

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



2019

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



October 2020

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



Annual Report on AB 2588 Air Toxics “Hot Spots” Program

October 2020

Deputy Executive Officer
Planning, Rule Development and Area Sources
Philip M. Fine, Ph.D.

Assistant Deputy Executive Officer
Planning, Rule Development and Area Sources
Sarah L. Rees, Ph.D.

Planning and Rules Manager
Planning, Rule Development and Area Sources
Tracy A. Goss, P.E.

Authors: Victoria Moaveni, Program Supervisor
Fortune Chen, Senior Air Quality Engineer
Tracy Tang, Senior Air Quality Engineer
Alberto Jasso, Air Quality Engineer II
Edward Lee, Air Quality Engineer II
Kevin Chiu, Air Quality Engineer II
Matthew Lee, Air Quality Engineer I
Pierre Sycip, Air Quality Specialist

Reviewed by: William Wong, Principal Deputy District Counsel

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

Chairman: DR. WILLIAM A. BURKE
Speaker of the Assembly Appointee

Vice Chairman: BEN BENOIT
Council Member, Wildomar
Cities of Riverside County

MEMBERS:

KATHRYN BARGER
Supervisor, Fifth District
County of Los Angeles

LISA BARTLETT
Supervisor, Fifth District
County of Orange

JOE BUSCAINO
Council Member, 15th District
City of Los Angeles Representative

MICHAEL A. CACCIOTTI
Council Member, South Pasadena
Cities of Los Angeles County/Eastern Region

VANESSA DELGADO
Senate Rules Committee Appointee

GIDEON KRACOV
Governor's Appointee

LARRY MCCALLON
Mayor, Highland
Cities of San Bernardino County

JUDITH MITCHELL
Councilmember, Rolling Hills Estates
Cities of Los Angeles County/Western Region

V. MANUEL PEREZ
Supervisor, Fourth District
County of Riverside

CARLOS RODRIGUEZ
Council Member, Yorba Linda
Cities of Orange County

JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

EXECUTIVE OFFICER:

WAYNE NASTRI

Table of Contents

Executive Summary	ES-1
Chapter 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.....	1-3
Risk Characterization	1-3
Public Notification.....	1-3
Risk Reduction Plans.....	1-3
Industrywide Sources	1-3
Chapter 2: South Coast AQMD’s Air Toxics “Hot Spots” Program.....	2-1
Background.....	2-1
Program Implementation Elements	2-2
Progress in Implementing the AB 2588 Program.....	2-6
Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2019	2-7
Air Monitoring Activities	2-10
Continued Air Toxics Monitoring in Communities	2-12
Assembly Bill 617 (AB 617).....	2-13
Chapter 3: Streamlining Activities.....	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)	3-2
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 Streamlining Activities	3-3
Rule 1401 Guidance	3-3
Web Tools.....	3-3
Small Business Assistance.....	3-4
Public Assistance	3-4
State Level Air Toxics Related Activities	3-4
OEHHA Updates	3-4
Chapter 4: Future Activities	4-1
AB 2588 Activities	4-1
Other Support Activities	4-1
Appendix A — Description of Facilities/Projects	A-1
Appendix B — Summary of Toxic Air Contaminants in the South Coast Air Basin.....	B-1
Appendix C — Health Risks from Facilities with an Approved HRA	C-1
Appendix D — Approved Risk Reduction Plans and Voluntary Risk Reduction Plans ...	D-1
Facilities with an Approved Rule 1402(f) Risk Reduction Plan.....	D-1
Facilities with an Approved Rule 1402(h) Voluntary Risk Reduction Plan	D-2
Appendix E — List of Acronyms and Abbreviations	E-1

List of Figures

Figure 2-1: Trends in Inhalation Cancer Risks in the Basin (1990-2018)	2-1
Figure 2-2: Overview of the AB 2588 “Hot Spots” Program.....	2-6
Figure 2-3: Distribution of Risks for AB 2588 Facilities with an Approved HRA.....	2-7
Figure 2-4: Location of the monitoring sites in the City of Paramount.....	2-11
Figure 2-5: Location of the monitoring sites in the West Rancho Dominguez	2-13
Figure B-1 — CARB toxic monitoring sites in the South Coast Air Basin	B-1
Figure B-2 — Trends in Inhalation Cancer Risks in the Basin (1990-2017)	B-3
Figure B-3 — Methylene Chloride Monitored Concentrations at Riverside Station, Averaged by Quarter (2000 to 2018).....	B-3

Figure B-4 — Inhalation Cancer Risks in the Basin (2015 to 2017) (excluding DPM).....	B-5
Figure B-5 — Non-cancer Chronic Risks in the Basin (2015 to 2017).....	B-6
Figure B-6 — Non-cancer 8-Hour Chronic Risks in the Basin (2015 to 2017)	B-7

List of Tables

Table 2-1: AB 2588 Facilities by Source Category	4
Table 2-2: Rule 1402 Risk Categories	5
Table 2-3: Actions Taken in 2019 for Facilities in the Traditional AB 2588 Program	8
Table 3-1: New or Proposed Health Values in 2019 from OEHHA.....	5
Table 3-2: 2015-2018 Summary of HDI Emitting Facilities	6
Table B-1 — Toxic Air Contaminants Monitored.....	B-2
Table B-2 — Change in Population and Vehicle Activity in the Basin Since 1990	B-4
Table C-1	C-2
Table C-2	C-15
Table D-1 — Status of Risk Reduction Plans.....	D-1
Table D-1 — Facilities with Approved Voluntary Risk Reduction Plans.....	D-2



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 Toxics Exposure Study.

Executive Summary

Executive Summary

The California Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) was enacted in 1987. It is a key statewide program implemented by local air districts to address health risks from 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. The 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 emissions much more quickly than previously required.

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 South Coast AQMD’s permitting program and Rule 1401 requirements, enforcement efforts to ensure facilities comply with all applicable air quality requirements, and the Multiple Air Toxics Exposure Study, a study measuring the amount of regional toxic air contaminants and their risks throughout the air basin. Additionally, within the past five years, South Coast AQMD has performed ambient air monitoring in many neighborhoods and found high levels of air toxic contaminants. This monitoring has helped to identify high risk facilities, thereby requiring them to implement risk reduction measures under Rule 1402. Monitoring will also be 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 activities. This report fulfills that requirement and describes the South Coast AQMD’s ongoing efforts to regulate and reduce air toxic emissions.

The following summaries highlight key AB 2588 activities in 2019:

AB 2588 and Rule 1402 Implementation Activities	Prioritized 68 facilities based on their quadrennial toxic emission inventory updates
	Initiated 49 audits based on prioritization scores
	Reviewed 31 ATIRs, 11 HRAs, 5 RRP, and 5 VRRPs, and 3 revised priority scores from 48 facilities
Streamlining and Program Improvement Activities	Updated AB 2588 Facility Prioritization Procedures
	Provided support to rulemaking and AB 617 staff
	Provided support in implementation of Rules 1420.2 and 1466

Chapter 1

California's Air Toxics "Hot Spots" Program



The California Air Toxics "Hot Spots" Information Act was adopted in 1987 under Assembly Bill 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.

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 certain goals such as to collect emissions data of toxic air contaminants from stationary sources, identify facilities having localized impacts, determine health risks, and notify affected individuals. The California Air Resources Board (CARB) has developed 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* (CARB Emission Inventory Guidelines).¹ Under the AB 2588 Program, larger facilities (core facilities) are subject to individual reporting requirements while facilities that are generally small businesses are in the industrywide source (IWS) categories, which are described later in this chapter. CARB Emission Inventory Guidelines provides both criteria and direction for facilities to compile and submit air toxic emission data. The requirements within the CARB Emission Inventory Guidelines 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 needs to conduct a Health Risk Assessment (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 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

¹ *Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program*, September 26, 2007, California Air Resources Board

<https://www.arb.ca.gov/ab2588/final/reg.pdf>

² *Facility Prioritization Guidelines*, August 2016, California Air Pollution Control Officers Association
<http://www.capcoa.org/wp-content/uploads/2016/08/CAPCOA%20Prioritization%20Guidelines%20-%20August%202016%20FINAL.pdf>

there are two procedures, both are similar in nature and involve calculating 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 are those with 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 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 to be District Tracking facilities and must continue to submit toxics emissions reports on a quadrennial basis. Facilities ranked with low priority may be eligible to be exempted from the AB 2588 Program altogether.

Priority Score	Category	Action
TS > 10	High Priority	Submit HRA
1 < TS ≤ 10	Intermediate Priority	No HRA required; continue toxics emissions reports
TS ≤ 1	Low Priority	May be eligible to be exempt from 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*³ (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 contains 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 containing other types of adverse health effects. A facility must identify all substances that are listed in the CARB Emissions Inventory Guidelines.

Exposure Assessment

The purpose of the exposure assessment is to estimate extent of public exposure of emitted toxic air contaminants, and estimating exposures for which potential health effects will be evaluated.

³ <https://oehha.ca.gov/media/downloads/cmr/2015guidancemanual.pdf>

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 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 the significant risk level, above which risk reduction would be required. 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 emissions and risk, then develop and carry out a plan to reduce the 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 IWS categories. Facilities falling into this category are generally small businesses where individual compliance would impose economic hardship. The advantage to industrywide 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. The California Air Pollution Control Officers Association (CAPCOA), in cooperation with OEHHA and CARB

develop IWS risk assessment guidelines.⁴ 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
- emissions are easily and generically characterized.

Periodic Updates to the AB 2588 Guidelines

The AB 2588 Air Toxics "Hot Spots" Emissions Inventory Criteria and Guidelines Regulation (EICG) provides direction and outlines the requirements for quantifying and reporting air toxics emissions required by the "Hot Spots" Program. The current regulation was approved by the Office of Administrative Law on August 27, 2007. CARB is currently working on updating the EICG which includes updating the list of chemicals required to be quantified and reported to CARB. The updated EICG is expected to be published in late 2020.

⁴ Three IWS risk assessment guidelines have been published: autobody shops, dry cleaners, and retail gasoline stations
<https://ww3.arb.ca.gov/ab2588/riskassess.htm>



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 2019.

Chapter 2 South Coast AQMD's Air Toxics "Hot Spots" Program

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

Background

The 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 smoggiest urban areas in the U.S., South Coast AQMD has achieved significant reductions in air toxics in the Basin. For example, monitoring studies have shown that cancer risks have decreased by more than 50 percent in the past decade alone.⁵ While these reductions were primarily attributable to reductions in diesel particulate matter, there have 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 toxic emissions, and through mandatory risk reductions triggered by facilities exceeding health risk thresholds. Figure 2-1⁶ below demonstrates the reductions in risk that have been achieved despite the substantial number of facilities located within our district.

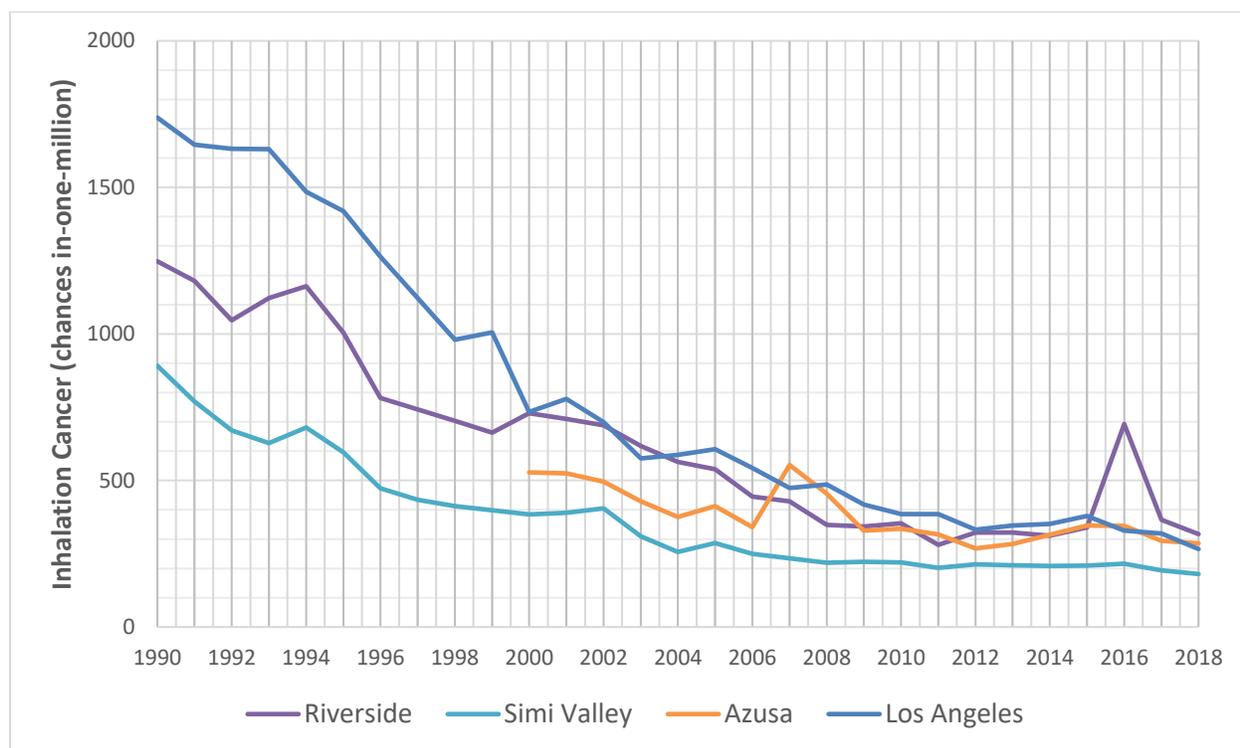


Figure 2-1: Trends in Inhalation Cancer Risks⁷ in the Basin (1990-2018)

⁵ Reductions measured between the Multiple Air Toxics Exposure Studies (MATES) versions III and IV: https://www.aqmd.gov/docs/default-source/default-document-library/mates-v-admin-comm-presentation-060917final_jg.pdf

⁶ See Appendix B for more information on the monitoring stations and monitoring network within the Basin.

⁷ Calculated with 2015 OEHHA Risk Assessment Guidelines, excluding cancer risks from DPM.

There was an increase in risk in 2016 due to elevated methylene chloride readings in Riverside county. However, the readings from 2016 were not consistent with historical trends, and readings have since decreased. Additional details are provided in Appendix B.

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 above what are specified in AB 2588 and SB 1731. Rule 1402 was most recently amended in October 2016. This most recent amendment included a new provision beyond what is required under state law. This provision created 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) and HRA reports and for reducing risk. Both the Voluntary Risk Reduction Program and the new 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 400 core facilities as categorized in Table 2-1 that are subject to the following main components of the South Coast AQMD's AB 2588 Program:

- **Emissions Reporting** – Since the FY 2000-01 reporting cycle, toxics 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. Since there are four phases, each core facility is required to submit a more detailed inventory by reporting 177 toxic air contaminants during the quadrennial reporting year. This detailed inventory serves as a foundation for an ATIR, if required.
- **Prioritization** – South Coast AQMD uses a refined method for prioritizing facilities based on CAPCOA Guidelines. The current South Coast AQMD Procedure incorporates the 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.

In 2019, 68 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.

- **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 450 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 participating in the traditional pathway, if the ATIR indicates that the facility is still considered a high priority, the facility must prepare an HRA that conforms to the OEHHA HRA Guidelines. Specific instructions for the 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)*.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 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 for associated categories). 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 designed to comprehensively reduce risk. The Risk Reduction Plan 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

⁸ *AB 2588 and Rule 1402 Supplemental Guidelines, (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)*, September 2018, South Coast AQMD.

⁹ http://www.aqmd.gov/docs/default-source/planning/risk-assessment/pn_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.

includes an optional Voluntary Risk Reduction Program 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 the Act 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 Facilities by Source Category

Facility Categories	Number of Facilities
Airports	1
Amusement Parks	2
Entertainment	5
Harbors	1
Hospitals and Health-Related	30
Military Base	4
Office Buildings	1
Schools and Educational Institutions	16
Other Institutional/Commercial	19
Other Service/Commercial	5
Dairy/Poultry Farms	9
Other Agricultural Processing	2
Fermentation and Brewing (Breweries/Distilleries/Wineries)	1
Food flavoring manufacturing	1
Pharmaceuticals	4
Other Food Processing Facility	1
Bulk Plants	19
Terminal Depots	13
Electricity Generation	35
Petroleum Refinery	10
Crude Oil Production	35
Aerospace	41
Building/Construction/Mineral Products	44
Cement Production	1
Chemical Plants	12
Electronic	4
Furniture/Household Products	2
Glass Production	1
Hydrogen Production	3
Iron and Steel Production	7
Metal and Alloys Products	27

Facility Categories	Number of Facilities
Printing/Publishing	2
Pulp and Paper Manufacturing	5
Other Industrial/Manufacturing	63
Landfill – Industrial Waste	1
Landfill - Municipal Solid Waste	20
Wastewater Treatment – Industrial	1
Wastewater Treatment – Municipal	21
Other Waste Disposal	2
Total Facilities	471

Table 2-2: Rule 1402 Risk 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 Cancer burden of 0.5 or more Acute or chronic HI of 5.0 or more	Public notification and implement RRP	No later than 2 years after approval of plan for facilities designated as Potentially High Risk Facilities

Figure 2-2 below shows the process used by South Coast AQMD to implement AB 2588 under Rule 1402.

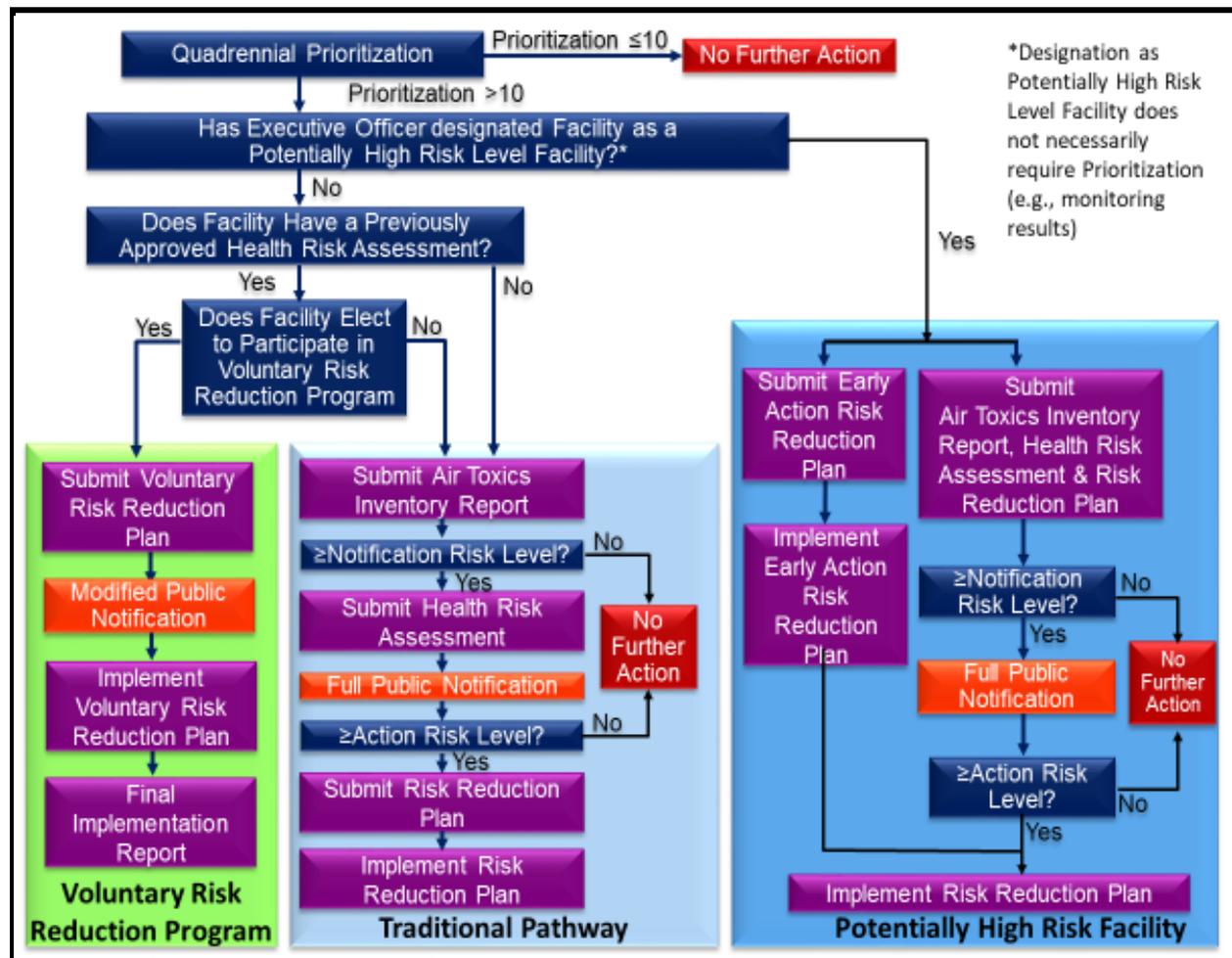


Figure 2-2: Overview of the AB 2588 Program

Progress in Implementing the AB 2588 Program

From the beginning of the AB 2588 Program in 1987 through the end of 2019, staff has reviewed and approved 349 HRAs from 339 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 339 facilities, 28 were required to implement risk reduction measures, 61 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 2-3 is based on the information in Appendix C, which lists the core facilities and the health risks from their approved HRAs. Table C-1 in Appendix C lists the facilities in order of their cancer

risks and Table C-2 in Appendix C lists the same facilities ordered by facility ID. Table D-1 in Appendix D lists facilities which have prepared a Risk Reduction Plan (RRP) for the AB 2588 Program and their corresponding health risks [H&S Code 44363(a) (2) and (3)] and Table D-2 in Appendix D lists facilities which have successfully participated in the Voluntary Risk Reduction Program. Appendix E contains a list of acronyms and abbreviations used in this report.

