defining dose-response assessment for cancer and non-cancer health impacts and a table showing target organ systems by substance for non-cancer impacts

G. Summary of results which includes a Risk Summary Form found on South Coast AQMD's website in addition to the summary information listed below.[30] Note that potential cancer risks for residents must be based on a 30-year, OEHHA Tier 1 analysis and potential cancer risks for workers must be based on 25-year, OEHHA Tier 1 analysis. Cancer burden results must be based on 70-year OEHHA Tier 1 analysis.

1. Location (UTM coordinates) and description of the off-site PMI, MEIR, and MEIW.

2. Location (UTM coordinates and location addresses, where available) and description of any sensitive receptors that are above a cancer risk of ten chances in-one-million or above a non-cancer health HI of one

3. Text presenting an overview of the total potential multi-pathway 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

[30] https://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/ab2588-risk-summary-form.pdf

contribute to (i.e., drive) the potential health impacts. In addition, identify the exposure pathways evaluated in the HRA

4. Provide a map of the facility and surroundings and identify the location of the MEIR, MEIW, and PMI

5. Provide a map of the 30-year lifetime cancer risk zone of impact (i.e., 1 chance in-one-million risk contour), if applicable. Also show the 10, 25, and 100 chances in-one-million risk contours for the residential and worker cancer scenarios, if applicable.

6. Provide a map of the 70-year lifetime cancer risk zone of impact (i.e. 1 chance in-one-million risk contour).

7. Text presenting an overview of the acute and chronic non-cancer hazard quotients or the (total) hazard indices for the PMI, MEIR, MEIW, and sensitive receptors.

8. 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

9. Identify any subpopulations (e.g., subsistence fishers) of concern

10. Table and text presenting an overview of estimates of population exposure

11. Version of the Risk Assessment Guidelines and computer program(s) used to prepare the risk assessment

III. Main Body of Report

A. <u>Hazard Identification</u>

1. 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 EICG

2. Table and text identifying all substances that are evaluated for cancer risk and/or non-cancer acute and chronic health impacts. In addition, identify any substances that present a potential cancer risk or non-cancer chronic hazard via non-inhalation routes of exposure

3. 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.

1. Facility Description - Report the following information regarding the facility and its surroundings:

   a) Facility name

   b) South Coast AQMD Facility ID number

   c) Facility location address

   d) Local topography

   e) Facility plot plan identifying emission source locations, property line, scale, building dimensions

   f) 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 shall be clearly presented and cross-referenced to the text in an appendix

2. Emissions Inventory - Report the following information regarding the facility's sources and emissions in table format; see Appendix K of the 2015 OEHHA Guidance Manual. 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:

   a) Source identification number used by the facility (e.g., EIM release ID)

   b) Source name

   c) Source location using UTM coordinates (in meters); with a WGS84 projection

   d) Source base elevation (m)

e) Source height (m)

f) Source dimensions (e.g., stack diameter, building dimensions, area/volume size, etc.) (m)

g) Stack gas volumetric flow rate (ACFM) if applicable

h) Stack gas exit temperature (K)

i) Number of operating hours per day and per year

j) Number of operating days per week

k) Number of operating days or weeks per year

l) Report emission control equipment and efficiency by source and by substance. The description should be brief.

m) Report emissions inventory methods indicating whether emissions are measured or estimated.

3. Report emission rates for each toxic substance, grouped by source, in table form including the following information (see Appendix K of the 2015 OEHHA Guidance Manual). 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:

a) Source name

b) Source identification number

c) Substance name and CAS number

d) Annual average emissions for each substance (lb/yr). Radionuclides are reported in curies/yr

e) Maximum one-hour emissions for each substance (lb/hr). Radionuclides are reported in millicuries/yr

f) Report facility total emission rates by substance for all devices including the following information (see Appendix K of the 2015 OEHHA Guidance Manual). This information should be in the main body of the report

g) Substance name and associated CAS number

h) Annual average emissions for each substance (lb/yr and g/s). Radionuclides are reported in curies/yr

i) Maximum one-hour emissions for each substance (lb/hr and g/s).

4. Air Dispersion Modeling

a) The HRA shall indicate the source, time period, and justification

of the meteorological data used. South Coast AQMD has AERMOD-ready meteorological data for available stations in the South Coast Air Basin available for download from South Coast AQMD's website. Submit the meteorological data if it is not provided by South Coast AQMD. See Section 3.3 for more information

b) Proper justification should be provided for using variable emissions, if applicable. Furthermore, clear explanations are required regarding the calculation and application of variable emission factors.

c) The latest approved version of AERMOD and HARP shall be used for all HRAs prepared for the AB 2588 Program

d) Table and text that specifies the following information:

(1) Selected model options and parameters

(2) Receptor grid spacing

e) For the PMI, MEIR, MEIW, and any locations with high densities of sensitive receptors within the zone of impact, include tables that summarize the annual average, maximum one-hour, and 90-day rolling average (lead only) concentrations calculated for all substances

C. Risk Characterization

The following information shall 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.

1. Description of receptors

2. Identify the 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., HARP/dispersion modeling) files that show the same information

3. Include proper justification for using WAF, when applicable. WAF is required for sources that operate non-continuously and shall only be applied when estimating worker cancer risks and worker non-cancer chronic 8-hour HI

4. Tables and text providing the following information regarding the

potential multi-pathway cancer risks at the PMI, MEIR, MEIW, and any sensitive receptors of concern:

a) Location in UTM coordinates

b) Contribution by substance

c) Contribution by source

5. Tables and text providing the following information regarding the non-cancer acute hazard quotient at the PMI, MEIR, MEIW, and any sensitive receptors of concern:

a) Location in UTM coordinates

b) Target organ(s)

c) Contribution by substance

d) Contribution by source

6. Tables and text providing the following information regarding the non-cancer chronic (inhalation and oral) hazard quotient at the PMI, MEIR, MEIW, and any sensitive receptors of concern:

a) Location in UTM coordinates

b) Target organ(s)

c) Contribution by substance

d) Contribution by source

7. 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 HI greater than 0.5, 1.0, 3.0, and 5.0. Total cancer burden should also be provided

8. 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 a schematic drawing. Color aerial photos are usually the most appropriate choice. The following maps are required:

a) Locations of the PMI, MEIR, MEIW, and sensitive receptors for the cancer and non-cancer acute and chronic risks. Also show the facility emission points and facility boundary

b) Total cancer risk (including multi-pathway factors) contours for

the following risk levels: 100, 25, 10, and 1 chance in-one-million. Maps should be provided for the minimum exposure pathways (i.e., inhalation, soil ingestion, dermal exposure, and mother's milk) and for all applicable exposure pathways (i.e., minimum exposure pathways plus additional site/route specific pathways). Include the facility location on the maps

c) Non-cancer acute and non-cancer chronic HI contours for the following levels: 5.0, 3.0, 1.0 and 0.5

9. 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

10. If appropriate, comment on the possible alternatives for control or remedial measures

11. If possible, identify any community concerns that influence public perception of risk

D. References

References to other documents cited within HRA shall be included in this section. References to standard guidance documents are not required.

IV. Appendices

The appendices shall contain all data, sample calculations, assumptions, and all modeling and risk assessment files that are needed to reproduce the HRA results. All data and model input and output files shall be provided electronically (e.g., uploaded to South Coast AQMD's OnBase system or on USB flash drive). All appendices and the information they contain shall be referenced, clearly titled, and paginated. The following are potential appendix topics unless presented elsewhere in the HRA:

A. List of all receptors in the zone of impact and their associated risks

B. Emissions by source

C. Census data

D. Maps and facility plot plan

E. All calculations used to determine emissions, concentrations, and potential health impacts at the PMI, MEIR, MEIW, and sensitive receptors

F. Presentation of alternate risk assessment methods (e.g., alternate exposure durations, or non-OEHHA Tier 1 evaluations with supporting information)

V. Computer Files

The list of electronic files that must be submitted for the HRA are found in Table 6 of this document. They must be useable (i.e., unencrypted and can be opened by native applications such as HARP programs). Any supplementary files shall be submitted in formats that will not lose formatting in transfer (i.e., pdf for text documents).

Appendix C — HRA Review Check List

The check list contained here is used by South Coast AQMD staff to standardize the review of HRAs. It is being provided to assist facilities and consultants in their HRA preparation.