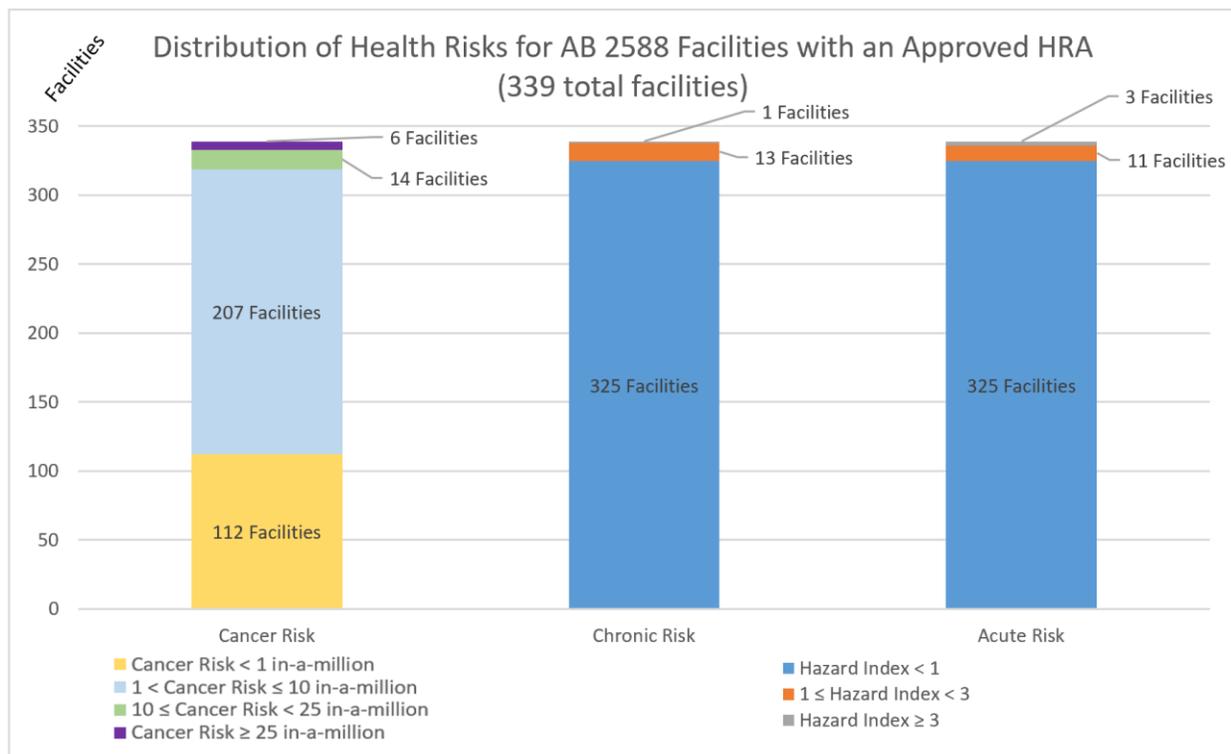


Figure 2-3: Distribution of Risks for AB 2588 Facilities with an Approved HRA

Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2019

In 2019, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on 49 facilities with priority scores greater than 10. Key activities conducted include review of 31 ATIRs, 11 HRAs, five RRP, five Voluntary Risk Reduction Plans (VRRPs), and three revised priority scores. Many of these key activities were for facilities that tend to have more sources and are more complex such as refineries and other industrial facilities. Overall, a total of 212 documents were reviewed in 2019 from 48 facilities, with some facilities having multiple documents submitted for South Coast AQMD staff review. Table 2-3 presents a summary of key activities for facilities participating in the traditional AB 2588 Program and Table 2-4 presents a summary of key activities for facilities participating in the Rule 1402 Voluntary Risk Reduction Program.

Table 2-3: Actions Taken in 2019 for Facilities in the Traditional AB 2588 Program

Facility Name	ID #	ATIR		HRA		RRP		Status
		R	A	R	A	R	A	
Aerocraft Heat Treating Co. Inc. ^a	23752						X	See Appendix A.2
Air Liquide Large Industries U.S., LP	148236	X						
All American Asphalt - Irwindale	114264							See Appendix A.4
All American Asphalt - Perris	148146							See Appendix A.5
Anaplex Corp ^a	16951					X		RRP initially rejected on 04/24/2019. See facility entry in Appendix A.6
Arconic Global Fasteners & Rings, Inc.	134931							See Appendix A.7
City of Cerritos, Water Division	74396							See Appendix A.10
Eco Services Operations Corp. ^b	180908							See Appendix A.11
Eisenhower Medical Center	3671	X	X					
Equilon Enter. LLC, Shell Oil Prod. US ^b	800372			X				
Evonik Corporation ^b	183926							See Appendix A.15
Gerdau/TAMCO	18931							See Appendix A.16
Glendale City, Glendale Water & Power ^b	800327				X	X		Public notification meeting on 06/26/2019.
Hixson Metal Finishing	11818							See Appendix A.18
Holliday Rock Co., Inc.	41580	X	X					
Kirkhill Inc ^b	187823			X	X			Public notification meeting on 11/13/2019.
LA City, Sanitation Bureau (Hyperion Treatment Plant) ^b	800214		X					VRRP approved as ATIR
LA City, Street Maintenance Bureau Department of Public Works	25196							See Appendix A.23
Light Metals ^b	83102	X						
Los Angeles By-Products	60384							See Appendix A.25
Lubeco Inc ^a	41229				X	X		
MM West Covina LLC ^b	113873			X				

Facility Name	ID #	ATIR		HRA		RRP		Status
		R	A	R	A	R	A	
Motion Picture & Television Fund	16211							See Appendix A.28
PABCO Bldg Products LCC	45746							See Appendix A.29
Pac Rancho, Inc.	140871							See Appendix A.30
Pacific Clay Products, Inc.	17953							See Appendix A.30
Pasadena Department of Water and Power ^b	800168	X	X					
Phillips 66 Co/LA Refinery Wilmington Plant ^b	171107		X	X				
Phillips 66 Company/Los Angeles Refinery ^b	171109		X					VRRP approved as ATIR
Plains West Coast Terminals	800417							See Appendix A.35
Robertson's Ready Mix – Redlands	42623							See Appendix A.36
Robertson's Ready Mix – Gardena	134112							See Appendix A.37
San Diego Gas & Electric	4242							See Appendix A.38
SFPP, L.P ^b	800278							See Appendix A.39
So Cal Edison Co ^b	4477		X	X				
So Cal Gas Co./Playa del Rey Storage Facility	8582				X	X	X	Modified public notice posted on 01/02/2019. See facility entry in Appendix A.41.
So Cal Holding, LLC	169754				X			
Tesoro Refining & Marketing Co., LLC, Calciner ^b	174591		X					VRRP approved as ATIR
Tesoro Refining & Marketing Co., LLC (Sulfur Recovery Plant) ^b	151798		X					VRRP approved as ATIR
TST, Inc. ^b	43436	X	X					
Vista Metals Corporation ^b	14495							See Appendix A.50
Vorteq Pacific	191677							See Appendix A.51
Whittier Fertilizer	511	X	X	X				

Notes:

For ATIRs, HRAs, and RRP: R=Report Received; A=Report Approved.

^a Classified as Potentially High Risk Level Facility and under an Order for Abatement during 2018.

^b Indicates facility notified to prepare either an ATIR or a VRRP. Facilities listed in this table elected to prepare an ATIR.

Table 2-4: Actions Taken in 2019 for Facilities in the Voluntary Risk Reduction Program

Facility Name	ID #	VRRP		Status
		R	A	
Chevron Products Co. (El Segundo Refinery)	800030		X	
Elite Comfort Solutions	182610	X		
Tesoro Refining & Marketing Co., LLC, Los Angeles Refinery	800436			See Appendix A.44
	174655			
	174694			
	174703			
Torrance Refining Company LLC	181667			See Appendix A.46
Ultramar Inc	800026			See Appendix A.49

Notes:

For VRRPs: R=Report Received; A=Report Approved.

A description of these activities for each facility in Tables 2-3 and 2-4 is listed in Appendix A

Air Monitoring Activities

In addition to the AB 2588 Program, South Coast AQMD also conducts other activities to address air toxics, including special monitoring projects. In 2013, South Coast AQMD staff began conducting an investigation into local sources of emissions, including initiating a local air sampling study after receiving a series of metallic odor complaints from local community members in the City of Paramount (Paramount) and surrounding areas. The purpose of these activities was to determine the source of emissions and potential air pollution control strategies. This investigation focused on two toxic metals of concern: nickel and hexavalent chromium. Monitoring efforts have been expanded and now includes West Rancho Dominguez.

Paramount

In July 2016, a larger number of samplers were deployed to allow South Coast AQMD to better measure spatial and temporal variations of hexavalent chromium in the area and identify its potential sources. In October 2016, South Coast AQMD initiated an extensive air monitoring campaign to assess levels of hexavalent chromium in the industrialized sections of Paramount. Highly elevated levels were found initially and additional efforts were conducted to identify and address sources of hexavalent chromium that were impacting nearby communities. Once potential sources were identified, the sampling strategy was adjusted to focus on specific facilities and on characterizing hexavalent chromium levels in the adjacent communities. As a result, several facilities made a range of improvements, some voluntary and some through rule changes and enforcement actions. These changes have substantially reduced ambient hexavalent chromium levels in Paramount and surrounding areas. As a result, South Coast AQMD is updating its air monitoring efforts in Paramount to focus on conducting studies to evaluate other potential sources of hexavalent chromium and also monitoring other areas of the Basin that may have higher potential for air toxics exposure.

Throughout this period, air monitoring in Paramount has occurred at a total of 38 locations as shown in Figure 2-4, and 12 schools. School sampling has been supported by CARB. Currently, South Coast AQMD collects air samples for hexavalent chromium analysis at 16 locations in the City of Paramount. Among these active monitoring locations, six are adjacent to facilities that are operated under an Order of Abatement during 2018 with South Coast AQMD’s independent Hearing Board (“Compliance” sites; see Figure 2-4). The remaining monitoring sites are close to other potential sources or near residential areas and sensitive receptors of Paramount. Because hexavalent chromium levels in Paramount have been declining steadily and are now within the typical levels, the size of this monitoring network can be reduced to focus on other areas that have higher potential for air toxics exposure.

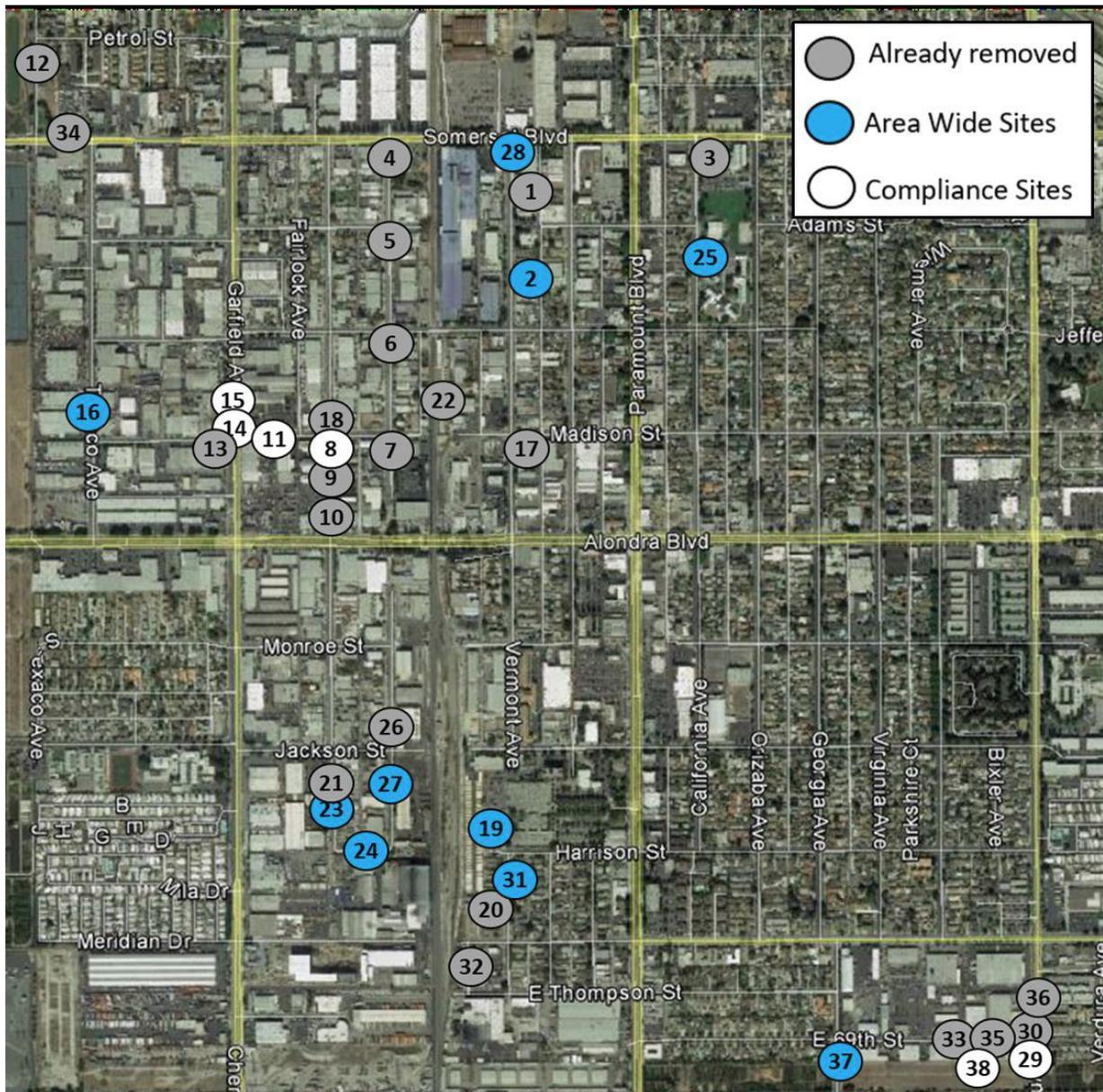


Figure 2-4: Location of the monitoring sites in the City of Paramount

Continued Air Toxics Monitoring in Communities

As a result of lessons learned during South Coast AQMD's investigation into air monitoring for sources of toxic metal emissions in Paramount and other areas, staff continues to investigate, identify and remediate any additional sources across our four-county region that may emit high levels of toxic air contaminants. South Coast AQMD will systematically identify and prioritize high-risk facilities, then use the latest air monitoring technology to confirm specific sources causing high emissions associated with metal-processing facilities. If identified, South Coast AQMD may seek Orders for Abatement from the independent South Coast AQMD Hearing Board to require these facilities to reduce their emissions to a level that does not pose an immediate threat to public health quickly. South Coast AQMD may also designate facilities as Potentially High Risk Level Facilities under Rule 1402.

The goal is to eliminate or minimize the release of hexavalent chromium into the environment associated with metal-processing facilities. This program is expected to be a seven-year, labor-intensive effort with the air monitoring portion costing approximately \$6 million to \$7 million annually. It will focus on a variety of metal processing facilities across South Coast AQMD's four-county jurisdiction with the potential to emit toxic metal contaminants including hexavalent chromium, lead, arsenic, cadmium and nickel.

As with the process in Paramount, 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. South Coast AQMD will seek to leverage the regulatory authorities of other agencies to assist in swiftly curtailing emissions from high-emitting facilities.

West Rancho Dominguez

In June 2019, the South Coast AQMD staff began collecting hexavalent chromium air monitoring samples in West Rancho Dominguez, which is an industrial area within the AB 617 Wilmington, Carson, West Long Beach community. Sampling equipment was installed at 14 different locations within a two-block area and data collected from these locations showed elevated levels of hexavalent chromium. Figure 2-5 below shows the location of the various air monitors. South Coast AQMD has been collecting air samples at Sites #1 through Site #10 since June 5, 2019, while monitoring for Sites #11 through #14 began at the end of July.

South Coast AQMD has been investigating potential sources in the vicinity of these monitors and working with the facilities to identify voluntary actions that could be implemented to reduce hexavalent chromium emissions. These actions include improvements to building enclosures, operational changes, add-on controls, housekeeping measures in addition to new requirements under amended Rule 1469 for chromic acid anodizing and chrome plating facilities requiring additional pollution controls on certain tanks that were previously unregulated resulting in additional hexavalent chromium emissions reductions. South Coast AQMD continues to work with facilities in the area to identify and address additional potential sources of hexavalent chromium.

Monitoring efforts have continued in this area while investigation of potential sources within the vicinity of the monitoring network continues.



Figure 2-5: Location of the monitoring sites in the West Rancho Dominguez

Assembly Bill 617 (AB 617)

AB 617 was passed by the California legislature in 2017 and focuses on improving air quality and public health in environmental justice communities. This law first allows local residents to provide recommendations for the selection of the environmental justice communities. South Coast AQMD will use updated data to assess the communities most affected, to identify key sources of pollution and develop targeted emissions reduction plans to reduce community exposures to air pollution. Five communities have been selected for the first two years and other communities will be added over time.

For each selected community, South Coast AQMD will work with local stakeholders to evaluate their greatest air pollution concerns. Depending on the needs of each community, South Coast AQMD may conduct targeted community air monitoring and develop a tailored community air plan. South Coast AQMD will work with CARB, other agencies, and all stakeholders to implement these community air plans to reduce local air pollution emissions and benefit public health. CARB approved three communities in September 2018. In December 2019, CARB approved the following two communities in our region for the second year of this program:

- Southeast Los Angeles (including the cities of Bell Gardens, Huntington Park, Cudahy, and South Gate).
- Eastern Coachella Valley (including the cities of Mecca, Coachella, Indio, Thermal, North Shore, and Oasis).

South Coast AQMD has convened a Community Steering Committee in each of the two communities with the purpose of identifying specific community air quality concerns, discussing resolutions, and developing recommendations for improving the local air quality. These committees work closely with South Coast AQMD and CARB to discuss emissions reductions targets and strategies to inform a tailored community air plan that addresses the community's highest priority concerns. South Coast AQMD will deploy systems to monitor air quality in selected communities where this information is most needed. The analysis of the data collected will inform future community emissions reduction plans and will be used to track progress. This information will also be shared with the public and CARB.

Chapter 3

Streamlining Activities



AB 2588 staff continually aim to improve South Coast AQMD's AB 2588 program and to help affected facilities comply with rule requirements. This chapter covers streamlining efforts implemented by South Coast AQMD for the AB 2588 program as well as other streamlining activities to assist other departments within the South Coast AQMD.

Streamlining Activities

Background

South Coast AQMD has undertaken several efforts to help affected facilities comply with rule requirements and to 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 toxics emissions inventory to South Coast AQMD on a quadrennial basis. Beginning with the fiscal year 2000-01 reporting cycle, toxics emission reporting was incorporated into South Coast AQMD's Annual Emissions Reporting (AER) Program. This was the first step towards streamlining emissions reporting between criteria pollutants and toxics. In 2008, South Coast AQMD created a web-based reporting system for facilities. The reporting tool automatically 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.

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 actual closest receptor locations in addition to evaluating receptors in the worst case wind direction. Most 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 the South Coast AQMD Prioritization Procedure, fewer facilities are incorrectly categorized as high priority.¹¹ This streamlining is highly effective since less facilities are immediately notified each year.

The AB 2588 group also conducts a detailed audit of those 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.

¹¹ <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-facility-prioritization-procedure-201809.pdf>

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 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 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 South Coast AQMD. By clearly indicating what is required from facilities and by periodically updating the document as needed, South Coast AQMD ensures that facilities have a clear and up to date understanding of all requirements. This will also minimize the amount of general inquiries and preliminary discussions, provided for a more efficient process.

Voluntary Risk Reduction Program

Another element streamlining the South Coast AB 2588 Program is the provision for the Voluntary Risk Reduction Program. We amended Rule 1402 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. To further expand the use of the Voluntary Risk Reduction Program and assist facilities, the AB 2588 staff developed guidelines that describe the requirements of a VRRP in September 2018.¹²

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

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>

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 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 24 stations throughout the South Coast Air Basin for download. The South Coast AQMD website includes a map showing the locations of each of these meteorological stations along with the corresponding most recent five years of meteorological data for each station. The meteorological station that best represents the facility's meteorological conditions (such as prevailing winds), terrain, and surrounding land use should be used in all modeling analyses. In many cases, this would be the nearest located station. South Coast AQMD staff are available to provide assistance to modelers to ensure the most representative station is used.

Other Streamlining Activities

Rule 1401 Guidance

Rule 1401 requires any new, modified, or relocated permit units which emit toxic air contaminants to comply with certain allowable limits. South Coast AQMD has developed the Rule 1401 Risk Assessment Procedures¹⁴ to assist applicants as well as staff to evaluate Rule 1401 and 1401.1 compliance. 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 times 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.

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

¹³ South Coast AQMD modeling guidance is available at:

<http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>

¹⁴ *Risk Assessment Procedures for Rules 1401, 1401.1 and 212, Version 8.1*, September 1, 2017, South Coast AQMD

<http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf>

<http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/attachmentn-v8-1.pdf>

details, equipment lists, compliance history, emissions inventory (including toxic pollutants), and hearing board information. There are several existing web-based applications 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 a very useful interactive map with aerial imagery from the U.S Geological Service.¹⁵

Small Business Assistance

South Coast AQMD has a team of engineers and inspectors that are specifically designated to help small businesses (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, assistance 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 serves to streamlines efforts to regulate air quality while also creating a positive open working relationship with small local businesses.

Public Assistance

The South Coast AQMD's AB 2588 Program provides public assistance services that includes both a hotline at (909) 396-3610 and 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, RRP's, and public notices, and information on air toxics monitoring in local communities, such as in Paramount.

South Coast AQMD also provides several other services, such as a telephone number to answer fee-related questions, 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.¹⁶ These services help to maintain good working relationships with facilities and to protect air quality and public health.

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 pollutants. South Coast AQMD staff monitor the progress for these changes closely. For any finalized changes in risk factors, staff performs a preliminary

¹⁵ <http://www.aqmd.gov/nav/FIND/facility-information-detail>

¹⁶ <http://www3.aqmd.gov/webappl/complaintsystemonline/NewComplaint.aspx>;
Telephone hotline: 1-800-CUT SMOG® (1-800-288-7664)

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 adopted new Reference Exposure Levels (RELs) for Hexamethylene Diisocyanate (HDI) (Monomer and Polydiisocyanates) in September 2019.¹⁷ RELs are airborne concentrations of a chemical that are not anticipated to result in adverse non-cancer health effects for specified exposure durations in the general population, including sensitive subpopulations. HDI is used in hardeners for polyurethane paints, primers, sealers, and clear coats. HDI is also used in outdoor furniture, architectural finishing, adhesives, polyurethane foams, and home thermal insulators.

OEHHA also proposed new RELs for Toluene in May 2019.¹⁸ Toluene is a solvent that is used in various industries including the production of coatings, cosmetics, cleaning agents, inks, adhesives, pharmaceuticals, and cosmetics. Toluene also occurs naturally as a component of crude oil and is produced in petroleum refining. Toluene is also a byproduct from combustion of fuels.

The proposed and adopted values are summarized in Table 3-1. The previous values are shown in parentheses below the current values; N/A within parentheses indicate no previous value existed.

Table 3-1: New or Proposed Health Values in 2019 from OEHHA

CAS #	Name	Chronic REL µg/m ³	8-Hour Chronic REL µg/m ³	Acute REL µg/m ³
822-06-0	Hexamethylene Diisocyanate Monomer	0.03 (N/A)	0.06 (N/A)	0.3 (N/A)
3779-63-3 4035-89-6	Hexamethylene Diisocyanate Polyisocyanate (Isocyanurate) (Biuret) (Uretidone)	0.4 (N/A)	0.8 (N/A)	4.5 (N/A)
108-88-3	Toluene	420 (300)	830 (N/A)	5000 (37,000)

Assessment of Impacts to Existing Facilities

HDI monomer is a previously listed pollutant and is subject to reporting by AB 2588 facilities every four years. Data from the 2015-2018 reporting years was used to account for facilities reporting HDI monomer in different reporting phases. 21 facilities reported annual emissions of

¹⁷ <https://oehha.ca.gov/air/crnrr/notice-adoption-reference-exposure-levels-hexamethylene-diisocyanate>

¹⁸ <https://oehha.ca.gov/air/crnrr/draft-document-summarizing-toxicity-and-derivation-reference-exposure-levels-rels-toluene>

HDI monomer. A breakdown of the types of facilities and the number of those types of facilities that reported HDI monomer emissions are presented in Table 3-2.