Facility Information

Facility Name	
Facility ID	
Street Address	
City, Zip Code	
HRA Consultant	

Dispersion Modeling

1. Control Pathway
    a. Regulatory default option selected (required in most cases): ☐ Yes ☐ No
    *If No, explain why:*_____
    b. Urban option:
        i. Applied to all sources (required): ☐ Yes ☐ No
        ii. Population (latest data from South Coast AQMD website was used): ☐ Yes ☐ No
        iii. Roughness length = 1.0 (default): ☐ Yes ☐ No
2. Source Pathways
    a. Sources
        i. Confirm source list is consistent with the approved ATIR: ☐ Yes ☐ No
        ii. Source Type determined properly: ☐ Yes ☐ No
        iii. Volume/Area source dimensions reasonable: ☐ Yes ☐ No
            1. Source footprint verified from review of Google Earth or programs: ☐ Yes ☐ No
        iv. UTMs consistent with Plot Plan: ☐ Yes ☐ No
        v. Elevation from AERMAP output file: ☐ Yes ☐ No
        vi. Release Heights reasonable: ☐ Yes ☐ No
        vii. Stack parameters reasonable: ☐ Yes ☐ No
        viii. Accurate and sufficient details for every source: ☐ Yes ☐ No
        ix. Default unitized emission rate used (required): ☐ Yes ☐ No
3. Buildings
    a. All on-site buildings included (required): ☐ Yes ☐ No
    b. If nearby off-site buildings excluded, confirmed the area of influence does not encompass any point sources at the facility: ☐ Yes ☐ No
    c. Tier Heights and corner points reasonable: ☐ Yes ☐ No
4. Receptors
    a. Grid receptors

i. Included: ☐ Yes ☐ No
ii. Spacing (≤ 100 meters): ☐ Yes ☐ No
1. Assumed spacing (meters): _____
iii. Elevations included (required): ☐ Yes ☐ No
iv. Grid area sufficient to cover acceptable risk levels: ☐ Yes ☐ No

b. Facility boundary receptors
i. Included: ☐ Yes ☐ No
ii. Spacing (≤ 20 meters required): ☐ Yes ☐ No
1. Assumed spacing (meters): _____
iii. Elevations included (required): ☐ Yes ☐ No

c. Sensitive receptors
i. Included if risks exceed zone of impact levels for 30-year cancer or non-cancer scenarios: ☐ Yes ☐ No
ii. Elevations included (required): ☐ Yes ☐ No
iii. Verified from review of Google Earth or other sources: ☐ Yes ☐ No

d. Census block receptors
i. Included if 70-year zone of impact: ☐ Yes ☐ No
ii. Elevations included (required): ☐ Yes ☐ No

e. Pathway receptors
i. Included where applicable: ☐ Yes ☐ No

5. Meteorology Pathway
a. Surface Met Data File: _____ (.sfc)
b. Profile Met Data File: _____ (.pfl)
c. Base Elevation of Met Station (PROFBASE): _____ meters
d. Met Station reflects prevailing conditions (examples of conditions include prevailing winds, surrounding land use, and topography that exists at the source. Note that the appropriate Met Station is not always the closest): ☐ Yes ☐ No

6. Terrain Option
a. Anchor location correct: ☐ Yes ☐ No
b. Appropriate DEM/NED data file linked: ☐ Yes ☐ No
i. DEM/NED file used:
_____
ii. Coverage sufficient: ☐ Yes ☐ No
c. AERMAP run successfully and elevations imported for all sources, buildings and receptors (required): ☐ Yes ☐ No