Table 3-2: 2015-2018 Summary of HDI Emitting Facilities

Facility Description	Number of Facilities
Aerospace	7
Entertainment	1
Military Base	1
Other Industrial/Manufacturing	4
Petroleum Refinery	1
Schools and Educational Institutions	2
Airports	1
Furniture/Household Products	1
Other Institutional/Commercial	1
Harbors	1
Metals and Alloys Products	1
Total:	21

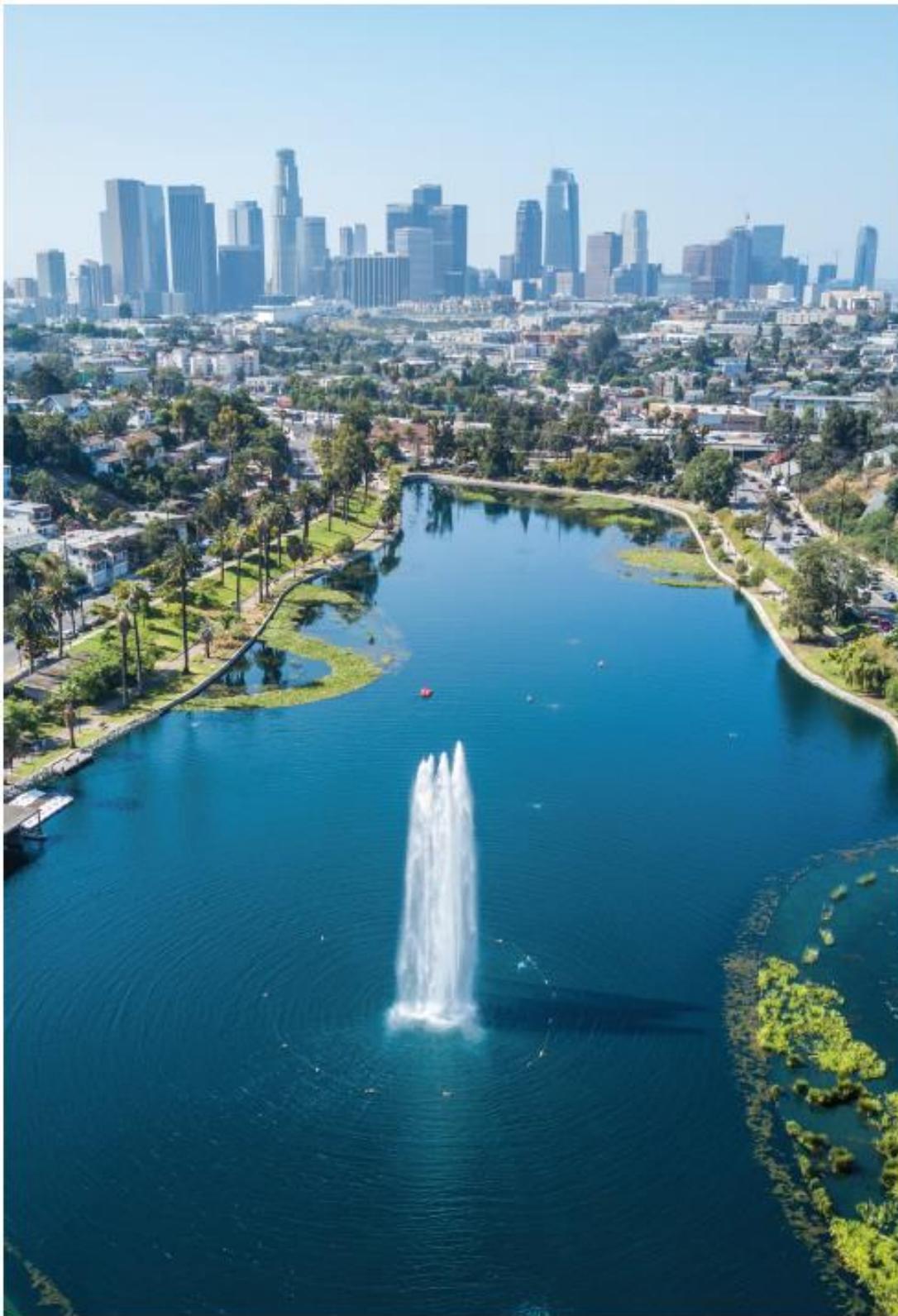
Fourteen of the 21 facilities have previously approved HRAs. The HRAs for these facilities were approved between 1993 and 2019. Although not reported in every HRA (no HRA approved before 2000 had HDI reported), HDI monomer did not have significant risk factors when reported in a HRA. HDI monomer is required to be reported on a quadrennial cycle and therefore is examined when screening and prioritization occurs in accordance with program requirements.

HDI polyisocyanates are newly added pollutants with no prior reporting requirements and are not currently required to be reported by AB 2588 facilities

Staff will continue to monitor the status of the proposed RELs for toluene. Adoption of the proposed RELs for toluene has a potential to affect most if not all facilities due to the widespread use of toluene as a solvent and as a byproduct from combustion of fuels.

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 review and update guidance documents. AB 2588 staff will also continue to provide support to other South Coast AQMD departments and work with CARB to improve the implementation of the AB 2588 program.

Future Activities

AB 2588 Activities

In 2020, staff will prioritize approximately 128 facilities, and notify those with high priority scores to prepare ATIRs or VRRPs, if eligible, and HRAs and RRP, if necessary. There are a substantial number of ATIRs and VRRPs that are expected to be reviewed in 2020. Public notification, and public meetings as necessary, will also occur for multiple facilities including Lubeco, Inc. (ID 41229), Phillips 66 Company, Los Angeles Refinery – Wilmington Plant (ID 171107), Equilon Enterprises (ID 800372), MM West Covina (ID 113873), and Southern California Edison, Pebbly Beach (ID 4477). Staff will also update AB 2588 guidance documents to provide additional clarification on the process and requirements of the AB 2588 program including the following:

- Facility Prioritization Procedures for the AB 2588 Program
- AB 2588 and Rule 1402 Supplemental Guidelines
- South Coast AQMD Public Notification Procedures for Facilities under AB 2588 and Rule 1402
- AB 2588 Quadrennial Air Toxics Emission Inventory Reporting Procedures

Other Support Activities

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

- Continue to provide support to rulemaking staff;
- Work with CARB and through the CAPCOA Toxics and Risk Managers Committee (TARMAC) to update CARB AB 2588 Guidelines, including review of draft list of chemicals;
- Continue to work with CARB and through CAPCOA-TARMAC to develop HRA guidelines for the industry-wide categories of gasoline dispensing facilities, diesel internal combustion engines, auto body shops, and providing training to South Coast AQMD personnel and the regulated community;
- Train new staff on the expanded emissions reporting under amended Rule 301 and AB 617; and
- Track development of potential REL revisions by OEHHA.

Appendix A — Description of Facilities/Projects

A.1. ACE Clearwater Enterprises (ID 17325) – Paramount

ACE Clearwater Enterprise (ACE) manufactures aerospace parts and is located in the city of Paramount. ACE currently operates two melting furnaces which are vented to a Donaldson Torit dust collector equipped with High Efficiency Particulate Air (HEPA) filters to control particulate matter and toxic emissions.

The facility had an approved Rule 1420.2 Monitoring and Sampling Plan from August 2017. The facility conducted ambient air monitoring for a year and demonstrated that the 30 consecutive day average ambient air lead concentration was 0.07 mg/m³ for the entire duration of ambient air monitoring activities onsite which is below Rule 1420.2 concentration limits. The facility submitted a Rule 1420.2 Ambient Monitoring Relief Plan in December 2018 pursuant to Rule 1420.2 (o)(1). Upon review of the modeling files in January 2019, South Coast AQMD staff found that the original source test submitted with the plan was not conclusive. The facility conducted a new source test which was approved in December 2018 and submitted to South Coast AQMD staff in February 2019. South Coast AQMD completed review of the modeling files in April 2019 and found that the project complied with the limits of Rule 1420.2 (o)(1)(A).

A.2. Aerocraft Heat Treating Co. Inc. (ID 23752) – Paramount

Aerocraft Heat Treating Company (Aerocraft) operates a facility in the City of Paramount that processes forgings, castings, bar, plate and rough-machined parts. The facility uses various heat treating furnaces, quench tanks, and metal grinding equipment, as well as plasma cutting operations. Based on ambient monitoring conducted near Aerocraft which showed elevated levels of hexavalent chromium, Aerocraft was officially designated as a Potentially High Risk Level Facility on December 14, 2016. As part of this designation, Aerocraft was required to submit an Early Action Reduction Plan by March 14, 2017, an ATIR by May 16, 2017, aHRA and a RRP by June 13, 2017. Additional details regarding the ambient monitoring in Paramount and near Aerocraft and events that led up to the designation of Aerocraft as a Potentially High Risk Facility are discussed on South Coast AQMD's website.¹⁹

The Early Action Reduction Plan was received on March 13, 2017 and after South Coast AQMD's staff review, a comment letter was sent on April 26, 2017 requesting revisions and resubmittal. Subsequently, on May 4, 2017, a revised Early Action Reduction Plan was received.

On May 16, 2017, Aerocraft submitted an ATIR, and the HRA and RRP were submitted on June 13, 2017, in accordance with the required deadlines. Conditional approval of the revised Early Action Reduction Plan was granted on May 31, 2017. On February 9, 2018, South Coast AQMD staff provided Aerocraft with comments and recommendations on the submitted ATIR, HRA, and RRP, and requested revision and resubmittal of those respective documents. After technical

¹⁹ Information regarding Aerocraft and compliance-related activities in Paramount can be found at the following link:
<https://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities/facilities---order-for-abatement/aerocraft>

conference calls with Aircraft representatives, South Coast AQMD staff received the Revised ATIR on March 29, 2018. The Revised ATIR was approved on May 9, 2018.

The Revised HRA and Revised RRP were received on May 17, 2018. The Revised HRA was approved by South Coast AQMD staff and OEHHA on October 9, 2018. The revised HRA representing the 2016 inventory year indicated that Aircraft posed a maximum cancer risk of 1,900 chances in-one-million for a residential receptor located at the corner of Madison Street and Illinois Avenue, based on a 30 year residential exposure, and 350 chances in-one-million for the worker receptor located immediately south of Aircraft, based on a 25 year worker exposure. The cancer risk was mainly due to hexavalent chromium emissions from furnaces and rack welding operations. A cancer burden of 11 was estimated, based on a 70 year lifetime exposure.

The maximum non-cancer chronic hazard indices of 0.10 and 0.15 were projected for residential and non-residential receptors, respectively. The maximum non-cancer 8-hour chronic hazard index is less than 0.01 and the maximum non-cancer acute hazard index was 2.9 at Aircraft's property boundary.

Since the HRA results were above the Significant Risk Level in Rule 1402, Aircraft was required to notify the public about the health risk in addition to conducting annual public notification meetings until the Rule 1402 Action Risk Level was achieved pursuant to Rule 1402(p). Notices of the public notification meeting were sent out to over 35,000 people in the area of impact. South Coast AQMD staff held a public notification meeting at the Progress Park Community Center on December 1, 2018 to explain the impact of Aircraft's emissions on public health and to discuss how risks will be reduced. South Coast AQMD conditionally approved the Revised RRP on April 24, 2019 requiring Aircraft to construct permanent total enclosures with associated baghouses and Ultra Low Particulate Air (ULPA) filters for Buildings 2 and 3 by December 20, 2019. While these controls have been constructed and installed, source testing to confirm the control efficiency has not yet occurred at the end of 2019. The first annual progress report is due in April 2020. Staff continues to work with the facility to ensure the Revised RRP is fully implemented.

A.3. Air Liquide Large Industries U.S., LP (ID 148236) – El Segundo

Air Liquide Large Industries U.S., LP (Air Liquide) is a hydrogen plant located within the Chevron El Segundo Refinery facility on land leased from Chevron. Air Liquide and Chevron are independent parties and share no common ownership or employees. The plant began operations in 2004 and was originally part of Chevron before separating in 2008. The plant produces up to 90 million standard cubic feet of hydrogen per day and 227,000 pounds of steam per hour. Air Liquide receives its feed streams which include refinery fuel gas and natural gas from Chevron and sends its products of hydrogen and steam back to Chevron. Hydrogen is used in various aspects of petroleum refining.

On January 25, 2019, South Coast AQMD staff sent a letter requiring Air Liquide to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2016 emissions. The main toxic air contaminants contributing to the priority score are arsenic and arsenic compounds, nickel and nickel compounds, and cadmium and cadmium compounds. The main sources of emissions are from the reformer heater.

Air Liquide submitted its ATIR on June 25, 2019. The ATIR was in review as of the end of 2019.

A.4. All American Asphalt (ID 114264) – Irwindale

All American Asphalt is an asphalt plant located in Irwindale, that blends various ingredients to manufacture hot mix asphalt, also known as asphaltic concrete. This asphalt is then transported out of the facility to support construction projects.

On August 23, 2019, South Coast AQMD staff sent a letter requesting All American Asphalt to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions, with hexavalent chromium being the main air toxic contributor to the high priority score. Hexavalent chromium emissions were due primarily to the Rotary Dryer. On September 19, 2019, All American Asphalt submitted the Initial Information for the ATIR. The ATIR is due on January 21, 2020.

A.5. All American Asphalt (ID 148146) – Perris

All American Asphalt is an asphalt plant located in Perris, that blends various ingredients to manufacture hot mix asphalt, also known as asphaltic concrete. This asphalt is then transported out of the facility to support construction projects.

On August 23, 2019, South Coast AQMD staff sent a letter requesting All American Asphalt to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions, with hexavalent chromium being the main air toxic contributor to the high priority score. Hexavalent chromium emissions were due primarily to the Rotary Dryer. On September 19, 2019, All American Asphalt submitted the Initial Information for the ATIR. The ATIR is due on January 21, 2020.

A.6. Anaplex Corp (ID 16951) - Paramount

Anaplex Corporation (Anaplex) operates a metal processing and finishing company in the City of Paramount. The facility processes parts for commercial and defense aerospace applications. The processes include anodizing and plating process lines which use hexavalent chromium, nickel, and cadmium. Additional details regarding the ambient monitoring in Paramount and near Anaplex and events that led up to the designation of Anaplex as a Potentially High Risk Facility are discussed on South Coast AQMD's website.²⁰

Based on ambient monitoring in December 14, 2016, South Coast AQMD staff designated Anaplex as a Potentially High Risk Level Facility specifically based on high levels of hexavalent chromium found at monitors adjacent to Anaplex. As part of this designation, Anaplex was required to submit an Early Action Reduction Plan by March 14, 2017, an ATIR by May 16, 2017, a HRA and a RRP by June 13, 2017. Following litigation in Superior Court, the Hearing Board granted a Stipulated Order for Abatement on January 18, 2017.

Anaplex submitted an Early Action Reduction Plan on March 13, 2017. South Coast AQMD staff provided comments on April 26, 2017 and requested revisions and resubmittal of the Early

²⁰ <http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities/facilities---order-for-abatement/anaplex-corp>

Action Reduction Plan. Anaplex submitted a revised Early Action Reduction Plan on May 11, 2017 which was conditionally approved on May 31, 2017.

On May 15, 2017, Anaplex submitted an ATIR and a HRA and RRP on June 13, 2017. South Coast AQMD staff provided written comments regarding all three documents on December 8, 2017, and requested revisions and resubmittal of each document. On December 8, 2017, South Coast AQMD staff provided Anaplex with comments and recommendations on the submitted ATIR, HRA and RRP, and requested revision and resubmittal of those respective documents. After numerous technical conference calls and meetings with Anaplex representatives, South Coast AQMD staff received the Revised ATIR on May 1, 2018 and the Revised HRA and RRP on May 17, 2018. After review, South Coast AQMD staff requested another revision and resubmittal of the HRA and RRP. Anaplex submitted the Revised HRA and Revised RRP on September 26, 2018. The revised ATIR was approved on October 9, 2018.

The Revised HRA submitted by Anaplex contained alternate HRA scenarios in the main HRA report, which was not consistent with South Coast AQMD's AB 2588 Supplemental Guidelines. In the interest of time and pursuant to Rule 1402 (e)(2)(D), South Coast AQMD staff modified the Revised HRA resubmitted on September 26, 2018 to follow Appendix B of South Coast AQMD's AB 2588 and Rule 1402 Guidelines²¹. The HRA relied upon results of one of the scenarios contained in Anaplex's resubmitted Revised HRA, and presented the information consistent with South Coast AQMD's AB 2588 Supplemental Guidelines. Anaplex's modified HRA was conditionally approved on October 9, 2018 and was submitted to OEHHA for their review. The HRA results representing the 2016 inventory year indicated that Anaplex posed a maximum cancer risk of 931 chances in-one-million for a residential receptor located at the corner of Madison Street and Illinois Avenue, based on a 30 year residential exposure, and 2,836 chances in-one-million for a worker receptor located immediately south of Anaplex, based on a 25 year worker exposure. The cancer risk was mainly due to hexavalent chromium emissions from spray booth operations. A cancer burden of 9.73 was estimated, based on a 70 year lifetime exposure.

The maximum non-cancer chronic hazard indices of 0.06 and 2.02 were projected for residential and non-residential receptors, respectively. The maximum non-cancer 8-hour chronic hazard index was 0.11 and the maximum non-cancer acute hazard index was 23.84 at Anaplex's property boundary.

Since the HRA results were above the Significant Risk Level in Rule 1402, Anaplex was required to notify the public about the health risk in addition to conducting annual public notification meetings until the Rule 1402 Action Risk Level was achieved pursuant to Rule 1402(p). Notices of the public notification meeting were sent out to over 35,000 people in the area of impact. South Coast AQMD staff held a public notification meeting at the Progress Park Community Center on December 1, 2018 to explain the impact of Anaplex's emissions on public health and to discuss how to reduce risks.

On April 24, 2019, South Coast AQMD rejected the September 26, 2018 Revised RRP. Anaplex submitted a set of revised risk reduction measures on July 12, 2019. A follow-up comment letter

²¹ <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines-201809.pdf>

was sent to Anaplex on September 6, 2019 which detailed remaining concerns on certain risk reduction measures. On October 31, 2019, Anaplex submitted a request letter for RRP approval that detailed the disputed risk reduction measures; however, South Coast AQMD staff required additional supporting documentation to complete the review. Anaplex submitted a revised RRP for approval on December 18, 2019, which was under review by South Coast AQMD as of the end of 2019.

A.7. Arconic Global Fasteners & Rings, Inc. (ID 134931) – Fullerton

Arconic Global Fasteners & Rings, Inc. (Arconic) manufactures precision fastening systems and components for the aerospace industry. They operate plating lines, ovens and abrasive blasting equipment.

This facility has a HRA that was approved in November 1997 with elevated cancer risks requiring risk reduction. The RRP was submitted in February 2001 and approved March 2001. The RRP involved eliminating use of perchloroethylene as a cleaning solvent, and installing scrubbers to control emissions of various metals from plating operations. This RRP was fully implemented and approved in October 2003. However, the resulting acute hazard index was greater than 1.0 due to use of sodium hydroxide as part of the plating operations.

The facility voluntarily submitted an HRA to demonstrate that the acute hazard index is no longer greater than 1.0. Upon review of the HRA, South Coast AQMD staff found that certain emissions were not included in the HRA. In response, the facility indicated that some permitted sources were no longer operated at the facility, but still listed on the facility's Permits to Operate. Staff informed the facility that emissions from those sources cannot be excluded unless modifications to the facility permits are done and those sources are inactivated. Staff is currently working with the facility to resolve the outstanding issues.

A.8. Ascon Landfill (ID 43819) – Huntington Beach

Ascon Landfill is a waste disposal site in the city of Huntington Beach that handled mostly waste from oil drilling operations as well as inert solid wastes until 1984 when the site stopped commercially receiving waste. In 2003 the California Department of Toxic Substances Control (DTSC) notified the site's responsible parties about cleanup responsibilities at Ascon Landfill. The responsible parties requested that South Coast AQMD staff review information to approve alternative Rule 1466 provisions for remedial activities including a proposed PM10 limit of 50 $\mu\text{g}/\text{m}^3$ instead of 25 $\mu\text{g}/\text{m}^3$ as required in subparagraph (d)(2).

Staff was required to evaluate the health risks associated with toxic air emissions which was calculated by multiplying PM10 speciation profiles from the facility by the proposed alternative Rule 1466 PM10 limits. To do so, staff reviewed a DTSC HRA prepared in 2013 and identified missing information needed to complete the review. This information was sent to South Coast AQMD staff on November 15, 2018 and additional missing information was submitted on January 16, 2019. Staff concluded there was no correlation between the submitted data and the proposed alternative Rule 1466 provisions based on the information submitted. Supplemental information was requested and received on February 14, 2019. Staff performed risk analysis on the toxic air emissions calculated with the new information and concluded that the alternative provisions were

approvable on March 6, 2019.

A.9. Chevron Products Co. (El Segundo Refinery) (ID 800030) – El Segundo

Chevron Products Co. (Chevron) is a 1,000 acre petroleum oil refinery in the City of El Segundo with a 290,000 barrels of crude oil per day processing capacity. Chevron has approximately 20% of the gasoline market share in Southern California and is one of the largest refineries on the West Coast. The main products of the refinery are transportation fuels, such as gasoline, jet fuel, and diesel fuel.

On October 14, 2016, South Coast AQMD staff sent a letter requiring Chevron to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions with furans, polycyclic aromatic hydrocarbons, arsenic, cadmium, and related compounds as the main air toxics contributing to the high priority score. Chevron elected to participate in the Voluntary Risk Reduction Program and submitted a VRRP on March 27, 2017. Reductions of diesel particulate matter (DPM) from unpermitted internal combustion engines along with reductions of hexavalent chromium from unpermitted welding are elements of the VRRP. In 2018, staff have worked with the permitting teams to evaluate options for incorporating these requirements so that they are enforceable. The VRRP was approved on April 24, 2019. Chevron will submit annual progress reports on the status of their voluntary risk reduction measures as well as a Final Implementation Report once all voluntary risk reduction measures are implemented.

A.10. City of Cerritos, Water Division (ID 74396) - Cerritos

The City of Cerritos, Water Division draws groundwater from three deep wells. The facility operates two natural gas fired engines. The well on Artesia has one main engine that draws well water and one emergency engine for backup electricity.

On August 23, 2019, South Coast AQMD staff sent City of Cerritos, Water Division a notice to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory. Their primary pollutants and risk drivers are formaldehyde and 1,3-butadiene. The ATIR is due on January 21, 2020.

A.11. Eco Services Operations Corp. (ID 180908) – Carson

Eco Services Operations in Carson regenerates spent sulfuric acid from refineries. In addition to the sulfuric acid plant, Eco Services Operations operates an alum manufacturing system and other equipment associated with storage and handling of spent sulfuric acid and other raw materials.

On December 10 2019, South Coast AQMD staff sent a letter requiring Eco Services Operations to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory with sulfuric acid as the main contributor to the high priority score. The main source of emissions is from their primary furnace. Eco Services Operations elected to submit an ATIR. The ATIR is due May 8, 2020.

A.12. Eisenhower Medical Center (ID 3671) – Rancho Mirage

Eisenhower Medical Center is a hospital based in Rancho Mirage, California serving the Coachella Valley region.

On June 12, 2018, South Coast AQMD staff sent a letter requiring Eisenhower Medical Center to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2014 annual emissions inventory, with formaldehyde from the cogeneration units as the main air toxics contributing to the high priority score.

On November 9, 2018, Eisenhower Medical Center submitted an ATIR. South Coast AQMD staff reviewed the submittal and worked with the facility to make some necessary revisions such as building and stack coordinates in addition to emission estimation methods. Based on results from preliminary analysis of the ATIR and discussion with the facility, Eisenhower Medical Center submitted a request to source test both cogeneration units for formaldehyde, 1-3 butadiene, and acetaldehyde.

Source testing of both cogeneration units took place starting on February 19, 2019. The source test report was approved by South Coast AQMD on June 27, 2019 and the results were initially determined to not be acceptable for emissions calculations. South Coast AQMD staff later received clarification that the source test results could indeed be used for emissions calculations. Eisenhower Medical Center submitted a revised ATIR on August 9, 2019. Upon review, South Coast AQMD determined that Eisenhower Medical Center's updated priority score was below one, and a letter was sent on August 16, 2019 informing the facility that it would be exempt from the AB 2588 program.

A.13. Elite Comfort Solutions (ID 182610) – Commerce

Elite Comfort Solutions (Elite) operates a facility in city of Commerce and manufactures polyurethane foam for bedding, furniture, packaging, automotive, and medical industries.

On January 31, 2018, South Coast AQMD staff sent a letter requiring Elite to either prepare an ATIR or VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions inventory, with toluene diisocyanates as the main air toxic contributor to the high priority score.

Elite elected to participate in the Voluntary Risk Reduction Program and submitted the VRRP on June 22, 2018. Following review, staff required Elite to provide missing information and to make several revisions. Elite provided information and a revised submittal on November 7, 2018. However, in reviewing this submittal, South Coast AQMD staff found that additional risk reduction measures were needed in order to meet the Voluntary Risk Reduction Threshold. In response, the facility had to submit revisions to the VRRP on December 3, 2018, and another one on December 17, 2018. After further review, staff discovered additional issues regarding receptor exposure, cost & feasibility of risk reduction measures and hours of operation and requested revision and resubmission of VRRP. Elite submitted several VRRP revisions from February 12 to November 27, 2019. A final revision addressing all staff comments is due on January 8, 2020.

A.14. Equilon Enter. LLC, Shell Oil Prod. US (ID 800372) – Carson

Equilon Enterprises LLC (Equilon) operates a petrochemical product distribution terminal in the City of Carson which is comprised of loading racks, storage tanks, and product pipeline. The products are transported by pipeline, trucks, or rail.

On October 10, 2017, South Coast AQMD staff sent a letter requiring Equilon to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions with benzene, ethyl benzene, and naphthalene emissions as the main air toxics contributing to the high priority score. Equilon elected to prepare an ATIR and submitted it on March 9, 2018. After review and subsequent revisions, South Coast AQMD sent a letter to Equilon on May 30, 2018 approving the ATIR and requiring the preparation of an HRA.

On August 28, 2018, Equilon submitted an HRA. After review, staff discovered several discrepancies with the HRA such as variable emission rates, terrain characterization and risk values and subsequently required revision and resubmission. Equilon provided HRA revisions on September 14, 2018, April 4, 2019, and two more revisions on November 2019. A minor revision to the HRA Summary page was submitted on December 6, 2019. South Coast AQMD staff found no other issues with the HRA and is in the process of approving it.

A.15. Evonik Corporation (ID 183926) – Los Angeles

Evonik Corporation is a facility in Los Angeles that is one of many locations for the multinational company Evonik Industries, a specialty chemicals company.

On December 6, 2019, South Coast AQMD staff sent a letter requesting Evonik Corporation to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2016 annual emissions with 4,4'-methylenedianiline (MDA). MDA emissions came primarily from fugitive components. The initial information submittal is due in January 2020.

A.16. Gerdau/TAMCO (ID 18931) – Rancho Cucamonga²²

Gerdau/TAMCO (Gerdau) is located in the City of Rancho Cucamonga and was acquired by TAMCO steel mini mill in October 2010. The facility produces steel reinforcing bars that are commonly used in construction. Ferrous steel scrap is recycled and delivered to the facility by trucks and rail, and then melted in an electric arc furnace to produce steel billets. The billets are reheated in a reheat furnace to form concrete reinforcing bar (rebar). The primary pollutants for this facility are hexavalent chromium, nickel, manganese, mercury, and arsenic.

Gerdau was directed to submit an ATIR and HRA based on significantly high levels of cadmium reported in its 2011 annual emissions reporting. The HRA was approved on October 8, 2015 based on the 2015 OEHHA Risk Assessment Guidelines. Several health risks in the approved HRA exceeded levels specified in Rule 1402 and Gerdau was therefore required to notify the public regarding the results of its HRA, and also submit a RRP. Notices of the public notification meeting were sent out to 1,523 people in the area where the health risks were above the levels established in Rule 1402. South Coast AQMD staff held a public notification meeting on

²² <http://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/gerdau>

November 30, 2015 to explain the impact of Gerdau's emissions on public health and to discuss next steps.

Gerdau submitted its first RRP on April 5, 2016. After review of the RRP and several meetings with facility representatives, South Coast AQMD staff provided comments on the RRP and on July 1, 2016, Gerdau submitted a revised RRP. However, the revised RRP did not account for hexavalent chromium emissions from ladle heaters, billet reheat furnace, and spray chamber stack. South Coast AQMD staff added these emissions which resulted in a projected potential maximum residential cancer risk of 8.7 chances in-one-million. The cancer burden and acute and chronic HI remain below 1, so after making these revisions, South Coast AQMD staff conditionally approved Gerdau's RRP on July 5, 2016. The RRP consisted of ten risk reduction measures to be completed by January 5, 2019.

On July 5, 2017, Gerdau submitted a progress report to update South Coast AQMD on the status of its risk reduction measures. On January 25, 2018, Gerdau submitted an amendment to the RRP to specify plans to pave vehicle travel paths, which South Coast AQMD staff approved. On July 13, 2018, Gerdau submitted their second progress report indicating that they implemented seven of the ten risk reduction measures, while three of the measures are still in process. A public notice of risk reduction activities by Gerdau was mailed out to the notification area on September 18, 2018. South Coast AQMD staff continues to monitor the progress of the RRP and anticipates all risk reduction measures to be implemented within specified timeframes.

A.17. Glendale City, Glendale Water & Power (ID 800327) – Glendale

Glendale Water & Power (GWP) is a municipal power plant owned and operated by the City of Glendale. GWP consists of three utility boilers and eight stationary combustion turbines with a combined 238 MW generation capacity. These units combust natural gas which is supplemented by landfill gas from a Class III landfill.

On March 1, 2017, South Coast AQMD staff sent a letter requesting GWP to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions with dioxins and furans, hexavalent chromium, and arsenic as the main air toxics contributing to the high priority score.

GWP elected to prepare an ATIR and submitted it on July 28, 2017. On March 22, 2018, the ATIR was approved and the facility notified to prepare an HRA. The HRA was submitted on July 18, 2018. After requesting and receiving several revisions from GWP, South Coast AQMD staff approved the HRA on January 22, 2019. The HRA results representing the 2015 inventory year indicated that GWP posed a maximum cancer risk of 179.5 chances in-one-million and a maximum chronic hazard index of 1.69, based on a 30 year residential exposure. The cancer risk was mainly due to dioxins and furans from landfill gas combustion. A cancer burden of 4.97 was estimated, based on a 70 year lifetime exposure.

Since the HRA results were above the Notification Risk Level in Rule 1402, GWP was required to notify the public about the health risk. Notices of the public notification meeting were sent out to over 7,700 people in the area of impact. South Coast AQMD staff held a public notification

meeting at the Glendale Downtown Central Library on June 26, 2019 to explain the impact of GWP's emissions on public health and to discuss next steps.

Since the HRA results were above the Action Risk Level in Rule 1402, GWP was required to prepare a RRP, which was received on October 9, 2019. As of the end of 2019, South Coast AQMD staff was reviewing the RRP.

*A.18. Hixson Metal Finishing (ID 11818) - Newport Beach*²³

Hixson Metal Finishing (Hixson) located in the City of Newport Beach, is a metal finishing facility that conducts anodizing, testing, plating, coating, and painting operations on various parts for use in the aerospace and defense industries. Some of the potential onsite sources of emissions include the chrome anodizing line, nickel and cadmium plating, curing and drying ovens, paint spray booths, abrasive blasting equipment, wastewater treatment system and miscellaneous natural gas combustion sources. The major source of concern with Hixson's operation is fugitive dust containing hexavalent chromium. On April 3, 2014, South Coast AQMD staff required Hixson to prepare and submit a HRA and a RRP, in conjunction with a Stipulated Order for Abatement approved by South Coast AQMD's Hearing Board that limited Hixson's activities, and required shutdown of certain operations using hexavalent chromium if monitored ambient levels exceeded specified hexavalent chromium levels.

Hixson submitted their HRA to South Coast AQMD on November 13, 2014. Upon detailed review and use of the 2015 OEHHA Risk Assessment Guidelines, South Coast AQMD staff finalized the submitted HRA on May 8, 2015. The approved HRA found a maximum residential cancer risk of 1,502 chances in-one-million mainly from hexavalent chromium emissions. The estimated cancer risk was based on emissions occurring before the facility instituted various control measures and current level of risk is substantially lower. Since the HRA results were above the Significant Risk Level in Rule 1402, Hixson was required to notify the public about the health risk in addition to conducting annual public notification meetings until the Rule 1402 Action Risk Level was achieved pursuant to Rule 1402(p). Notice of the public notification meeting was sent out to over 7,300 people in the area of impact. South Coast AQMD staff held a public notification meeting at the Hoag Conference Center on June 18, 2015.

Hixson submitted its first RRP on March 2, 2015. On May 8, 2015, South Coast AQMD staff rejected Hixson's first RRP and required resubmittal. Hixson subsequently submitted a second RRP on June 5, 2015. On June 26, 2015, South Coast AQMD staff rejected Hixson's second RRP due to its failure to demonstrate that the proposed controls reduce risks below Rule 1402 thresholds. Hixson resubmitted a revised RRP on July 1, 2015, and South Coast AQMD staff conditionally approved it on July 24, 2015. The associated permits to construct implementing the RRP were approved on December 11, 2015 and a second public notification meeting was held on February 11, 2016 at the Hoag Conference Center to inform interested parties regarding the key activities surrounding the RRP. In the 2016 Annual Report for the AB 2588 Program, staff incorrectly stated that the RRP was fully implemented as of December 31, 2016. The Order for Abatement expired on December 31, 2016, as Hixson had constructed all the measures contained in the RRP. However, one of the risk reduction measures requires all emissions from Building 2 to

²³ <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/hixson-metal-finishing>

be captured and routed through a dry scrubber followed by ULPA filters. The existing chromic acid anodizing tank (Tank 70) is located in Building 2 and currently has a control system that includes an ULPA filtration system. As part of the modifications to Building 2, existing Tank 70 is being replaced with a new chromic acid anodizing tank (also designated Tank 70) vented to the new Building 2 control system, which also includes ULPA filtration. However, there was an issue with the temperature controls for the new Tank 70, which has delayed its operation. Since the existing Tank 70 is already being controlled by an ULPA filtration system, there are no additional emissions expected from the continued operation of existing Tank 70 compared to new Tank 70, as proposed in the RRP. Ambient monitoring for hexavalent chromium continues in the vicinity of Hixson. As of the end of 2018, construction of the new Tank 70 and the new air pollution control system was complete, and the facility conducted a source test in June 2018. However, it was discovered that there were moisture problems and additional mesh pads were needed. The facility conducted another source test in December 2019 to demonstrate compliance.

A.19. Holliday Rock Co., Inc. (ID 41580) – Rialto

Holliday Rock Co., Inc. (Holliday Rock) is a hot mix asphalt plant located in Rialto. There are multiple locations of Holliday Rock in the South Coast air basin. It is one of the largest independent producers of aggregate, ready mix concrete, and hot mix asphalt in the United States.

On December 20, 2018, South Coast AQMD staff sent a letter requiring Holliday Rock to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory. The main toxic air contaminants contributing to the priority score are manganese and manganese compounds, mercury and mercury compounds, and nickel and nickel compounds. The main sources of emissions were from cement silos and loadout hoppers.

Holliday Rock submitted its ATIR on May 21, 2019. Holliday Rock stated that several devices and emissions from Holliday Trucking (ID 12036), a nearby facility also owned by Holliday Rock, had been mistakenly included in the 2017 AER. The devices in question were permitted under Holliday Trucking and were therefore not included in Holliday Rock's ATIR. After requesting and receiving several revisions from Holliday Rock, South Coast AQMD staff approved the ATIR on December 6, 2019. Since Holliday Rock's revised priority score was less than 10, the facility was not subject to HRA requirements.

A.20. Industrial Battery Engineering Inc. (ID 3277) – Sun Valley

Industrial Battery Engineering (IBE) operates a battery manufacturing plant in Sun Valley and manufactures large batteries for forklifts and other industrial equipment. They operate various equipment at the facility including a lead melting pot, spray booth, lead oxide mixing system, lead oxide storage bin, and associated air pollution control equipment such as baghouses.

South Coast AQMD staff received the request to review the modeling files for a 1420.2 Monitoring and Sampling Plan in February 2019. Staff completed review of the modeling files in June 2019 and concurred with the monitoring locations proposed by the facility. South Coast AQMD staff also proposed to add a sampling location to represent upwind or background concentrations.

A.21. Kirkhill Inc (ID 187823) – Brea

Kirkhill Inc (Kirkhill) is a rubber manufacturing facility located in Brea. Kirkhill produces multiple types of rubbers for industries including aerospace and medical manufacturing. The rubber manufacturing process includes raw material mixing, milling, pressing, and various types of curing.

On January 31, 2018, South Coast AQMD staff sent a letter requiring Kirkhill to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory. The main air toxic contributing to the priority score is hexavalent chromium from mixers, mills, presses, ovens, autoclave, and roto-curing devices.

Kirkhill elected to prepare an ATIR and submitted it on July 3, 2018. On October 19, 2018, South Coast AQMD staff sent a letter to the facility approving the ATIR and requiring the preparation of an HRA based on the approved ATIR. Kirkhill submitted the HRA on January 17, 2019. After requesting and receiving several revisions from Kirkhill, South Coast AQMD staff approved the HRA on September 19, 2019. The HRA results representing the 2015 inventory year indicated that Kirkhill posed a maximum cancer risk of 18.8 chances in-one-million based on a 30 year residential exposure and a maximum cancer risk of 15.9 chances in-one-million based on a 25 year worker exposure. The cancer risk was mainly due to hexavalent chromium from coloring dyes in the rubber manufacturing process.

Since the HRA results were above the Notification Risk Level in Rule 1402, Kirkhill was required to notify the public about the health risk. Notices of the public notification meeting were sent out to over 900 people in the area of impact. South Coast AQMD staff held a public notification meeting at Brea Junior High School on November 13, 2019 to explain the impact of Kirkhill's emissions on public health and to discuss actions taken by the facility to reduce risk.

Since the HRA results were below the Action Risk Level in Rule 1402, Kirkhill was not required to take action to reduce its health risks. However, Kirkhill voluntarily ceased usage of coloring dyes containing chromium in its rubber manufacturing process and submitted permit applications for several of its previously Rule 219 exempt devices to allow South Coast AQMD to enforce the reduction. By ceasing usage of coloring dyes containing chromium, Kirkhill reduced its risk even further to under the Notification Risk Level in Rule 1402.

A.22. LA City, Sanitation Bureau (Hyperion Treatment Plant) (ID 800214) – Playa del Rey

The City of Los Angeles owns and operates the Hyperion Water Reclamation Plant (Hyperion) in the Playa del Rey community. Hyperion is a publicly owned wastewater treatment plant with over 275 million gallon capacity with primary and full secondary treatment processes. As part of the treatment process, more than 885,000 pounds of solid and organic materials are removed daily and treated through anaerobic digestion.

On October 28, 2016, South Coast AQMD staff sent a letter requiring Hyperion to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory with perchloroethylene and arsenic as the main air toxics contributing to the high priority score.

On November 23, 2016, Hyperion elected to participate in the Voluntary Risk Reduction Program and submitted a VRRP on January 24, 2017. Throughout 2018, South Coast AQMD and Hyperion staff have been working to resolve various issues regarding electronic format of the emissions inventory, the use of unapproved source tests, the distribution of emissions, and receptor grid spacing. Comments were provided to Hyperion on February 9, 2018 and the facility submitted revisions to the EIM files on March 14, 2018. Upon review, South Coast AQMD staff found additional errors and requested revisions on September 4, 2018. Hyperion submitted revised EIM files on December 19, 2018. South Coast AQMD staff completed its review of the VRRP EIM files and provided comments to Hyperion on January 31, 2019. The facility made the requested changes and submitted revised EIM files on February 19, 2019. South Coast AQMD staff approved the VRRP as an ATIR on April 3, 2019.

A.23. LA City, Street Maintenance Bureau Department of Public Works (ID 25196) – North Hollywood

LA City, Street Maintenance Bureau Department of Public Works (LA City, Street Maintenance) is an hot mix asphalt plant in North Hollywood. The facility is a city owned public utility that provides maintenance work on city streets in Los Angeles. The plant includes equipment such as silos, dryers, asphalt tanks, and associated air pollution control equipment.

On September 4, 2019, South Coast AQMD staff sent a letter requiring LA City, Street Maintenance to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory. The risk driver for this facility is polycyclic aromatic hydrocarbons (PAHs) from the hot mix asphalt plant.

LA City, Street Maintenance elected to submit an amendment to their 2017 quadrennial emissions report. As of the end of 2019, the amendment was under review. The ATIR is due in February 2020.

A.24. Light Metals (ID 83102) – City of Industry

Light Metals Inc. (Light Metals) is located in the City of Industry and produces secondary aluminum alloy by processing recycled aluminum into ingot for the metal casting industry. On August 2, 2019, South Coast AQMD staff sent a letter requiring Light Metals to submit an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory with polychlorinated dibenzofurans as the main air toxic contributing to the high priority score. Light Metals chose the ATIR option and submitted their ATIR on December 31, 2019.

A.25. Los Angeles By-Products (ID 60384) – Sun Valley

Los Angeles By-Products (LA By-Products) operates a landfill gas collection system and flares for combustion of the landfill gas and is located in Sun Valley, California.

On August 23, 2019, South Coast AQMD staff sent a letter requiring LA By-Products to submit an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory, with polycyclic aromatic hydrocarbons (PAHs) and formaldehyde as the

main air toxics contributing to the high priority score. The ATIR is due in January 2020.

A.26. Lubeco Inc (ID 41229) – Long Beach

Lubeco, Inc. (Lubeco) is a metal finishing company operating in Long Beach near the southern border of the City of Paramount. Lubeco's primary operations involve painting, surface preparation, anodizing, sealing and coating of metals for the aerospace industry. Ancillary operations include abrasive blasting, wastewater treatment, and operation of a natural gas-fired boiler and ovens.

Lubeco utilizes baking and drying ovens, spray booths, tanks for chromic acid anodizing, aqueous solutions, and acid surface preparations. These processes can potentially generate hexavalent chromium emissions.

Beginning in October 2016, through expanded monitoring efforts in the City of Paramount, South Coast AQMD staff found high concentrations of hexavalent chromium in the vicinity of Lubeco. As a result, Lubeco was selected as a host facility for testing of hexavalent chromium emissions from a heated sodium dichromate seal tank due to elevated ambient monitoring readings in the nearby south Paramount area. On April 27, 2017, South Coast AQMD staff conducted source tests for hexavalent chromium emissions from the sodium dichromate seal tank with the main objective of determining an emission factor to calculate emissions from such tanks used in plating operations. The results of the source tests showed the heated sodium dichromate tank to be a source of hexavalent chromium. The second objective of this testing was to identify potential sources of hexavalent chromium emissions as measured by South Coast AQMD ambient air monitors in the nearby south Paramount area. South Coast AQMD subsequently filed a petition for Order for Abatement with the Hearing Board. Following the hearings on August 17 and August 23, 2017, the Hearing Board granted South Coast AQMD permission to install ambient monitors and a meteorological station on the facility property and permission to conduct additional source tests.

Because of the ambient measurements, South Coast AQMD staff notified Lubeco on September 8, 2017 that the facility may be designated as a Potentially High Risk Level Facility. Lubeco representatives and South Coast AQMD staff met on September 22, 2017 to discuss the monitoring results that had led to the notification. On September 28, 2017, Lubeco was officially designated as a Potentially High Risk Level Facility. As part of this designation, Lubeco was required to expeditiously reduce risks and to submit an Early Action Reduction Plan by December 27, 2017, an ATIR by February 27, 2018, a HRA and a RRP by March 27, 2018. The Early Action Reduction Plan was submitted on December 8, 2017. On March 29, 2018, 2018, South Coast AQMD sent Lubeco an approval letter for the Early Action Reduction Plan. On February 9, 2018, Lubeco submitted an ATIR followed by a HRA and RRP on March 27, 2018.

South Coast AQMD staff reviewed the submitted ATIR and HRA and determined that the meteorological data from the Compton station was more representative of the site conditions at Lubeco than that used in the facility's HRA. Lubeco submitted a revised HRA in March 2019. Staff also found that Lubeco used non-default assumptions in their emission calculations for the sodium dichromate seal tank and requested for supporting documentation which was submitted in July 2019. Upon review of the submitted information, Staff determined that the facility had

understated the operating hours and requested for an updated ATIR and HRA to reflect the increase in operating hours and emissions for the dichromate seal tank in August 2019.

Lubeco submitted a revised HRA on September 16, 2019. The Revised HRA representing the 2015 inventory year indicated that Lubeco posed a maximum cancer risk of 129 chances in-one-million for a residential receptor, based on a 30 year residential exposure, and 39 chances in-one-million for the worker receptor, based on a 25 year worker exposure. South Coast AQMD approved the ATIR and HRA on September 27, 2019.

Since the HRA results were above Rule 1402 Notification Risk Levels, a public meeting to notify the public about the health risk was required. Staff also reviewed the Risk Reduction Plan and found that some of the proposed risk reduction measures were inconsistent with recent permit applications. As a result, on October 24, 2019, staff requested revision and resubmission of the Risk Reduction Plan. On November 8, 2019, Lubeco submitted an updated Risk Reduction Plan on November 8, 2019 and a subsequent revised Risk Reduction Plan on December 20, 2019. A public notification meeting is scheduled to occur in 2020.

A.27. MM West Covina LLC (ID 113873) – West Covina

MM West Covina is a cogeneration facility located on the BKK Landfill in the City of West Covina. Landfill gas from the inactive BKK Landfill, which received Class I and Class III waste, is combusted in the facility's steam generator. The steam powers a 7,100 kW capacity steam turbine to produce electricity.

On January 11, 2017, South Coast AQMD staff sent a letter requiring MM West Covina to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2014 annual emissions inventory with dioxins and hexavalent chromium being the main air toxic contributors to the high priority score. On February 15, 2017, MM West Covina elected to prepare an ATIR. The ATIR was submitted on June 13, 2017. South Coast AQMD staff provided comments on August 17, 2017 requiring revisions to the ATIR which was provided on August 29, 2017. South Coast AQMD staff approved the ATIR on March 27, 2018, and notified the facility to prepare and submit a HRA by June 26, 2018.