7. Building Downwash run successfully: ☐ Yes ☐ No

8. PLT files generated successfully: ☐ Yes ☐ No
a. PLT files generated for source group “all”: ☐ Yes ☐ No

Residential Risk Assessment

1. Enabled Pathways & Related Variables:
    a. Soil Ingestion (Required): ☐ Yes ☐ No
    b. Dermal absorption (Required, select "Warm"): ☐ Yes ☐ No
    c. Mother's milk (Required): ☐ Yes ☐ No
    d. Drinking water (Not Required): ☐ Yes ☐ No
    e. Fish water (Not Required): ☐ Yes ☐ No
    f. Home-grown produce (Required, default = 0.137): ☐ Yes ☐ No
    g. Beef/dairy (pasture, Not Required): ☐ Yes ☐ No
    h. Pigs, chickens, and/or eggs (Not Required): ☐ Yes ☐ No
    i. Deposition velocity (0.02 m/s): ☐ Yes ☐ No
    j. Exposure duration (30 years): ☐ Yes ☐ No
    k. Cancer analysis method (select "RMP using Derived Method"): ☐ Yes ☐ No
    l. Chronic non-cancer analysis method (select "OEHHA Derived"): ☐ Yes ☐ No
2. Risk isopleths generated (zone of impact, area of impact, etc.): ☐ Yes ☐ No
3. By-source batching run successfully for each risk scenario (at a minimum at the MEIR and PMI): ☐ Yes ☐ No

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Worker Risk Assessment

1. Enabled Pathways & Related Variables:
    a. Soil Ingestion (Required): ☐ Yes ☐ No
    b. Dermal absorption (Required, select "Warm"): ☐ Yes ☐ No
    c. Mother's milk (Not Required): ☐ Yes ☐ No
    d. Drinking water (Not Required): ☐ Yes ☐ No
    e. Fish water (Not Required): ☐ Yes ☐ No
    f. Home-grown produce (Not Required): ☐ Yes ☐ No
    g. Beef/dairy (pasture, Not Required): ☐ Yes ☐ No
    h. Pigs, chickens, and/or eggs (Not Required): ☐ Yes ☐ No
    i. Deposition velocity (0.02 m/s): ☐ Yes ☐ No
    j. Exposure duration (25 years): ☐ Yes ☐ No
    k. Cancer analysis method (select "OEHHA Derived"): ☐ Yes ☐ No
    l. Chronic non-cancer analysis method (select "OEHHA Derived"): ☐ Yes ☐ No
2. Facility Operating conditions:
    a. Hours/day: _____
    b. Days/week: _____
    c. Worker Adjustment Factor(s): _____
3. Risk isopleths generated (zone of impact, area of impact, etc.): ☐ Yes ☐ No
4. By-source batching run successfully for each risk scenario (at a minimum at the MEIW and PMI): ☐ Yes ☐ No

Program Used

1. Facility submittal package processed with the latest version of AERMOD and HARP/ADMRT: ☐ Yes ☐ No
    a. If NOT, pre-approved by South Coast AQMD staff: ☐ Yes ☐ No

Appendix D — Elements of a Risk Reduction Plan

INTRODUCTION

Facilities with an approved HRA with health risks greater than or equal to the Action Risk Levels as identified in South Coast AQMD Rule 1402 are required to submit an RRP within the specified timeframes for each specific category as specified in the Rule. Facilities participating in the Voluntary Risk Reduction Program under Rule 1402 are required to follow the *Guidelines for Participating in the Rule 1402 Voluntary Risk Reduction Program*. The owner or operator is responsible for preparing an RRP that identifies the risk reduction measures to be implemented. Implementation of these measures will reduce the impact of the total facility emissions below the Action Risk Levels.

ELEMENTS OF A RISK REDUCTION PLAN

1. The name, address, and South Coast AQMD facility identification number, and Standard Industrial Code (SIC) and North American Industry Classification System (NAICS) codes of the facility;
2. A facility risk characterization which includes an updated ATIR and HRA, if the risk due to total facility emissions has increased above or decreased below the levels indicated in the previously approved HRA. A Risk Summary Form shall also be included;
3. Identification of each source from which risk needs to be reduced in order to achieve a risk below Rule 1402 Action Risk Levels;
4. For each source identified in subparagraph (3), an evaluation of the risk reduction measures available to the owner or operator, including emission and risk reduction potential, and time necessary for implementation;
5. Specification of the risk reduction measures that shall be implemented by the owner or operator to comply with the requirements of Rule 1402 (i) to achieve the Action Risk Level or the lowest achievable level;
6. 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 RRP, or in accordance with another schedule subject to approval by the Executive Officer, and specify the dates for other increments of progress associated with implementation of the risk reduction measures;
7. If requesting a time extension, the plan must also include the following information:
    a. A description of the risk reduction measure(s) for which a time extension is needed;
    b. The reason(s) a time extension is needed;
    c. Progress in implementing risk reduction measures in the plan;

d. For RRPs, estimated health risks at the time of the extension request and at the end of the risk reduction period; and the length of time extension requested.