MM West Covina submitted an HRA on July 2, 2018. After review, on August 1, 2018, South Coast AQMD staff informed the facility that HRA did not include all of the emissions, specifically dioxins and furans, from the approved ATIR and therefore rejected the HRA. MM West Covina opted to conduct a source test to address the accuracy of the inventory of dioxin and furans in the ATIR. A revised HRA was submitted on October 5, 2018 which again utilized an inventory that was not consistent with the approved ATIR. On July 9, 2019, South Coast AQMD sent a letter to MM West Covina requiring a revision of the HRA while allowing the source test results to be utilized in an alternate HRA. On August 16, 2019, MM West Covina submitted a revised HRA which also included an alternate HRA. At the end of 2019, South Coast AQMD had provided additional comments on the HRA and was working with MM West Covina to finalize the HRA.

A.28. Motion Picture & Television Fund (ID 16211) – Woodland Hills

Motion Picture & Television Fund (MPTF) is a service organization that provides healthcare and retirement living services to members of the entertainment industry community. MPTF operates a

facility in Woodlands Hills and has cogeneration units powered by internal combustion engines which generate formaldehyde, 1,3-butadiene, and benzene emissions.

On December 6, 2019, South Coast AQMD staff sent a letter requiring MPTF to prepare an ATIR due to the facility having a priority score greater than 10 based on 2017 annual emissions inventory. The high priority score was mostly due to internal combustion engine emissions.

A.29. PABCO Bldg Products LCC (ID 45746) – Vernon

PABCO Bldg Products LLC (PABCO) is a paper mill operation located in Vernon that manufactures drywall board liner paper from recycled paper stock. The facility operates a paper conveying system, three boilers, one process unit hot air heater, a plasma arc cutter, and Rule 219 equipment including space heaters and a propane tank.

On December 6, 2019, South Coast AQMD staff sent a letter requiring PABCO to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2016 annual emissions inventory. The main toxic air contaminant contributing to the priority score was sodium hydroxide. The main sources of emissions were from boiler water treatment and from caustic felt wash processes.

On December 18, 2019, PABCO provided sodium hydroxide emission revisions along with documentation to substantiate their revisions. As of the end of 2019, South Coast AQMD staff was reviewing PABCO's sodium hydroxide emission revisions.

A.30. Pac Rancho, Inc. (ID 140871) – Rancho Cucamonga

Pac Rancho Inc. located in the city of Rancho Cucamonga, manufactures highly-engineered components and sub-assemblies. The Company uses green sand, dry sand and permanent mold castings in aluminum and magnesium alloys, investment castings in numerous ferrous, non-ferrous, and super alloys.

On September 4, 2019, South Coast AQMD staff sent a letter requiring Pac Rancho, Inc. to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2018 annual emissions inventory. The facility submitted the Initial Information for the ATIR in November 2019. South Coast AQMD staff has reviewed the initial information. The ATIR is due in March 2020.

A.31. Pacific Clay Products, Inc. (ID 17953) – Lake Elsinore

Pacific Clay Products in Lakes Elsinore manufactures bricks and other clay products. The facility operates various equipment including dryers, kilns, conveyors, silos, crushers, and other miscellaneous clay processing equipment and associated baghouses.

On August 23, 2019, South Coast AQMD staff sent a letter requiring Pacific Clay Products to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory. The main toxic air contaminant contributing to the priority score are polycyclic aromatic hydrocarbons which comes from the heating of diesel which is used as a non-stick lubricant to ease the bricks from their molds. The facility also operates dryers, kiln, conveyors, silos, screens, crushes, and other miscellaneous clay processing equipment and

associated baghouses. The facility provided the initial information for the ATIR on September 26, 2019. The ATIR is due on February 11, 2020.

A.32. Pasadena Department of Water and Power (ID 800168) - Pasadena

The City of Pasadena, Departments of Water and Power (Pasadena DWP) owns and operates a power plant in Pasadena, California. This facility operates several gas turbines to provide electricity to residents in the surrounding area.

On January 16, 2019, South Coast AQMD staff sent a letter requiring Pasadena DWP to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2016 annual emissions inventory with polycyclic aromatic hydrocarbons (PAHs) and formaldehyde as the main air toxics contributing to the priority score. Pasadena DWP elected to prepare a VRRP, and on April 2, 2019, conducted a source test on one of the gas turbines for the air toxics PAHs, formaldehyde, and benzene.

On June 14, 2019 Pasadena DWP submitted a VRRP. Upon review, South Coast AQMD notified Pasadena DWP of some preliminary issues with the submittal. A revised VRRP was then submitted on June 28, 2019. South Coast AQMD continued discussions with Pasadena DWP to correct any further errors with the VRRP and received an additional inventory revision on September 6, 2019. A final VRRP submittal was received on September 26, 2019. On November 5, 2019, South Coast AQMD approved the submittal as an ATIR since facility risks were below the Rule 1402 Voluntary Risk Thresholds.

A.33. Phillips 66 Co/LA Refinery Wilmington Plant (ID 171107) – Wilmington

The Phillips 66 Company, LA Willmington Plant (Wilmington Refinery) operates two linked facilities, five miles apart, in Carson and Wilmington. The Wilmington Refinery was built in 1919 and is situated on approximately 424 acres. This facility receives and processes intermediate product from the Carson facility and produces petroleum fuels as well as fuel-grade petroleum coke. Air toxic emissions are generated from fluid catalytic cracking, steam generation, electricity generation, and sulfuric acid production processes.

On March 1, 2017, South Coast AQMD staff sent a letter requiring Wilmington Refinery to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory with hexavalent chromium and polycyclic aromatic hydrocarbons being the main air toxic contributors to the high priority score.

Wilmington Refinery elected to prepare an ATIR, and submitted the ATIR on August 1, 2017. Following review, South Coast AQMD staff found several deficiencies. Revisions were submitted by Wilmington Refinery staff on November 10, and December 20, 2017. Staff subsequently requested calculations and supporting data Wilmington Refinery submitted a revision on December 19, 2018.

Upon review of the revision, South Coast AQMD staff found issues with the facility's modeling of the wastewater treatment system. The facility was also required to conduct source testing that had not been completed at the time of review. Further, the facility's calculation methodology for

welding emissions were not consistent with South Coast AQMD's methodology. Wilmington Refinery submitted revised calculations in April 2019. The ATIR was conditionally approved in May 2019 provided that the facility completes the required source testing. Wilmington Refinery submitted the HRA and modeling files in September 2019 and source test protocols for the required source test in October 2019. The source tests were tentatively scheduled for December 2019. South Coast AQMD staff reviewed the HRA submittal and found that the facility did not utilize the most recent meteorological data in the model, and on November 22, 2019, requested that the HRA be revised using the updated meteorological dataset. South Coast AQMD staff review is pending results from the source test and a revised HRA submittal.

A.34. Phillips 66 Company/Los Angeles Refinery (ID 171109) - Carson

The Phillips 66 Company operates two facilities, five miles apart, in Carson and Wilmington. The Phillips 66 Carson Refinery (Carson Refinery) was built in 1923 and is situated on approximately 235 acres. The refinery processes mainly heavy, high-sulfur crude oil, which is received by pipeline and at a terminal in the Port of Long Beach. The Carson Refinery produces intermediate product, which is then sent to the Phillips 66 Wilmington Refinery for further processing to produce petroleum fuels and fuel-grade petroleum coke. These facilities have fluid catalytic cracking, alkylation, hydrocracking, coking and naphtha reforming units.

On March 1, 2017, South Coast AQMD staff sent a letter requesting Carson Refinery to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions inventory with arsenic and sulfuric acid being the main contributors to the high priority score. These emissions were mainly from crude distillation, hydro-treating, and steam generation processes at the facility.

Carson Refinery elected to participate in the Voluntary Risk Reduction Program, and submitted the VRRP on August 1, 2017. Following review, South Coast AQMD staff noted several deficiencies. Revisions and clarifications were provided by Carson Refinery staff on multiple instances in 2017 and 2018. South Coast AQMD staff reviewed the latest submittal from September 11, 2018 and requested the facility revise sulfuric acid emissions, modeling discrepancies, and arsenic emission calculations among other issues. The HRA was then modeled and South Coast AQMD staff determined that the facility health risks did not exceed the Rule 1402 Voluntary Risk Thresholds and approved the submittal as an ATIR instead of a VRRP. Approval was given on January 9, 2019.

A.35. Plains West Coast Terminals (ID 800417) - Compton

Plains West Coast Terminals (Plains West Coast) is a petroleum storage facility located in Compton. On December 6, 2019, South Coast AQMD staff sent a letter requiring Plains West Coast to submit an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory, with benzene from storage tanks as the main air toxics contributing to the high priority score. South Coast AQMD staff was awaiting the submittal of the ATIR from Plains West Coast at the end of 2019.

A.36. Robertson's Ready Mix (ID 42623) – Redlands

Robertson's Ready Mix (RRM Redlands) owns and operates several aggregate processing plants in Southern California and Nevada. RRM Redlands has a plant in the city of Redlands where arsenic, nickel, and manganese emissions are produced from crushing and screening operations as well as an on-site quarry.

On August 23, 2019, South Coast AQMD staff sent a letter requiring RRM Redlands to submit an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory. Staff's review of the Initial Information for the ATIR revealed that the facility was not using an approvable method for calculating speciated PM emissions. As a result, RRM Redlands proposed a sampling plan for speciating PM dust emissions on November 8, 2019. The plan was being reviewed by South Coast AQMD staff at the end of 2019.

A.37. Robertson's Ready Mix (ID 134112) – Gardena

Robertson's Ready Mix (RRM Gardena) owns and operates several ready-mix concrete batch plants in California and Nevada. The Gardena plant utilizes fly ash and cement as well as aggregate delivered by train from a quarry in Cabazon.

On December 06, 2019, South Coast AQMD staff sent a letter requiring RRM Gardena to submit an ATIR due to the facility having a priority score greater than 10 based on its 2016 annual emissions inventory, with arsenic and manganese emissions as the main air toxics contributing to the high priority score. The facility's Initial Information for the ATIR was pending review at the end of 2019.

A.38. San Diego Gas & Electric (ID 4242) – Moreno Valley

San Diego Gas & Electric (SDG&E) owns and Southern California Gas Company (SoCalGas) operates the Moreno Valley Compressor Station located at in Moreno Valley.

On September 12, 2019, South Coast AQMD staff sent a letter requiring SoCalGas to submit an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory, with formaldehyde emissions as the main air toxic contributing to the high priority score. The facility submitted the initial information on October 11, 2019. The ATIR is due on February 9, 2020.

A.39. SFPP, L.P (ID 800278) – Carson

The SFPP facility in Carson is also known as the Kinder Morgan, Watson station. This tank farm receives and distributes various petroleum products through various pipelines.

On August 23, 2019, South Coast AQMD staff sent a letter requiring SFPP to submit an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory. The primary air toxic contributing to the high priority score is benzene which comes from the fugitive losses from their 25 storage tanks. Since the facility failed to provide a response by the specified deadline, SFPP was required to submit an ATIR. The ATIR is due on February 28, 2020.

A.40. So Cal Edison Co (ID 4477) – Pebbly Beach

So Cal Edison Co (SCE Pebbly Beach) is the primary producer of electric power for Santa Catalina Island and is located approximately one mile southeast of the city of Avalon. Electricity is generated using six diesel-fired engines. There is also a diesel-fired backup generator and 23 microturbines. Diesel fuel and liquefied petroleum gas (LPG) are periodically shipped in and stored at the facility. LPG is vaporized to produce a petroleum gas and air mixture to form a natural gas surrogate, where it is sent to either local residents or combusted in the microturbines.

On June 13, 2018, South Coast AQMD staff sent a letter requiring SCE Pebbly Beach to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory. The main air toxic contributing to the priority score is DPM from the six diesel-fired internal combustion engines.

SCE Pebbly Beach elected to prepare an ATIR and submitted it on November 13, 2018. On January 23, 2019, South Coast AQMD staff sent a letter to the facility approving the ATIR and requiring the preparation of an HRA based on the approved ATIR. SCE Pebbly Beach submitted the HRA on April 23, 2019. As of the end of 2019, the HRA is still in review.

A.41. So Cal Gas Co./Playa del Rey Storage Facility (ID 8582) – Playa del Rey

Southern California Gas Company (So Cal Gas) is a public utilities company that owns and operates a natural gas storage facility in the Playa del Rey community in the City of Los Angeles. Natural gas is compressed and stored in underground reservoirs. Transmission pipelines distribute natural gas to and from the facility. Primary equipment at the facility include three natural gas internal combustion engines driving air compressors to facilitate storage of natural gas.

On May 31, 2017, South Coast AQMD staff sent a letter requiring So Cal Gas to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory with formaldehyde, 1,3-butadiene and benzene being the main air toxic contributors to the high priority score. On October 31, 2017, the ATIR was submitted.

On March 22, 2018, the ATIR was approved and So Cal Gas was required to submit an HRA based on the approved ATIR. The HRA was submitted on June 7, 2018. Following review, South Coast AQMD staff noted some deficiencies and required revision and resubmission of the HRA. So Cal Gas provided revisions on July 17, August 17, and a final revision on October 16, 2018. January 2, 2019, the HRA was approved with a predicted acute non-cancer hazard index of 7.28 which exceeded the public notification and risk reduction thresholds of Rule 1402. Since the risk isopleths covered an area of the Ballona Wetlands which is normally restricted to individuals who obtain a permit from the California Department of Fish and Wildlife, a modified public notice was done in lieu of a regular public meeting on January 10, 2019. So Cal Gas submitted an RRP on April 26, 2019 which was approved on December 6, 2019. The RRP proposed rerouting natural gas venting and using carbon adsorbers to control emissions and permit applications were required to be submitted within 180 days after approval of the RRP. South Coast AQMD staff will continue to monitor the implementation of So Cal Gas' Risk Reduction Plan in 2020.

A.42. So Cal Holding, LLC (ID 169754) – Huntington Beach

SoCal Holding, LLC (SoCal Holding) is a subsidiary of California Resources Corporation, an oil and natural gas exploration and production company. SoCal Holding leases and operates oil production wells, mainly in Huntington Beach with some wells located offshore on a platform approximately 1.5 miles from shore. Recovered field gas is either sold to AES Huntington Beach, combusted in microturbines or flared. The liquid product is stored in tanks linked to truck loading or pipeline.

On October 11, 2017, South Coast AQMD sent a letter requiring SoCal Holding to prepare an ATIR due to the facility having a priority score greater than 10 based on 2015 annual emissions inventory with polycyclic aromatic hydrocarbons and benzene being the main air toxic contributors to the high priority score. The source for polycyclic aromatic hydrocarbons emissions was a flare located on a leased property northwest of the intersection of Goldenwest Street and Pacific Coast Highway. Benzene emissions were reported as fugitive leaks throughout the facility. The ATIR was received on March 13, 2018. Following review, staff found errors and requested corrections to the ATIR. The corrected ATIR was submitted on July 13, 2018. On July 25, 2018, the corrected ATIR was approved and South Coast AQMD staff directed So Cal Holding to prepare and submit an HRA. The HRA was submitted on October 23, 2018. South Coast AQMD staff requested corrections on the HRA forms on January 17, 2019. On January 25, 2019, So Cal Holding submitted a revised HRA report. The risks were found to be below the notification risk thresholds in Rule 1402 and the HRA was subsequently approved on February 14, 2019.

A.43. Tesoro Refining & Marketing Co., LLC, Calciner (ID 174591) – Wilmington

Tesoro Refining & Marketing Co., LLC, Calciner (Tesoro Calciner) located in Wilmington, produces calcined petroleum coke, or raw or “green” petroleum coke heated to high temperatures so that volatile hydrocarbon compounds and excess moisture are heated out of the coke. Equipment in Tesoro Calciner’s operations include a rotary kiln, baghouses, conveyor belts, receiver and separator vessels, an afterburner, surge bins, boiler, bucket elevators, loading and unloading stations, shakers, and storage silos.

On April 28, 2017, South Coast AQMD staff sent a letter requiring Tesoro Calciner to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2016 annual emissions inventory with sulfuric acid, arsenic, manganese, and nickel as the main air toxic contributors to the high priority score. On May 25, 2017, Tesoro Calciner elected to participate in the Voluntary Risk Reduction Program, and subsequently submitted the VRRP on September 21, 2017.

After review of the VRRP, South Coast AQMD staff found several deficiencies and on January 31, 2018, a letter requesting revision and resubmittal of the VRRP was sent. Tesoro Calciner identified diesel particulate matter (DPM) emissions as another source of emissions and submitted a revised VRRP on February 26, 2018. South Coast AQMD staff subsequently reviewed the VRRP and requested information on calculations and supporting documentation. In addition, Tesoro Calciner had proposed to use a 2011 source test to estimate emissions of dioxins from the rotary kiln. However, since the source test was not acceptable, Tesoro Calciner was

required to use previously approved source tests to estimate emissions. After several discussions with staff and revisions to the VRRP, Tesoro submitted an updated VRRP addressing the DPM and rotary kiln emission calculations on September 7, 2018.

Upon further review of the submittal, South Coast AQMD staff found that the welding emissions were not estimated properly and requested welding emissions be recalculated following U.S.EPA guidance. Tesoro Calciner provided updated calculations to the welding emissions on April 11, 2019 and refined DPM calculations on April 16, 2019.

On May 8, 2019, Tesoro Calciner submitted the final emissions inventory files reflecting the changes in diesel and welding emissions. Staff found that all health risks were below both Notification Risk Levels and the Voluntary Risk Threshold in Rule 1402, and therefore risk reduction measures were not required. South Coast AQMD staff approved the VRRP as an ATIR for Tesoro Calciner on August 9, 2019. To ensure emissions of DPM from the engines and emissions from welding emissions are calculated accurately, Tesoro Calciner is required to maintain and provide thorough records for diesel and welding emissions during the next and future quadrennial reports as specified in the approval letter.

A.44. Tesoro Refining & Marketing Co., LLC, Los Angeles Refinery (ID 800436, 174655, 174694, 174703) – Carson and Wilmington

The Tesoro Los Angeles Refinery (Tesoro Refinery) is located along the city border between the cities of Carson and Wilmington in south Los Angeles County. The Tesoro Refinery was originally two adjacent non-contiguous refineries but has been undergoing consolidation through the Los Angeles Refinery Integration and Compliance Project.²⁴ The Tesoro Refinery will be comprised of approximately 930 acres with a processing capacity of approximately 380,000 barrels per day. In 2017, the Tesoro Corporation underwent a name change to Andeavor.

On December 22, 2016, South Coast AQMD staff sent a letter requiring Tesoro Refinery to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory with polycyclic aromatic hydrocarbons, hexavalent chromium, arsenic, naphthalene, benzene, and cadmium as the main air toxic contributors to the high priority score.

Tesoro Refinery elected to participate in the Voluntary Risk Reduction Program, and submitted their VRRP on May 23, 2017. After initial review, South Coast AQMD staff required Tesoro Refinery to make several revisions. Both South Coast AQMD staff and Tesoro Refinery representatives have met several times regarding the revisions and risk reduction measures proposed. South Coast AQMD staff is currently waiting for the necessary revisions to be submitted before continuing the review of the VRRP. At the end of 2018, South Coast AQMD staff identified heaters located at Carson for source testing with the intention of establishing a representative emission profile for heaters located at Carson.

On February 19, 2019, South Coast AQMD sent Tesoro Refinery a letter requesting for EIM files and identifying equipment that required source testing. Tesoro submitted EIM files on March 7,

²⁴ http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/tesoro_feir.pdf

2019 and the source test protocols for the three heaters on March 7, March 15, and April 11, 2019. South Coast AQMD staff approved these protocols on March 20, May 22, and May 29, 2019, respectively. Tesoro completed the source tests on June 28, 2019, and submitted the final report on August 20, 2019. The final source test report is currently under review.

A.45. Tesoro Refining & Marketing Co., LLC (Sulfur Recovery Plant) (ID 151798) – Carson

Tesoro Sulfur Recovery Plant (Tesoro SRP) is located in Carson east of the Tesoro Los Angeles Refinery. The facility supports petroleum refinery operations by utilizing the Claus process to recover sulfur in the form of hydrogen sulfide from the byproduct gases of refining crude oil. The facility operates boilers, incinerators, condensers, absorbers, storage tanks, sumps, and sulfur pits.

On December 22, 2016, South Coast AQMD staff sent a letter requiring Tesoro SRP to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory with arsenic, polycyclic aromatic hydrocarbons, hexavalent chromium, and formaldehyde as the main air toxic contributors to the high priority score.

Tesoro SRP elected to participate in the Voluntary Risk Reduction Program, and submitted the VRRP on May 23, 2017. After review, on February 15, 2018, South Coast AQMD staff sent a letter requesting revisions and resubmittal of the VRRP. Ongoing communication with Tesoro SRP has occurred to develop the most representative emission estimation methodology. On November 9, 2018, a finalized emissions inventory was submitted by Tesoro SRP for South Coast AQMD staff review. On March 13, 2019, South Coast AQMD approved the VRRP submittal as an ATIR since facility risks were below the Rule 1402 Voluntary Risk Thresholds.

A.46. Torrance Refining Company LLC (ID 181667) – Torrance

Torrance Refining Company LLC (Torrance Refining) is a subsidiary of PBF Energy, an independent petroleum refiner and supplier of unbranded transportation fuels, heating oils, petrochemical feedstocks, lubricants, and other petroleum products. The Torrance Refining sits on 750 acres in the City of Torrance and has a 155,000 barrels per day of crude oil processing capacity. The refinery produces various petroleum productions along with coke, and sulfur. On January 11, 2017, South Coast AQMD staff sent a letter requiring Torrance Refining to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions inventory with polycyclic aromatic hydrocarbons, arsenic, benzene, and cadmium being the main air toxic contributors to the high priority score.

Torrance Refining elected to participate in the Voluntary Risk Reduction Program and was prepared to submit the VRRP on August 24, 2017 for the 2015 inventory year. However, due to an explosion that had occurred at the facility's fluid catalytic cracking unit during 2015, the facility had limited operations during that year. As a result, South Coast AQMD staff decided that 2016 would be more representative of the facility's routine operations and, required Torrance Refining to use 2016 as the inventory year for their VRRP.

The facility submitted the VRRP on August 24, 2017. After review, on October 19, 2017, South Coast AQMD staff sent a comment letter requesting revisions and resubmittal of the VRRP.

The revised VRRP was received on November 2, 2017. However, a few issues and information regarding calculations and reference documentation required more revisions. VRRP files were requested and received in various stages up to May 8, 2018.

Upon review, South Coast AQMD staff determined the VRRP to be sufficient. However, on July 12, 2018, Torrance Refining informed South Coast AQMD that the permit application for the first risk reduction measure was withdrawn and requested to submit another revised VRRP utilizing a change in operating condition instead of the previous risk reduction measure. The revised VRRP was submitted on August 3, 2018. This VRRP also included changes to the emission inventory for diesel particulate matter emissions. Based on a meeting on August 9, 2018 and subsequent review, the change in operating condition was found acceptable as a risk reduction measure. Policies on diesel particulate matter emissions were reviewed for all refineries, and subsequently the emissions inventory was also accepted.

South Coast AQMD staff instructed Torrance Refining to submit a permit application for a change in operating condition, which was submitted on November 9, 2018. South Coast AQMD also requested revisions to the VRRP language for the second and third risk reduction measure. The second measure was revised completely, incorporating an emission limit rather than a fuel usage limit. By December 5, 2018, Torrance Refining submitted language for risk reduction measures along with VRRP files incorporating the changes. South Coast AQMD staff confirmed that the measures would still reduce risk below 10 chances in-one-million. The VRRP then began pending approval, as South Coast AQMD staff needed to determine the logistics of compliance plans for the second and third risk reduction measures and whether fees would be charged for such plans.