The Executive Officer will review the request for the time extension and will approve or reject the time extension based on the following criteria:

a. The facility-wide health risk is below the Significant Risk Level at the time of submittal of the time extension request;

b. The owner or operator provides sufficient details identifying the reason(s) a time extension is needed that demonstrates to the Executive Officer that there are specific circumstances beyond the control of the owner or operator that necessitate additional time to complete implementation of the plan. Such a demonstration may include, but is not limited to, providing detailed schedules, engineering designs, construction plans, permit applications, purchase orders, economic burden, and technical infeasibility; and

c. The time extension will not result in an unreasonable risk to public health.

8. An estimation of the residual health risk after implementation of the specified risk reduction measures; and

9. Proof of certification of the RRP as meeting all requirements by an individual who is officially responsible for the processes and operations of the facility. The person who makes this certification must be one of the following:

   a. An engineer who is registered as a professional engineer pursuant to Business and Professional Code section 6762.

   b. An individual who is responsible for the operations and processes of the facility.

   c. An environmental assessor registered pursuant to Health and Safety Code section 25570.3.

Appendix E — Elements of a Risk Reduction Progress Report

INTRODUCTION

Facilities with an approved RRP or VRRP as identified in South Coast AQMD Rule 1402 are required to submit an **Annual Progress Report** every twelve months until all risk reduction measures have been implemented.

ELEMENTS OF A RISK REDUCTION PROGRESS REPORT

1. A description of any increases or decreases in emissions of TACs that have occurred at the facility, including a description of any associated permits that were subject to Rule 1401, since approval of the RRP or VRRP;

2. The increments of progress (interim facility risks) achieved in implementing the risk reduction measures specified in the RRP or VRRP. The interim facility risk should represent the previous twelve-month period;

3. Submittal dates of all applicable permit application(s), the status of the application(s), the name of the regulatory agency, and the corresponding permit number(s);

4. A schedule indicating dates for future increments of progress; and

5. Identification of any increments of progress that will be achieved later than specified in the plan and the reason for achieving the increments late.

Appendix F — Elements of an Early Action Reduction Plan for Potentially High Risk Level Facilities

INTRODUCTION

Facilities designated as a Potentially High Risk Level Facility by the Executive Officer, as identified in South Coast AQMD Rule 1402, are required to submit an Early Action Reduction Plan within 90 days of notification of such designation. The purpose of the Early Action Reduction Plan is to expedite risk reduction to mitigate the elevated health risk to protect public health.

ELEMENTS OF AN EARLY ACTION REDUCTION PLAN FOR POTENTIALLY HIGH RISK LEVEL FACILITIES

Within 90 days of the date of notification by the Executive Officer that the facility is a Potentially High Risk Level Facility, an owner or operator shall submit an Early Action Reduction Plan that identifies a list of measures that can be implemented immediately to reduce the facility-wide health risk. The Early Action Reduction Plan shall include:

1. The name, address, and South Coast AQMD Facility ID number;

2. Identification of device(s) or process(es) that are the key health risk driver(s);

3. Risk reduction measure(s) that can be implemented by the owner or operator that includes but are not limited to procedural changes, process changes, physical modifications, and curtailments; and

4. A schedule for implementing the specified risk reduction measures.

Appendix G – List of Acronyms and Abbreviations

List of Acronyms and Abbreviations

Acronym	Description
2015 OEHHA Guidance Manual	Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments
AB 2588	Air Toxics "Hot Spots" Information and Assessment Act
ADMRT	Air Dispersion Modeling and Risk Tool
AER	Annual Emissions Reporting
ATIR	Air Toxics Inventory Report
CARB	California Air Resources Board
CAS	Chemical Abstracts Service
DEM	Digital Elevation Model
DICE	Diesel Internal Combustion Engine
EIM	Emission Inventory Module
HARP	Hotspots Analysis and Reporting Program
HI	Hazard Index
HRA	Health Risk Assessment
MEIR	Maximum Exposed Individual Resident
MEIW	Maximum Exposed Individual Worker
MICR	Maximum Individual Cancer Risk
NAICS	North American Industry Classification System
NED	National Elevation Dataset
ODC	Ozone Depleting Compound
OEHHA	Office of Environmental Health Hazard Assessment
PMI	Point of Maximum Impact
REL	Reference Exposure Level
RRP	Risk Reduction Plan
SB 1731	Facility Air Toxic Contaminant Risk Audit and Reduction Plan
SIC	Standard Industrial Code
South Coast AQMD	South Coast Air Quality Management District
TAC	Toxic Air Contaminant
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VRRP	Voluntary Risk Reduction Plan
WAF	Worker Adjustment Factor
WGS84	World Geodetic System 1984

Attachment 5

AB 2588 Toxic Hot Spots 2024 Annual Report

Governing Board Meeting
December 5, 2025

South Coast AQMD

INTRODUCTION

- AB 2588 Program Annual Report summarizes
  - Activities implemented under AB 2588 “Hot Spots Act” consistent with state law
  - South Coast AQMD activities to reduce toxic air contaminants
  - Future activities relating to AB 2588
  - Updates to AB 2588 guidance documents
- H&S Code §44363 requires a public hearing to present results of Annual Report

GOALS AND OBJECTIVES OF AB 2588

Collect emissions data for air toxics

Identify facilities with potential for localized toxic impacts

Determine potential health risks

Provide public notification

Reduce significant health risks

AB 2588 is one piece of South Coast AQMD's overall approach to air toxics

FACILITIES CURRENTLY* IN SOUTH COAST AQMD AB2588 PROGRAM

- Currently, 476 facilities exist within the AB 2588 program at South Coast AQMD
- Facilities are frequently added or removed from the program for various reasons
- 2024 Annual Report summarizes work completed on 2023 facilities (Phase 1A)

* Facility counts current as of 10/7/2025

AB 2588 TRADITIONAL PROCESS FOR 'CORE' FACILITIES 2025 ACTIVITIES

High Priority Facilities
(e.g. Priority Score > 10)

Quadrennial Emissions Inventory

Emissions inventory of 183 toxic air contaminants

- **118 Quadrennial Reports in 2024**

Prioritization

Calculate a Priority Score for each facility

- **118 Facility Priority Score audits initiated**

Air Toxics Inventory Report (ATIR)

Emissions inventory of 500+ toxic air contaminants

- **Nine Notifications to submit an ATIR or VRRP***

Health Risk Assessment (HRA)

Facilities that remain high priority are required to prepare an HRA

- **Two facilities required to submit HRAs**

Public Notification and/or Risk Reduction

Public notice and risk reduction required if risk thresholds are exceeded

- **Two facilities conducted public notification; Risk Reduction Plan required at two facilities.**

**VRRP = Voluntary Risk Reduction Plan*

PATHWAYS FOR FACILITIES IN RULE 1402

Traditional Approach

Priority Score > 10

Air Toxic Inventory Report → Health Risk Assessment → Public Notification* → Risk Reduction Plan**

Standard process for public notification and risk reduction at facilities with toxic emissions

Voluntary Risk Reduction Program***

Priority Score > 10; & Approved HRA

Voluntary Risk Reduction Plan → Baseline & Post Reduction Inventories → Health Risk Assessment → Modified Public Notification

A voluntary program that requires risks to be reduced by greater than 60% of the traditional approach and includes modified public notification

Potentially High-Risk Level Facility

Cancer Risk ≥100 in-one-million or HI ≥ 5

Early Action Reduction Plan → Air Toxic Inventory Report → Health Risk Assessment → Public Notification* → Risk Reduction Plan**

Accelerated timelines and risk reductions for facilities with the highest risks

* *Required if cancer risks ≥ 10 chances in-one-million or Hazard Index ≥ 1.0*

** *Required if cancer risks ≥ 25 chances in-one-million or Hazard Index ≥ 1.0*

*** *Post emission reduction cancer risks must be < 10 chances in-one-million and Hazard Index < 1.0*

REVIEWS IN 2023

143
Reviews

134 Total Facilities

139

Traditional AB 2588

- 118 Quadrennial Emission Report Audits
- 10 Air Toxics Inventory Reports
- 10 Health Risk Assessments
- 1 Risk Reduction Plan