Before the VRRP was approved, South Coast AQMD staff adopted a new methodology for calculating welding emissions. Staff requested all facilities with welding calculations that were inconsistent with the methodology to revise their emissions. Torrance Refining was notified on March 15, 2019. After an initial submittal on March 25, 2019, the facility's proposal of an alternative methodology on April 4, 2019, and a question regarding exemptions to welding done to repair an FCC unit, Torrance Refining submitted satisfactory calculations on April 24, 2019. An updated HARP database was submitted on April 26, 2019. South Coast AQMD staff requested Torrance Refining to model the new risk numbers and to begin incorporating additional measures in the VRRP to offset the increase in risk. Torrance Refining calculated the additional risk and submitted a VRRP with additional risk reduction measures on June 12, 2019. However, this submittal calculated risk by considering proposed emissions over a five-year period. Torrance Refining was required to revise the VRRP to calculate risk based on emissions over a one-year period only. This revised VRRP was submitted on June 26, 2019.

Upon review, staff had many questions regarding recordkeeping for diesel engines. A revision to risk reduction measure language was submitted on July 16, 2019. Staff submitted comments on this language on August 7, 2019, requesting that recordkeeping for diesel engines and welding emissions be described in better detail. After further discussion, Torrance Refining submitted another revision to risk reduction measure language on August 27, 2019. Staff provided comments on this revision on September 4, 2019. More discussion took place, and Torrance Refining submitted another revision to risk reduction measure language on September 13, 2019. Staff reviewed and discussed concerns again, then requested specific changes to the language on October 2, 2019. Torrance Refining again submitted risk reduction measure language on October

29, 2019. Staff identified a gap in diesel recordkeeping and discovered that language had been unintentionally removed, thus, revised reduction measure language was once again submitted on December 4, 2019.

During further discussion that occurred in November 2019, staff found that Torrance Refining was not open to suggestions regarding welding and also disagreed with the enforceability of the proposed risk reduction measures. Torrance Refining requested a face to face meeting, which was held on December 12, 2019. Torrance Refining explained their position regarding limitations on certain recordkeeping methods. Staff requested changes such as a standard method to record welding usage and more assurance for accurate fueling meters. A revised VRRP is expected in January 2020.

A.47. Trojan Battery Company (ID 21872) – Santa Fe Springs

Trojan Battery Company (Trojan Battery) manufacturers, markets, and distributes industrial deep-cycle batteries for motive and stationary power markets. Trojan Battery operates two facilities in the city of Santa Fe Springs: The Ann Street facility (ID 21872) performs initial manufacturing activities and the Clark Street facility performs final product manufacturing activities. The Ann Street facility that performs metal melting operations of primary pure lead in quantities exceeding 100 tons per year and is therefore subject to Rule 1420.2 for ambient monitoring and reporting.

Trojan Battery had a previous 1420.2 Monitoring and Sampling Plan which was approved in August 2017. Several changes were made by the facility and the original plan was revised due to the changes on the stack parameters (e.g. increased stack height, re-orienting to vertical stacks, removal of rain caps, etc.) and relocation of existing monitors. Trojan Battery submitted a revised plan in March 2018. However, due to additional changes, an updated modeling report was submitted in March 2019 and a revised compliance plan was submitted in April 2019. Staff completed review of the modeling report and compliance plan in September 2019. South Coast AQMD staff found that exceedances of ambient air quality standards for lead were not expected based on normal operating conditions and source testing results. Further, existing monitor locations should be retained.

A.48. TST, Inc. (ID 43436) – Fontana

TST Inc. (TST) located in Fontana, conducts secondary aluminum refining of scrap metal which consists of two primary operations: producing aluminum ingots from scrap metal and producing billets. Aluminum chips and borings are received in scrap barrels and bins and dumped into a receiving hopper. The chips and borings are crushed and, if necessary, passed through a dryer to remove any oils or coatings. The aluminum is then sent to furnaces where the dross is used to create the billets and ingots.

On April 20, 2018, South Coast AQMD staff sent a letter requiring TST to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2014 annual emissions inventory with nickel and arsenic as the main air toxics contributing to the high priority score. On May 22, 2018, TST elected to prepare an ATIR and also submitted the initial information for the ATIR. In accordance with Rule 1402(d)(2)(A), TST was required to submit an ATIR within 150 days of the initial notification date. TST failed to meet the required deadline and was issued a Notice to Comply on October 10, 2018. In response, TST submitted an ATIR on October 24, 2018.

South Coast AQMD staff reviewed the ATIR and found errors and required resubmittal. A revised ATIR was submitted on November 30, 2018. TST submitted another revised ATIR on January 22, 2019 to address additional comments from South Coast AQMD Staff. After review, South Coast AQMD sent a letter to TST on March 22, 2019 to inform them that their priority score had been revised to be below 10 and no further action was required for the 2014 inventory year.

A.49. Ultramar Inc (ID 800026) – Wilmington

Ultramar Refining Company (Ultramar) is a subsidiary of Valero Energy Corporation and operates a 135,000 barrel per day crude oil processing capacity petroleum refinery facility in Wilmington.

On March 29, 2017, South Coast AQMD staff sent a letter requiring Ultramar to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions inventory with polycyclic aromatic hydrocarbons emissions as the main air toxic contributor to the high priority score.

Ultramar elected to participate in the Voluntary Risk Reduction Program and submitted the VRRP on August 25, 2017. After review by South Coast AQMD staff, items were found to be missing, which included throughput data, emission factors, calculation basis, and certain devices and device descriptions. Ultramar subsequently provided the missing information on September 15 and October 26, 2017. Ultramar provided information on emission factor reference sources on February 26, 2018. However, review indicated that the VRRP still had an incomplete emissions inventory, among other issues. From March 22, 2018 thru the end of the year, staff provided comments to the facility regarding unaccounted emissions and continued deficiencies in the submitted files. Upon review of revised files received on December 13, 2018, South Coast AQMD staff determined that the facility once again failed to provide all the requested information and another resubmission was required.

Staff sent multiple emails and held conference calls with Ultramar regarding issues with the VRRP language, welding rod emission calculations, sulfuric acid emission calculations, and other various issues from January 3, until March, 2019. Although Ultramar indicated during a conference call on March 28, 2019 that all revisions would be submitted to South Coast AQMD, after multiple follow-ups in April, Ultramar still had not provided the revisions. Ultramar submitted the revisions on May 31, 2019 after South Coast AQMD staff notified the facility that the VRRP would be rejected since the facility had failed to submit the revisions. Issues remained with the welding emissions calculations and subsequent revisions were submitted on June 28, 2019 and November 5, 2019. South Coast AQMD staff found additional issues and worked with Ultramar to correct them for the rest of the year.

A.50. Vista Metals Corporation (ID 14495) – Fontana

Vista Metals Corporation (Vista Metals) is a secondary aluminum smelter located in Fontana manufacturing specialty aluminum alloy ingots, plates, and slabs used primarily by aerospace and automotive manufacturers. The facility operates melting furnaces, homogenizing heat treat furnaces, chip dryers, a service station, and numerous Rule 219 exempt equipment.

On August 23, 2019, South Coast AQMD staff sent a letter requiring Vista Metals to prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2018 annual

emissions inventory. The main toxic air contaminants contributing to the priority score are dioxins and furans from furnace melting operations and rotary dryer processes. Vista Metals' ATIR is due on January 21, 2020.

A.51. Vorteq Pacific (ID 191677) – Rancho Cucamonga

Vorteq Pacific is a producer of coated aluminum and steel products in Rancho Cucamonga. The facility coats metal sheets and slits metal coils made of aluminum, steel, and stainless steel. Major operations include metal surface preparation, coating, and wastewater treatment. The facility was previously known as Western Metal Decorating Co. (ID 17956) before being acquired by Vorteq Coil on October 18, 2019.

On August 23, 2019, South Coast AQMD staff sent a letter requiring Western Metal Decorating to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2018 annual emissions inventory. The main toxic air contaminants contributing to the priority score are polycyclic aromatic hydrocarbons from coating operations. Western Metal Decorating's ATIR is due on January 21, 2020.

A.52. Whittier Fertilizer (ID 511) – Pico Rivera

Whittier Fertilizer Co. (Whittier Fertilizer) is a fertilizer manufacturing and green waste composting facility located in Pico Rivera. The facility manufactures a variety of products such as fertilizers, composts, soil amendments, mulch, and decorative rocks. After receiving raw materials, these materials are further processed through grinders, screens, shredders, and bagging systems.

On January 25, 2019, South Coast AQMD staff sent a letter requiring Whittier Fertilizer to submit an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory, with Polycyclic Aromatic Hydrocarbons (PAHs) from diesel engine combustion as the main air toxics contributing to the high priority score. Speciated diesel components, including PAHs, were appropriately grouped as diesel particulate matter (DPM) upon submittal of the ATIR. On June 20, 2019, Whittier submitted an ATIR to the South Coast AQMD. South Coast AQMD staff approved the ATIR on August 9, 2019 and notified the facility to prepare and submit a HRA by November 12, 2019.

Whittier Fertilizer submitted an HRA to the South Coast AQMD on October 29, 2019. During review of the submitted HRA, it was determined that emissions from the diesel engines were overestimated. On December 10, 2019, South Coast AQMD staff notified Whittier Fertilizer that a revision to the emissions inventory and subsequently the HRA was necessary. As of the end of 2019, South Coast AQMD staff was working on finalizing the HRA.

Appendix B — Summary of Toxic Air Contaminants in the South Coast Air Basin

In addition to South Coast AQMD's periodic Multiple Air Toxics Exposure Studies (MATES), CARB has maintained a long-term continuous toxics monitoring network since the late 1980's.²⁵ In this chapter, trends in cancer risks are illustrated for sites in the South Coast Air Basin. Health risk levels for the most recent three-year period (i.e., 2016 to 2018) are also shown for the air toxics which are monitored. CARB's monitoring network does not include DPM, which contributes significantly to cancer risks in the Basin. Since this is ambient air quality data, both mobile and stationary emission sources are captured in the health risk levels provided here. Looking at this historical data set illustrates the benefits of past regulatory control efforts.

Four of the approximately 16 current active sites in CARB's statewide toxics monitoring network are in or near the Basin as shown in Figure B-1. CARB's long-term sites are located in Azusa, Los Angeles, and Riverside-Rubidoux. Simi Valley is included in this analysis since it is just outside the western edge of the Basin and represents conditions at the western end of San Fernando Valley. The measurements consist of 24-hour integrated samples collected once every 12 days. Table B-1 lists the toxic air contaminants that are monitored with the carcinogenic compounds identified with an asterisk.

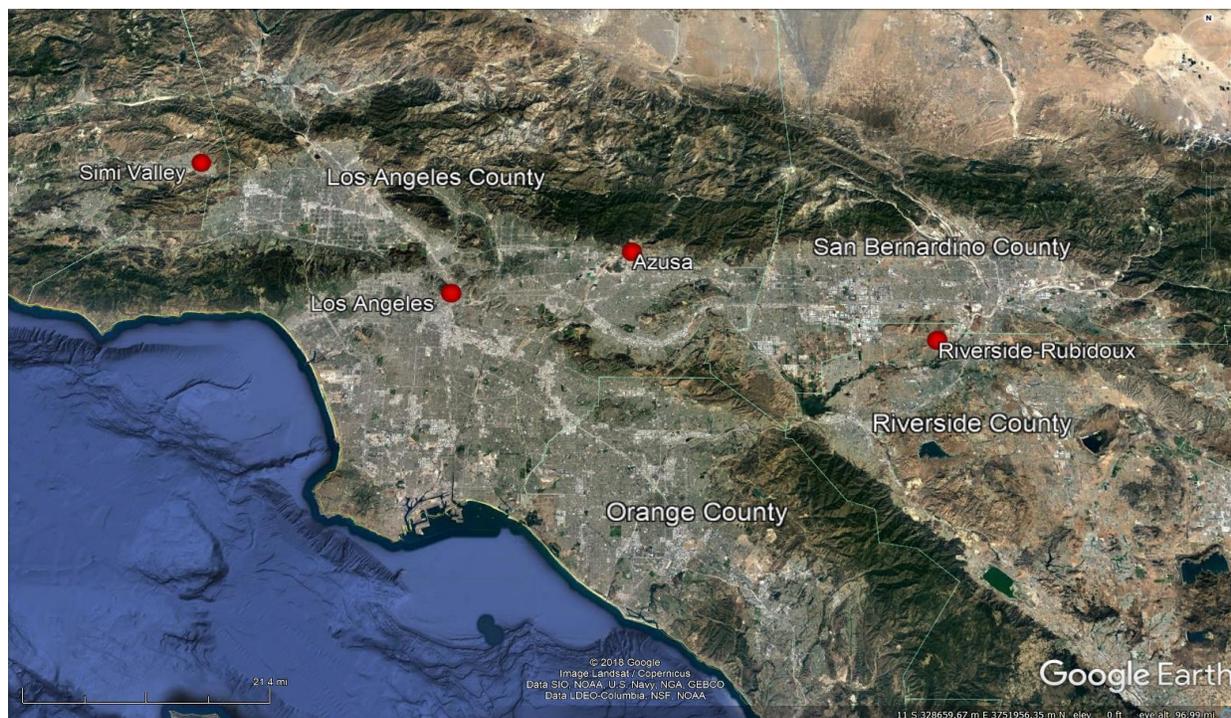


Figure B-1 — CARB toxic monitoring sites in the South Coast Air Basin

²⁵ Information about and data from CARB's toxic monitoring data are available at: <http://www.arb.ca.gov/adam/toxics/toxics.html>

Table B-1 — Toxic Air Contaminants Monitored

Toxic VOC		Toxic PM
Acetaldehyde*	Methyl Bromide	Hexavalent Chromium*
Acrolein	Methyl Chloroform	Lead*
Benzene*	Methyl Ethyl Ketone	Manganese
1,3-Butadiene*	Methylene Chloride*	Nickel*
Carbon Tetrachloride*	Perchloroethylene*	Selenium
Chloroform*	Styrene	
Ethyl Benzene*	Toluene	
Formaldehyde*	Trichloroethylene*	

* Carcinogen

The 2015 OEHHA Risk Assessment Guidelines incorporates age sensitivity and exposure factors which increase cancer health risk estimates to residential and sensitive receptors by approximately three times, and more than three times in some cases depending on whether the toxic air contaminant has multiple pathways of exposure in addition to the inhalation pathway. Under the 2015 OEHHA Risk Assessment Guidelines, even though the toxic pollutant concentrations may not have increased, the estimated cancer risk to a residential receptor will increase.

Figure B-2 presents health risk trends using the 2015 OEHHA Risk Assessment Guidelines.²⁶ The inhalation cancer risk shown is estimated based on a 30-year exposure. Inhalation cancer health risks have decreased significantly at all stations since 1990. Cancer risks have decreased by 75, 85, and 80 percent at Riverside, Los Angeles, and Simi Valley, respectively.²⁷ Azusa station shows a decrease in cancer risk by 46 percent since 2000.

Note that the Riverside station showed an increase in cancer risk for 2016. This was solely due to higher measured concentrations of methylene chloride for 2016, which were more than 30 times higher than the previous year. The readings for 2017 and 2018, however, dropped to a level that is more consistent with 2015 and earlier data. Figure B-3 shows the monitored methylene chloride concentrations at the Riverside station from 2000 to 2018, averaged by quarter.

Further, it was discovered that there were leaks in the VOC sampling manifolds for the Los Angeles and Riverside. Data for the Los Angeles station was impacted during the period of August 17, 2018 to April 25, 2019. Data for Riverside station was impacted during the period of September 22, 2017 to February 19, 2019. The leaks in the manifold resulted in atypical readings for acetaldehydes and formaldehyde. The data was ultimately invalidated, and insufficient data was available for 2018 for those two compounds. Therefore, readings from 2017 were used for acetaldehyde and formaldehyde. Although readings for other organic compounds were also invalidated when necessary, there was enough data to be representative of 2018.

²⁶ Excluding cancer risks from DPM.

²⁷ Some concentrations were not available for certain years. In order to avoid under-representing the total cancer risk from all toxic compounds, values are interpolated between years where possible. If data for a certain toxic compound is unavailable for the latest year, the available data point from the most recent prior year is used in its place.

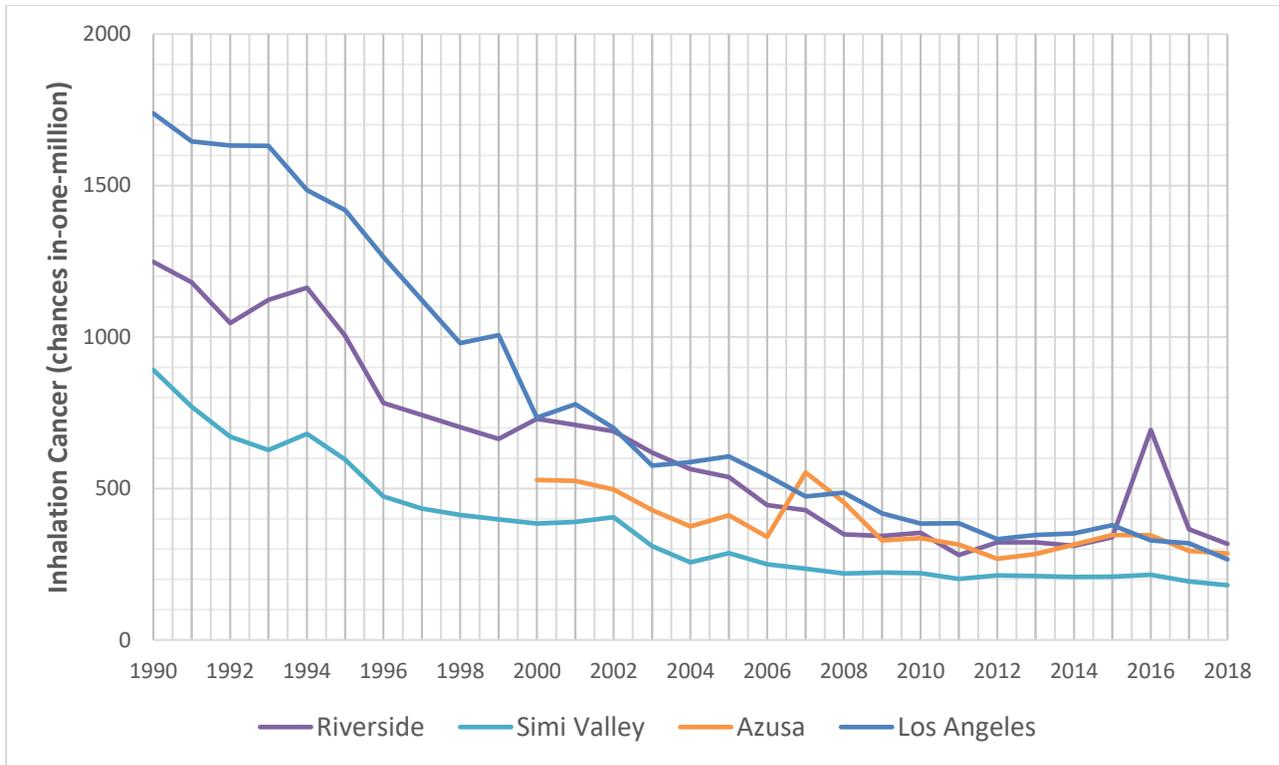


Figure B-2 — Trends in Inhalation Cancer Risks in the Basin (1990-2018)

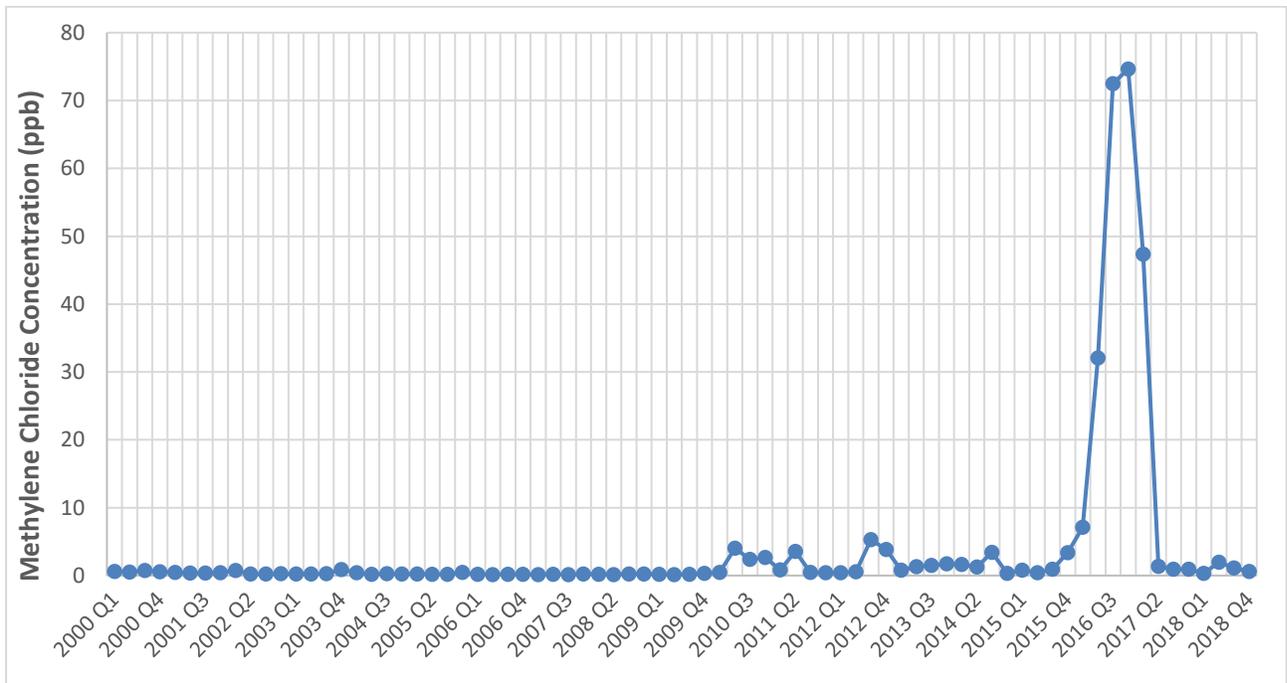


Figure B-3 — Methylene Chloride Monitored Concentrations at Riverside Station, Averaged by Quarter (2000 to 2018)

Azusa station started in 1995 as one of the Photochemical Assessment Monitoring Stations (PAMS) network aimed at determining speciated hydrocarbon ozone precursor compounds in ambient air. On October 17, 2006, U.S. EPA issued final amendments to PAMS monitoring requirements in 40 CFR Code 58. On July 1, 2009, to address these amendments, and with site-specific observations from the PAMS network assessment project, Azusa station was reclassified from Type 3 (maximum ozone concentration site) to Type 2 (maximum ozone precursor emissions impact site or above 8-hour ozone). The proposed change addressed the National PAMS Network Assessment that Azusa has high Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NOX) concentrations, with lower ozone concentrations. The site now more closely resembles a Type 2 ozone precursor site.