2

Voluntary Risk Reduction Program

- 1 Voluntary Risk Reduction Plan
- 1 Progress Report

2

Potentially High-Risk Level

- 1 Health Risk Assessment
- 1 Risk Reduction Plan

OTHER KEY TOXICS-RELATED ACTIVITIES IN 2024

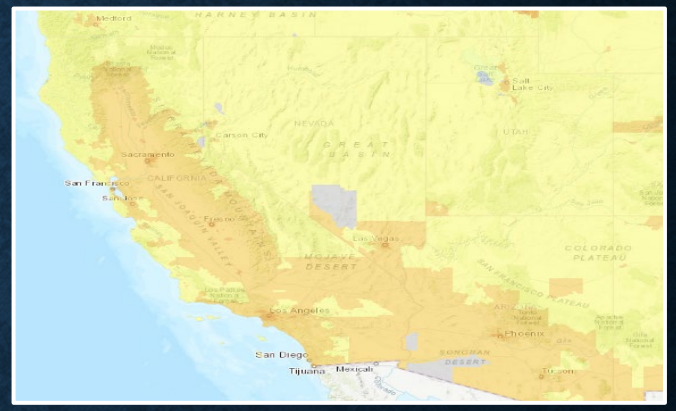
Rulemaking

- Regulatory advisory issued on Rule 1469 requiring compliance with corresponding CARB ATCM
- Amended Rule 1151 to gradually phase out two toxic compounds used in mobile equipment coating operations

Special Monitoring

- Ethylene Oxide (EtO) special monitoring
- Continued air monitoring in Environmental Justice communities as part of AB 617

Other Activities



- Completed review of 2022 emissions data for EPA's AirToxScreen
- EPA finalized release of the 2020 AirToxScreen analysis
- Initiated Multiple Air Toxics Exposure Study (MATES) VI

PROJECTED 2025/2026 TOXICS-RELATED ACTIVITIES

Continue COLLECTING DATA and ADDRESSING fumigation facilities through AB 2588

COORDINATE WITH CARB and CAPCOA on AB 2588 guideline updates, CTR* amendments, and new chemical reviews

SUPPORT CARB in updating HRA guidance for industry-wide sources

WORK with CARB and U.S. EPA to improve AirToxScreen using local emissions data

Continue MONITORING RISK REDUCTION PROGRESS for ethylene oxide sterilization facilities

* Criteria Pollutant and Toxics Emissions Reporting (CTR)

PROJECTED 2025/2026 TOXICS-RELATED RULE DEVELOPMENT ACTIVITIES

- Rule development activities for toxic rules such as:
  - PAR 1435: Control of Toxic Air Contaminant Emissions from Metal Heating Operations
  - PAR 1469: Hexavalent Chromium Emission from Chrome Plating and Chromic Acid Anodizing Operations
  - PAR 1420.2: Emission Standards for Lead from Metal Melting Facilities
  - PAR 1495: Commodity Fumigation

UPDATES TO AB 2588 SUPPLEMENTAL GUIDELINES

Additional clarification to ensure consistency with guidance in other AB 2588 documents

Clarifying language to differentiate OEHHA HRA Tiers from Rule 1401 HRA Tiers

Updated HRA checklist to include more detailed modeling options to ensure more accurate submissions

UPDATES TO AB 2588 PRIORITIZATION PROCEDURES

An overview of the refined prioritization procedures implemented in South Coast AQMD's AB 2588 Program.

Key Updates

- Updated the annual and hourly receptor proximity adjustment factors using the most current meteorological data
- Updated multipathway factors for prioritization and aligned the pollutant list with the EICG list for the screening process
- Provided further clarification to maintain consistency with Rule 1401 guidance documents and the new risk assessment webtool

UPDATES TO AB 2588 PUBLIC NOTIFICATION PROCEDURES

A guide specifying the requirements and procedures for conducting public noticing under the AB 2588 Hot Spots Program

Key Updates

- Remove requirement for providing hardcopy of HRA for purposes of maintaining in the South Coast AQMD library
- Include language which provides further clarity regarding what constitutes trade secrets for purposes of redactions
- Updated language for public notification sample template

RECOMMENDED ACTIONS

- Receive and File the 2024 AB 2588 Annual Report
- Approve updates to the Prioritization Procedures, Public Notification Procedures and AB 2588 & Rule 1402 Supplemental Guidelines

**H&S Code Section 44363 requirement*