The reduction in cancer risk at the Azusa station is primarily from reductions in ambient concentrations of benzene and 1,3-butadiene. Benzene accounts for 42 percent of the cancer risk reduction and 1,3-butadiene accounts for 45 percent of the cancer risk reduction.

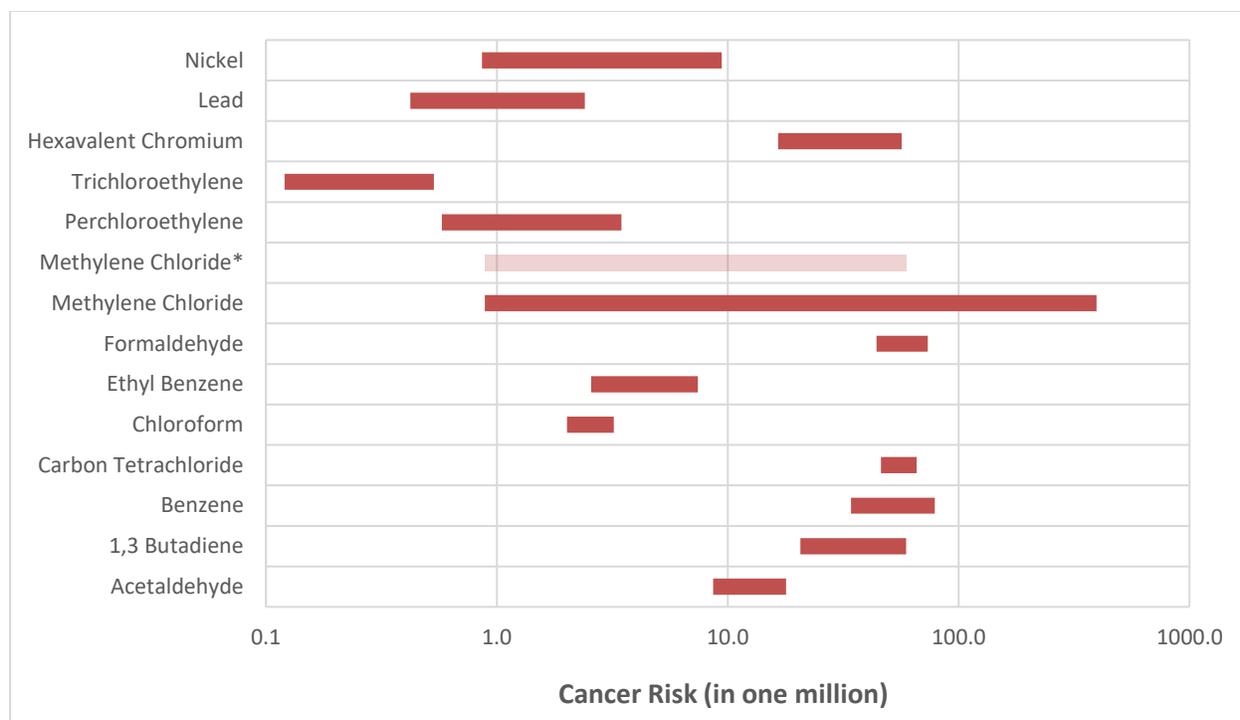
The cancer risk reductions shown in Figure B-2 occurred despite significant increases in population and vehicle activity. As shown in Table B-2, the population increased by 41 percent since 1990 and daily vehicle miles traveled), vehicle population, and daily fuel consumption increased by 45, 57, and 34 percent, respectively.

Table B-2 — Change in Population and Vehicle Activity in the Basin Since 1990

Activity Variable	1990	2019	Percentage Increase
Population	13,083,594	18,458,605	41.1%
Daily Vehicle Miles Traveled (1,000 mile per day)	282,561	410,251	45.2%
Vehicle Population	7,547,354	11,833,320	56.8%
Daily Fuel Consumption (1,000 gal per day)	18,338	24,482	33.5%

Source: http://www.arb.ca.gov/app/emsinv/trends/ems_trends.php.

The relative importance of each of the toxics at the four monitoring stations is illustrated in Figure B-4 below. These ranges do not represent all potential exposures, and some areas near facilities with toxic air contaminant emissions may have higher cancer risks. The range of cancer risks for the four sites analyzed here are shown for the most recently available three-year period (2016 to 2018). As mentioned previously, the range of inhalation cancer risk includes the high measurements for methylene chloride from 2016 at the Riverside station that are inconsistent with all other readings taken at this station. To better demonstrate the effect, methylene chloride is shown in the charts twice: inclusive of all readings, and exclusive of the high Riverside readings.



* Excludes peak readings from Riverside station in 2016

Figure B-4 — Inhalation Cancer Risks in the Basin (2016 to 2018) (excluding DPM)

Benzene, 1,3-butadiene, formaldehyde, carbon tetrachloride, hexavalent chromium, methylene chloride, acetaldehyde, and ethyl benzene are the largest contributors to the inhalation cancer risks, contributing individually from approximately 0.5 to 396 chances in-one-million. The ambient carbon tetrachloride concentrations observed in the Basin are not from a local source of emissions but represent background conditions. Note that there is little variability in cancer risks attributable to carbon tetrachloride as indicated by its short bar in Figure B-4. In fact, there is little variability statewide in carbon tetrachloride concentrations, with concentrations varying by less than ten percent. Perchloroethylene, chloroform, and nickel each contribute between approximately 0.6 and 9.4 chances in-one-million and trichloroethylene and lead contribute on average about two chances in-one-million to the inhalation cancer risks.

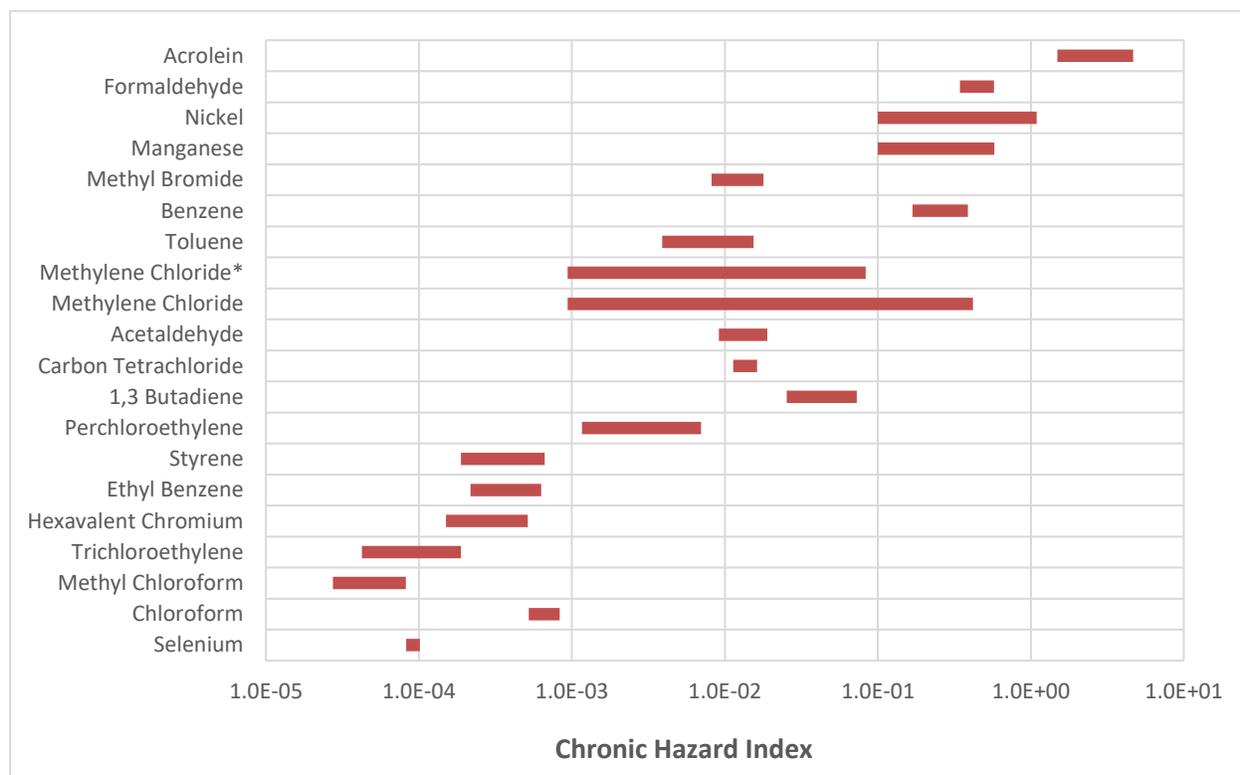
As demonstrated in the series of MATES conducted by South Coast AQMD staff, DPM is by far the largest contributor to inhalation cancer risks observed in the Basin. The MATES IV study attributed about 68 percent of the inhalation cancer risks to DPM based on emissions from 2012,²⁸ compared to 84 percent in MATES III based on emissions in 2005.²⁹ The total cancer risks shown

²⁸ See page ES-2 of the MATES IV Executive Summary which is available at: <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15>

²⁹ See page ES-3 of the MATES III Executive Summary which is available at: <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii/mates-iii-final-report>

in Figures B-2 and B-4 therefore represent only about 32 percent of the population weighted inhalation cancer risks found in the MATES IV study.

The range of non-cancer chronic risks for the four sites analyzed here are shown in Figure B-5 for the most recently available three-year period (2016 to 2018). Similar to the cancer risk analysis, an additional Methylene Chloride data entry (denoted with an asterisk) was added to remove the high readings recorded at the Riverside monitor. For each toxic air contaminant, the ratio of the observed concentration to the pollutant’s chronic REL is shown. Ratios less than one indicate that the observed concentrations are less than OEHHA’s defined RELs, and are not anticipated to result in adverse non-cancer health effects in the general population, including sensitive subpopulations. Ratios greater than one indicate the potential for adverse health effects. This concentration to REL ratio is also referred to as the Hazard Index (HI).



* Excludes peak readings from Riverside station in 2016

Figure B-5 — Non-cancer Chronic Risks in the Basin (2016 to 2018)

Note that acrolein, a respiratory irritant, is the only toxic air contaminant in which ambient concentrations are above its REL throughout the state and thus may partially reflect general background conditions. However, it should be noted that acrolein is well known to be difficult to measure with current techniques, and therefore, there is considerable uncertainty and data quality

issues associated with these measurements.³⁰ At best, acrolein monitoring data should be considered as a rough indicator, not accurate enough to be compared to health benchmarks. Acrolein emissions can better be estimated using computer modeling methods.

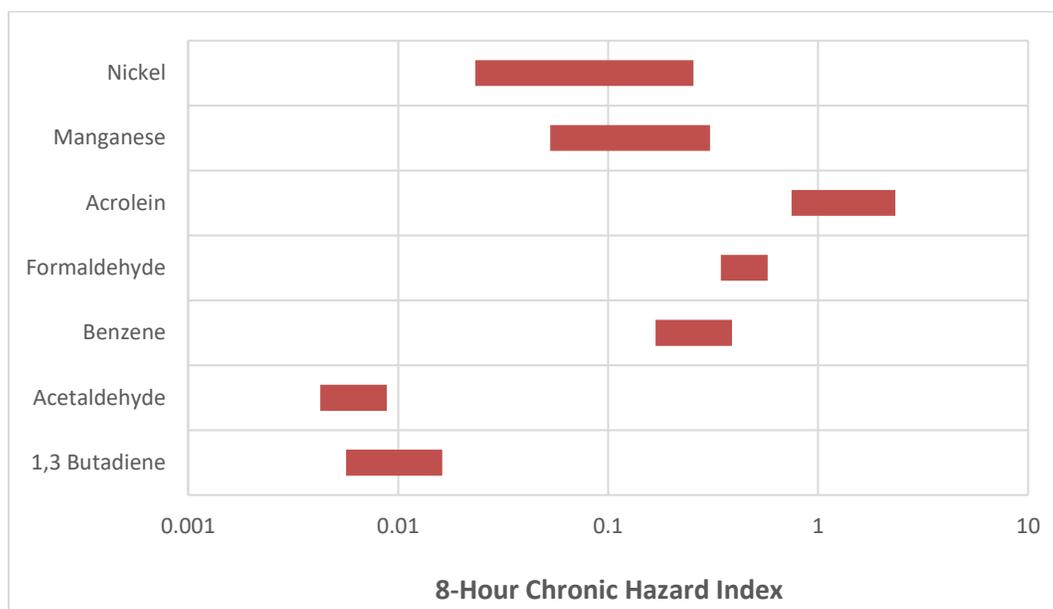


Figure B-6 — Non-cancer 8-Hour Chronic Risks in the Basin (2016 to 2018)

The 2015 OEHHA Risk Assessment Guidelines includes methodology for estimating an 8-hour chronic HI using 8-hour REL developed for this purpose. The 8-hour RELs were developed only for repeated, chronic daily 8-hour exposures (e.g. a typical worker or resident exposed to a facility that operates equal to or more than 8 hours per day and 5 days per week). The 8-hour chronic HI is based upon the daily average 8-hour exposure only for those chemicals with 8-hour chronic RELs. The range of non-cancer 8-hour chronic health risks for the four sites analyzed here are shown above in Figure B-6 for the most recently available three-year period (2016 to 2018). Methylene chloride does not have an 8-hour REL as defined by OEHHA and does not affect the 8-hour chronic hazard index.

As stated above, acrolein is the only toxic air contaminant in which ambient concentrations are above its REL. It should be noted that the ambient concentrations of acrolein are above its REL throughout the state and thus may partially reflect general background conditions.

³⁰ R. Schulte-Ladbeck, et al. "Characterization of chemical interferences in the determination of unsaturated aldehydes using aromatic hydrazine reagents and liquid chromatography." *J. Environ. Monit.*, 2001, 3, 306–310.
 Ho, S.S.H., et al. "Unsuitability of using the DNPH-coated solid sorbent cartridge for determination of airborne unsaturated carbonyls." *Atmospheric Environment*. 2011 45, 261-265.
 Herrington, J.S., et al. "Concerns regarding 24-h sampling for formaldehyde, acetaldehyde, and acrolein using 2,4- dinitrophenylhydrazine (DNPH)-coated solid sorbents." *Atmospheric Environment* 2012, 55, 179-184.
 Grosjean, D., "Ambient Levels of Formaldehyde, Acetaldehyde, and Formic Acid in Southern California: Results of a One- Year Base-Line Study," *Environmental Science & Technology*, Vol 25, 1991, pp. 710–715.

Appendix C — Health Risks from Facilities with an Approved HRA

The tables in Appendix C list the facilities and the health risks identified in their HRAs or RRP 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 D-2.

Table C-1 lists the facilities in order of their cancer risks and Table C-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 D lists the status of the facility’s RRP and is presented by facility ID. Attention should also be given to the footnotes for this appendix which denote facilities with updated HRAs pending approval and facilities with health risks including emergency diesel internal combustion engines. 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 could have different name and facility ID numbers. 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 C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
16951	A	ANAPLEX CORP	PARAMOUNT	2836.0	9.73	23.84	2.02	2018
23752	A	AEROCRAFT HEAT TREATING CO INC	PARAMOUNT	1900.0	11.00	2.90	0.15	2018
11818	A	HIXSON METAL FINISHING	NEWPORT BEACH	1502.0	1.09	0.20	0.10	2015
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	179.5	4.97	0.80	1.69	2019
41229	A	LUBECO INC	LONG BEACH	128.6	0.08	0.18	0.45	2019
18931	A	TAMCO	RANCHO CUCAMONGA	52.7	3.08	3.04	3.19	2015
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	23.2	0.29	0.10	0.70	2013
122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21.0	ND	0.10	0.40	2000
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.60	0.30	2009
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0.00	0.30	2008
165192	A	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	17.0	ND	0.50	0.10	2000
18989	A	BOWMAN PLATING CO INC	COMPTON	17.0	0.00	0.01	0.01	2015
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	0.02	0.10	0.10	2000
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
23907	A	JOHNS MANVILLE CORP	CORONA	13.0	ND	0.40	2.70	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12.0	ND	0.40	0.10	2000
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.30	0.40	2013
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0.00	0.10	2000
101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0.00	0.10	2000
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.10	0.20	1999
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.30	0.10	2000
187165	A	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0.00	0.00	2002
15504	A	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	9.5	0.07	1.59	1.11	2002

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0.00	0.00	2000
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.10	0.00	2001
10510	A	GREGG INDUSTRIES INC	EL MONTE	9.4	ND	0.60	0.60	2008
62897	A	NORTHROP GRUMMAN CORP, MASD	PICO RIVERA	9.4	ND	1.00	0.50	2000
155828	A	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	0.02	7.28	0.02	2019
42922	A	CMC PRINTED BAG INC	WHITTIER	9.0	ND	0.00	0.00	1995
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9.0	ND	0.00	0.00	1994
169990	A	SPS TECHNOLOGIES, LLC	GARDENA	8.9	ND	0.10	0.10	1999
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.20	0.10	1997
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0.00	0.00	1995
2680	A	LA CO., SANITATION DISTRICT	WHITTIER	8.6	ND	0.00	0.00	1999
44454	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0.00	0.00	0.20	2002
7203	A	HESSCO IND INC	LA HABRA	8.6	ND	0.00	0.00	1995
15736	A	HENRY CO	HUNTINGTON PARK	8.5	ND	0.00	0.00	2000
800057	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	8.5	ND	0.00	0.10	1999
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0.00	0.20	1998
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.10	0.00	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.20	0.10	1998
800054	A	GATX RAIL CORP	SAN PEDRO	8.0	ND	0.30	0.50	1997
7730	A	CARPENTER CO	RIVERSIDE	8.0	ND	0.03	1.34	2003
3609	A	AL'S PLATING CO INC	LOS ANGELES	7.8	ND	0.30	0.20	1999
37603	A	SGL TECHNIC LLC	VALENCIA	7.8	ND	0.00	0.40	1998
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.10	0.10	2001
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0.00	0.80	0.30	2008
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.20	0.50	2013
169754	A	SO CAL HOLDING, LLC	HUNTINGTON BEACH	7.6	0.02	0.02	0.04	2019

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
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	0.20	0.00	1997
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.10	0.00	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.70	0.40	2007
800032	A	CHEVRON USA INC	MONTEBELLO	7.5	0.14	0.00	0.20	1999
800150	A	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	7.4	0.02	0.30	0.00	2008
108701	A	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.10	0.10	2000
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0.00	0.10	1998
174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.30	0.10	2000
800026	A	ULTRAMAR INC	WILMINGTON	7.2	0.18	0.70	0.20	2012
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.90	0.00	2007
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.20	0.10	2007
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	0.20	0.10	1995
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	7.1	ND	0.00	0.00	2018
166587	A	THE BOEING COMPANY	HUNTINGTON BEACH	7.0	ND	0.00	0.00	1995
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0.00	0.10	2000
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	6.9	ND	0.40	0.10	2001
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0.00	0.90	0.30	2011
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0.00	0.10	1999
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0.00	0.20	1997
171109	A	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	6.6	0.11	0.00	0.30	2011
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
6643	A	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0.00	0.10	2007
11726	A	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.10	0.60	1999
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0.00	0.10	2002
168088	A	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.10	1.60	1995

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
1073	A	BORAL ROOFING LLC	CORONA	6.4	0.00	0.51	2.72	2018
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0.00	0.00	1997
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	6.4	0.02	0.01	0.08	2015
800066	A	HITCO CARBON COMPOSITES INC	GARDENA	6.4	ND	0.30	0.00	1995
183567	A	GS II, INC.	WILMINGTON	6.3	0.04	1.82	0.19	2018
4477	A	SO CAL EDISON CO	AVALON	6.3	0.02	0.00	0.00	2012
1226	A	HYATT DIE CAST & ENGINEERING CORP	CYPRESS	6.2	ND	0.00	0.10	1996
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0.00	0.10	1998
800180	A	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.50	0.80	1999
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0.00	0.10	2000
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6.0	ND	0.00	0.50	1996
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0.00	0.10	1999
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0.00	0.00	1998
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0.00	0.10	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0.00	0.20	1999
8578	A	ASSOCIATED CONCRETE PROD. INC	SANTA ANA	5.8	ND	0.10	0.60	1999
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0.00	0.00	1996
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.30	0.60	1998
164864	A	ARROWHEAD BRASS & PLUMBING	LOS ANGELES	5.7	ND	0.30	0.00	1995
22410	O	PALACE PLATING	LOS ANGELES	5.6	ND	0.73	0.38	2004
38971	A	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0.00	0.40	1995
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0.00	0.10	1996
14146	A	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0.00	0.10	1998
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.20	0.00	2007
54424	A	L&L CUSTOM SHUTTERS INC, ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.20	0.20	2001
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.50	0.20	1998
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.10	0.00	1997
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.60	0.20	2000
109198	A	TORCH OPERATING COMPANY	BREA	5.0	ND	0.00	0.00	2001
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.20	0.00	1999
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	0.00	0.00	2008
190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.20	0.10	1999
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0.00	0.00	0.00	2002
101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.60	1.00	1998
3950	A	CROWN CORK & SEAL CO INC	LA MIRADA	4.6	ND	0.00	0.10	1997
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	4.5	0.01	0.00	2.70	2002
157451	A	BENDER CCP INC	VERNON	4.4	0.00	1.00	0.00	2002
800041	A	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.10	0.00	2000
93346	A	WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY	SOUTH EL MONTE	4.3	ND	0.10	0.20	1997
174591	A	TESORO REF & MKTG CO LLC,CALCINER	LONG BEACH	4.3	ND	0.10	0.20	1995
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.30	0.00	2001
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.50	0.10	1995
6459	O	HONEYWELL INTERNATIONAL INC	VERNON	4.1	ND	0.00	0.00	1999
7533	A	SIMS HUGO NEU WEST	TERMINAL ISLAND	4.1	ND	1.30	0.10	2003
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.60	0.20	1998
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.30	0.00	2002
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0.00	0.00	0.00	2007
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	CITY OF INDUSTRY	3.7	ND	0.00	0.00	1996
9114	O	SOMITEX PRINTS OF CAL INC	CITY OF INDUSTRY	3.7	ND	0.10	0.00	1996
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0.00	0.00	2002
106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.20	0.20	2000
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1.00	0.50	2001
126197	A	STERIGENICS US, INC.	LOS ANGELES	3.6	ND	0.00	0.00	1996
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0.00	0.50	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	0.10	0.50	2000
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0.00	0.00	2002
151899	A	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0.00	0.20	2000
9163	A	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	ONTARIO	3.4	ND	0.30	0.00	2007
57329	O	KWIKSET CORP	ANAHEIM	3.4	ND	0.00	0.10	2000
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0.00	0.00	1999
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0.00	0.00	1996
126191	A	STERIGENICS US, INC.	LOS ANGELES	3.3	ND	0.00	0.00	1996
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0.00	0.00	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	0.10	0.10	2009
18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0.00	0.70	0.00	2012
6384	A	LA CO., RANCHO LOS AMIGOS NAT. REHAB CTR	DOWNEY	3.1	ND	0.00	0.10	1999
10005	A	ELECTRONIC CHROME GRINDING CO, INC	SANTA FE SPRINGS	3.0	0.01	0.20	0.10	2001
11435	A	PQ CORPORATION	SOUTH GATE	3.0	ND	0.00	0.00	1998
113676	A	VICKERS	LOS ANGELES	3.0	ND	0.00	0.00	1995
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3.0	ND	0.00	0.00	1994
2613	A	U.S.GVT,NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.10	0.00	2002
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0.00	0.10	1999
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.70	0.10	2009
116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0.00	0.00	1999
48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0.00	0.40	1997
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.10	0.00	1999

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0.00	0.00	2000
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0.00	0.10	1995
5887	A	NEXGEN PHARMA INC	IRVINE	2.7	ND	0.00	0.00	1997
16642	A	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	2.7	ND	0.00	0.10	1999
25440	A	INVENSYS CLIMATE CONTROLS	LONG BEACH	2.7	ND	0.00	1.00	1998
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0.00	0.10	2002
46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.20	0.00	1995
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0.00	0.20	2000
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0.00	0.10	1997
800030	A	CHEVRON PRODUCTS CO.	EL SEGUNDO	2.7	0.28	0.30	0.10	2001
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.10	0.30	1997
37507	A	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	2.6	0.00	1.10	1.30	2012
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.60	0.00	2008
185059	A	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0.00	0.00	1995
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.10	0.80	1999
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0.00	0.10	1999
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1.00	0.00	0.20	1998
133405	A	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0.00	0.20	1999
172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0.00	0.00	1999
800039	O	DOUGLAS PRODUCTS DIVISION	TORRANCE	2.4	ND	0.00	0.00	1996
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0.00	0.00	1996
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.10	0.00	2007
1208	A	MICROSEMI CORP	SANTA ANA	2.3	ND	0.00	0.00	2001
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0.00	0.00	1996
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0.00	0.00	0.00	2013
800056	A	KINDER MORGAN LIQUIDS' TERMINALS, LLC	WILMINGTON	2.3	0.01	0.00	0.00	1997
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0.00	0.10	1996

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0.00	0.00	0.20	2000
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.60	0.00	2004
9668	A	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0.00	0.00	2000
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0.00	0.00	0.10	2009
2605	A	3M DRUG DELIVERY SYSTEMS	NORTHRIDGE	2.0	ND	0.40	0.40	1996
14502	A	VERNON PUBLIC UTILITIES	VERNON	2.0	0.00	0.00	0.00	2007
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2.0	ND	0.00	0.50	1998
142267	A	FS PRECISION TECH LLC	COMPTON	2.0	ND	0.10	0.20	2001
800181	A	CALIFORNIA PORTLAND CEMENT CO	COLTON	2.0	ND	0.00	0.40	1996
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.10	0.60	1999
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0.00	0.00	2000
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0.00	0.10	2001
800003	A	HONEYWELL INTERNATIONAL INC	TORRANCE	1.8	ND	0.00	0.00	1999
8309	A	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	1.7	ND	0.00	0.10	2000
22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.70	0.20	2000
82512	A	BREA CANON OIL CO	WILMINGTON	1.7	ND	0.00	0.00	1996
185801	A	BERRY PETROLEUM COMPANY, LLC	SANTA CLARITA	1.6	ND	0.20	0.70	1999
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.30	0.30	1996
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0.00	0.40	0.30	2017
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.80	0.40	1998
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.10	0.00	2007
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0.00	0.30	0.10	2009
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0.00	0.00	2001
126536	A	CPP - POMONA	POMONA	1.5	ND	0.00	0.00	1999
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.10	0.20	1999
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0.00	0.00	1996
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.90	0.10	1998

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0.00	0.00	1996
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0.00	0.50	1997
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.60	0.10	1996
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0.00	0.00	1999
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0.00	0.00	2000
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0.00	0.00	1996
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0.00	0.00	2005
42514	A	LA COUNTY SANITATION DIST (CALABASAS)	AGOURA	1.1	0.00	0.10	0.00	2010
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0.00	0.10	1996
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1.0	ND	0.00	0.10	1997
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1.0	ND	0.00	0.00	1999
800127	A	SO CAL GAS CO	MONTEBELLO	1.0	0.00	0.00	0.00	2009
800301	A	ITT GILFILLAN	VAN NUYS	0.9	ND	0.10	0.20	1998
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.20	0.10	1996
47056	A	MYERS CONTAINER CORP, IMACC CORP DIV	HUNTINGTON PARK	0.9	ND	0.20	2.00	2002
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0.00	0.40	1999
18378	A	GRUBER SYS INC	VALENCIA	0.8	ND	0.10	0.10	2004
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0.00	0.10	1996
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.20	0.00	2007
150201	A	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0.00	0.00	1998
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0.00	0.00	1995
174340	A	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0.00	0.00	1995
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0.00	0.00	1999
22373	A	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0.00	0.00	1996
24060	A	AQUATIC COMPANY	ANAHEIM	0.7	ND	0.00	0.00	1996
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.10	0.00	2000
24756	A	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0.00	0.10	1997

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
115394	A	AES ALAMITOS, LLC	LONG BEACH	0.6	ND	0.00	0.00	1999
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.90	0.02	1997
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0.00	0.00	1995
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	SYLMAR	0.5	ND	0.00	0.00	1999
6281	A	US GOVT,MARINE CORPS AIR STATION,EL TORO	SANTA ANA	0.5	ND	0.00	0.00	1996
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0.00	0.00	2003
61160	A	GE ENGINE SERVICES, LLC	ONTARIO	0.5	ND	0.70	0.01	2003
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.40	0.20	2001
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0.00	0.10	0.40	2012
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0.00	0.00	1994
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0.00	0.00	2001
43436	A	TST, INC.	FONTANA	0.4	0.11	0.00	0.40	1997
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0.00	0.00	0.10	2011
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0.00	0.00	1998
122295	A	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0.00	0.00	1999
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0.00	0.00	2008
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0.00	0.00	1999
24520	A	LA CNTY SANITATION DISTRICT-PALOS VERDES	ROLLING HILLS ESTATES	0.3	ND	0.00	0.00	1998
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.30	0.00	1996
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.10	0.30	1999
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.10	0.10	2007
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0.00	0.00	1997
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0.00	0.00	2000
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.60	0.00	2002
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0.00	0.00	2000
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0.00	0.00	0.00	2010
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0.00	0.20	1996

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0.00	0.00	1999
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0.00	0.00	2002
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0.00	0.00	2000
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.70	0.00	1996
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.30	0.00	1999
180908	A	ECO SERVICES OPERATIONS CORP.	CARSON	0.1	ND	0.00	0.10	2006
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0.00	0.00	1997
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0.00	0.00	2001
16044	A	SPECIALTY ORGANICS, INC.	IRWINDALE	0.1	ND	0.00	0.20	1997
24118	A	DEVOE COATINGS CO	RIVERSIDE	0.1	ND	0.30	0.10	1999
24812	A	FARMER BROS CO	TORRANCE	0.1	ND	0.00	0.00	1999
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0.00	0.00	2002
37336	A	COMMERCE REFUSE TO ENERGY FACILITY	COMMERCE	0.1	0.00	0.00	0.00	2010
42676	A	CES PLACERITA INC	NEWHALL	0.1	ND	0.10	0.00	2003
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.40	0.40	2002
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0.00	0.00	1995
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0.00	0.00	1999
156741	A	HARBOR COGENERATION CO, LLC	WILMINGTON	0.1	ND	0.00	0.00	2002
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0.0	ND	0.00	0.00	1996
6670	O	TRU CUT INC	LOS ANGELES	0.0	ND	0.00	0.00	2002
809	O	GARNER GLASS CO	CLAREMONT	0.0	ND	0.00	0.00	1996
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0.0	ND	0.00	0.00	1996
1746	A	UNITED ALLOYS INC	LOS ANGELES	0.0	ND	0.00	0.00	1998
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0.0	ND	0.00	0.00	1996
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0.0	ND	0.00	0.40	1994
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0.0	ND	0.00	0.00	1995
4616	O	SUPERIOR IND INTL INC	VAN NUYS	0.0	ND	0.00	0.40	1997

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
5125	A	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0.0	ND	0.00	0.30	1996
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0.0	ND	0.00	0.00	1999
6163	A	OHLINE	GARDENA	0.0	ND	0.30	0.70	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0.0	ND	0.00	0.60	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0.0	ND	0.00	0.00	1995
7010	A	PRUDENTIAL OVERALL SUPPLY	IRVINE	0.0	ND	0.00	0.00	1995
8560	A	PRUDENTIAL OVERALL SUPPLY CO	COMMERCE	0.0	ND	0.20	0.40	1995
8935	A	TRAIL RITE INC	SANTA ANA	0.0	ND	0.00	0.30	1996
10656	A	NEWPORT LAMINATES	SANTA ANA	0.0	ND	0.00	0.00	1996
12493	O	REMO INC	NORTH HOLLYWOOD	0.0	ND	0.00	0.00	1997
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0.0	ND	0.00	0.00	1994
14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0.0	ND	0.00	0.00	2002
14217	A	MODERN FAUCET MFG COMPANY	LOS ANGELES	0.0	ND	0.00	0.50	1996
19953	A	RISTON KELLER INC	IRVINE	0.0	ND	0.00	0.00	1996
20144	A	CANON BUSINESS MACHINES INC	COSTA MESA	0.0	ND	0.00	0.10	1999
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0.0	ND	0.00	0.00	2000
22092	A	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0.0	ND	0.00	0.60	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0.0	ND	0.00	0.00	2002
24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0.0	ND	0.00	0.20	1999
40806	A	NEW BASIS	RIVERSIDE	0.0	ND	0.70	0.20	1997
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0.0	ND	0.00	0.00	1999
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0.0	ND	0.00	0.00	1995
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0.0	ND	0.00	0.00	1996
189043	A	REVLIN DBA ELIMINATOR BOATS	MIRA LOMA	0.0	ND	0.00	0.00	1995
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0.0	ND	0.00	0.00	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0.0	ND	0.00	0.00	1996
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0.0	ND	0.00	0.00	1996

Table C-1 (cont'd)
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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0.0	ND	0.20	0.20	2000
70021	A	XERXES CORP (A DELAWARE CORP)	ANAHEIM	0.0	ND	0.00	0.00	1996
115586	A	SUNDANCE SPAS, INC	CHINO	0.0	ND	0.00	0.40	1996
800109	A	REYNOLDS METALS CO	TORRANCE	0.0	ND	0.20	0.90	2001
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0.0	ND	0.00	0.00	2000
124016	O	CHEMETALL U.S., INC,	LA MIRADA	0.0	ND	0.10	0.10	2000
124838	A	EXIDE TECHNOLOGIES	VERNON	0.0	ND	0.00	0.00	2013
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0.0	ND	0.20	0.70	1997
149241	A	REGAL CULTURED MARBLE	POMONA	0.0	ND	0.00	0.20	1995
185282	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0.0	ND	0.30	0.00	1999
160916	A	FXI, INC.	ORANGE	0.0	ND	0.40	0.40	1994
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0.0	ND	0.00	0.00	2000
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0.0	ND	0.00	0.00	1997
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0.0	ND	0.00	0.00	2000
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0.0	ND	0.10	0.30	2004
800337	A	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0.0	ND	0.00	0.00	1996

Notes:

- (a) “A” – Active (note that facilities with this status may not be in operation currently); O = Out of Business or Inactive
- (b) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
- (c) ND = Not Determined

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0.00	0.00	2008
809	O	GARNER GLASS CO	CLAREMONT	0.0	ND	0.00	0.00	1996
1073	A	BORAL ROOFING LLC	CORONA	6.4	0.00	0.51	2.72	2018
1208	A	MICROSEMI CORP	SANTA ANA	2.3	ND	0.00	0.00	2001
1226	A	HYATT DIE CAST & ENGINEERING CORP	CYPRESS	6.2	ND	0.00	0.10	1996
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0.00	0.00	1995
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0.0	ND	0.00	0.00	1996
1746	A	UNITED ALLOYS INC	LOS ANGELES	0.0	ND	0.00	0.00	1998
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0.00	0.00	1997
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0.00	0.00	1996
2605	A	3M DRUG DELIVERY SYSTEMS	NORTHRIDGE	2.0	ND	0.40	0.40	1996
2613	A	U.S.GVT,NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.10	0.00	2002
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.10	0.00	2007
2680	A	LA CO., SANITATION DISTRICT	WHITTIER	8.6	ND	0.00	0.00	1999
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0.00	0.00	1997
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0.0	ND	0.00	0.00	1996
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	SYLMAR	0.5	ND	0.00	0.00	1999
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0.0	ND	0.00	0.00	1995
3609	A	AL'S PLATING CO INC	LOS ANGELES	7.8	ND	0.30	0.20	1999
3950	A	CROWN CORK & SEAL CO INC	LA MIRADA	4.6	ND	0.00	0.10	1997
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.10	0.20	1999
4477	A	SO CAL EDISON CO	AVALON	6.3	0.02	0.00	0.00	2012
4616	O	SUPERIOR IND INTL INC	VAN NUYS	0.0	ND	0.00	0.40	1997
5125	A	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0.0	ND	0.00	0.30	1996
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0.0	ND	0.00	0.00	1999
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0.00	0.10	1999
5887	A	NEXGEN PHARMA INC	IRVINE	2.7	ND	0.00	0.00	1997

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
6163	A	OHLINE	GARDENA	0.0	ND	0.30	0.70	1996
6281	A	US GOVT,MARINE CORPS AIR STATION,EL TORO	SANTA ANA	0.5	ND	0.00	0.00	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0.0	ND	0.00	0.60	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0.0	ND	0.00	0.00	1995
6384	A	LA CO., RANCHO LOS AMIGOS NAT. REHAB CTR	DOWNEY	3.1	ND	0.00	0.10	1999
6459	O	HONEYWELL INTERNATIONAL INC	VERNON	4.1	ND	0.00	0.00	1999
6643	A	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0.00	0.10	2007
6670	O	TRU CUT INC	LOS ANGELES	0.0	ND	0.00	0.00	2002
7010	A	PRUDENTIAL OVERALL SUPPLY	IRVINE	0.0	ND	0.00	0.00	1995
7203	A	HESSCO IND INC	LA HABRA	8.6	ND	0.00	0.00	1995
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0.00	0.00	2001
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
7533	A	SIMS HUGO NEU WEST	TERMINAL ISLAND	4.1	ND	1.30	0.10	2003
7730	A	CARPENTER CO	RIVERSIDE	8.0	ND	0.03	1.34	2003
8015	A	ANADITE INC	SOUTH GATE	3.5	ND	0.63	0.78	1998
8309	A	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	1.7	ND	0.00	0.10	2000
8547	A	QUEMETCO INC	CITY OF INDUSTRY	7.1	0.45	0.09	0.69	2016
8560	A	PRUDENTIAL OVERALL SUPPLY CO	COMMERCE	0.0	ND	0.20	0.40	1995
8578	A	ASSOCIATED CONCRETE PROD. INC	SANTA ANA	5.8	ND	0.10	0.60	1999
8582	A	SO CAL GAS CO/PLAYA DEL REY STORAGE FAC	PLAYA DEL REY	9.2	0.02	7.28	0.02	2019
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	CITY OF INDUSTRY	3.7	ND	0.00	0.00	1996
8935	A	TRAIL RITE INC	SANTA ANA	0.0	ND	0.00	0.30	1996
9114	O	SOMITEX PRINTS OF CAL INC	CITY OF INDUSTRY	3.7	ND	0.10	0.00	1996
9163	A	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	ONTARIO	3.4	ND	0.30	0.00	2007
9668	A	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0.00	0.00	2000
10005	A	ELECTRONIC CHROME GRINDING CO, INC	SANTA FE SPRINGS	3.0	0.01	0.20	0.10	2001
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0.00	0.00	2000

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
10510	A	GREGG INDUSTRIES INC	EL MONTE	9.4	ND	0.60	0.60	2008
10656	A	NEWPORT LAMINATES	SANTA ANA	0.0	ND	0.00	0.00	1996
11142	A	KEYSOR-CENTURY CORP	SAUGUS	17.0	ND	0.50	0.10	2000
11192	A	HI-SHEAR CORPORATION	TORRANCE	4.8	ND	0.00	0.00	2008
11435	A	PQ CORPORATION	SOUTH GATE	3.0	ND	0.00	0.00	1998
11726	A	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.10	0.60	1999
11818	A	HIKSON METAL FINISHING	NEWPORT BEACH	1502.0	1.09	0.20	0.10	2015
12493	O	REMO INC	NORTH HOLLYWOOD	0.0	ND	0.00	0.00	1997
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0.00	0.00	1994
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0.0	ND	0.00	0.00	1994
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0.00	0.80	0.30	2008
14146	A	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0.00	0.10	1998
14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0.0	ND	0.00	0.00	2002
14217	A	MODERN FAUCET MFG COMPANY	LOS ANGELES	0.0	ND	0.00	0.50	1996
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0.00	0.30	2008
14502	A	VERNON PUBLIC UTILITIES	VERNON	2.0	0.00	0.00	0.00	2007
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0.00	0.40	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	0.10	0.00	2000
15736	A	HENRY CO	HUNTINGTON PARK	8.5	ND	0.00	0.00	2000
16044	A	SPECIALTY ORGANICS, INC.	IRWINDALE	0.1	ND	0.00	0.20	1997
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0.00	0.00	1999
16642	A	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	2.7	ND	0.00	0.10	1999
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	6.4	0.02	0.01	0.08	2015
16951	A	ANAPLEX CORP	PARAMOUNT	2836.0	9.73	23.84	2.02	2018
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0.00	0.00	2002
18294	A	NORTHROP GRUMMAN SYSTEMS CORP	EL SEGUNDO	7.6	ND	0.13	0.05	1999

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
18378	A	GRUBER SYS INC	VALENCIA	0.8	ND	0.10	0.10	2004
18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0.00	0.70	0.00	2012
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.60	0.20	1998
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0.00	0.10	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12.0	ND	0.40	0.10	2000
18931	A	TAMCO	RANCHO CUCAMONGA	52.7	3.08	3.04	3.19	2015
18989	A	BOWMAN PLATING CO INC	COMPTON	17.0	0.00	0.01	0.01	2015
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0.00	0.00	2001
19953	A	RISTON KELLER INC	IRVINE	0.0	ND	0.00	0.00	1996
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0.00	0.00	1999
20144	A	CANON BUSINESS MACHINES INC	COSTA MESA	0.0	ND	0.00	0.10	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.70	0.40	2007
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0.00	0.90	0.30	2011
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1.0	ND	0.00	0.10	1997
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0.00	0.00	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.20	0.10	1998
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0.00	0.00	2003
22092	A	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0.0	ND	0.00	0.60	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0.0	ND	0.00	0.00	2002
22373	A	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0.00	0.00	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	0.70	0.20	2000
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.20	0.10	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	0.00	0.10	2001
23752	A	AEROCRAFT HEAT TREATING CO INC	PARAMOUNT	1900.0	11.00	2.90	0.15	2018
23907	A	JOHNS MANVILLE CORP	CORONA	13.0	ND	0.40	2.70	1999

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
24060	A	AQUATIC COMPANY	ANAHEIM	0.7	ND	0.00	0.00	1996
24118	A	DEVOE COATINGS CO	RIVERSIDE	0.1	ND	0.30	0.10	1999
24520	A	LA CNTY SANITATION DISTRICT-PALOS VERDES	ROLLING HILLS ESTATES	0.3	ND	0.00	0.00	1998
24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0.0	ND	0.00	0.20	1999
24756	A	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0.00	0.10	1997
24812	A	FARMER BROS CO	TORRANCE	0.1	ND	0.00	0.00	1999
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0.00	0.00	2002
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0.00	0.30	0.10	2009
25440	A	INVENSYS CLIMATE CONTROLS	LONG BEACH	2.7	ND	0.00	1.00	1998
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.30	0.00	1996
27343	O	CON AGRA INC, GILROY FOODS DBA	SANTA ANA	7.1	ND	0.20	0.10	1995
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0.00	0.10	2002
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0.00	0.10	2002
35302	A	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	14.0	0.02	0.10	0.10	2000
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.10	0.30	1997
37336	A	COMMERCE REFUSE TO ENERGY FACILITY	COMMERCE	0.1	0.00	0.00	0.00	2010
37507	A	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	2.6	0.00	1.10	1.30	2012
37603	A	SGL TECHNIC LLC	VALENCIA	7.8	ND	0.00	0.40	1998
38971	A	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0.00	0.40	1995
40806	A	NEW BASIS	RIVERSIDE	0.0	ND	0.70	0.20	1997
41229	A	LUBECO INC	LONG BEACH	128.6	0.08	0.18	0.45	2019
42514	A	LA COUNTY SANITATION DIST (CALABASAS)	AGOURA	1.1	0.00	0.10	0.00	2010
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0.00	0.00	1996
42676	A	CES PLACERITA INC	NEWHALL	0.1	ND	0.10	0.00	2003
42922	A	CMC PRINTED BAG INC	WHITTIER	9.0	ND	0.00	0.00	1995
43436	A	TST, INC.	FONTANA	0.4	0.11	0.00	0.40	1997
44454	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0.00	0.00	0.20	2002

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0.00	0.00	0.10	2011
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0.00	0.10	1998
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.30	0.00	2002
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0.0	ND	0.00	0.00	1999
46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.20	0.00	1995
47056	A	MYERS CONTAINER CORP, IMACC CORP DIV	HUNTINGTON PARK	0.9	ND	0.20	2.00	2002
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0.0	ND	0.00	0.00	1995
48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0.00	0.40	1997
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0.00	0.00	2002
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	7.1	ND	0.00	0.00	2018
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.70	0.10	2009
54424	A	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.20	0.20	2001
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0.0	ND	0.00	0.00	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0.0	ND	0.00	0.00	1996
57329	O	KWIKSET CORP	ANAHEIM	3.4	ND	0.00	0.10	2000
61160	A	GE ENGINE SERVICES, LLC	ONTARIO	0.5	ND	0.70	0.01	2003
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0.0	ND	0.00	0.00	1996
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0.00	0.50	1997
62897	A	NORTHROP GRUMMAN CORP, MASD	PICO RIVERA	9.4	ND	1.00	0.50	2000
70021	A	XERXES CORP (A DELAWARE CORP)	ANAHEIM	0.0	ND	0.00	0.00	1996
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1.00	0.00	0.20	1998
82512	A	BREA CANON OIL CO	WILMINGTON	1.7	ND	0.00	0.00	1996
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0.00	0.00	1996
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	4.5	0.01	0.00	2.70	2002
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0.00	0.00	1996
93346	A	WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY	SOUTH EL MONTE	4.3	ND	0.10	0.20	1997
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.40	0.40	2002

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.10	0.30	1999
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0.00	0.00	0.20	2000
101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0.00	0.10	2000
101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.60	1.00	1998
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.60	0.00	2004
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.20	0.00	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1.00	0.50	2001
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0.00	0.10	2000
106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.20	0.20	2000
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.10	0.10	2007
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0.00	0.00	2001
108701	A	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.10	0.10	2000
109198	A	TORCH OPERATING COMPANY	BREA	5.0	ND	0.00	0.00	2001
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0.00	0.10	1996
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0.00	0.00	1997
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.20	0.00	1997
113676	A	VICKERS	LOS ANGELES	3.0	ND	0.00	0.00	1995
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0.00	0.00	1999
115394	A	AES ALAMITOS, LLC	LONG BEACH	0.6	ND	0.00	0.00	1999
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0.00	0.00	1998
115586	A	SUNDANCE SPAS, INC	CHINO	0.0	ND	0.00	0.40	1996
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0.00	0.00	2000
116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0.00	0.00	1999
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0.00	0.20	1997
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0.0	ND	0.00	0.00	2000
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.30	0.30	1996
122295	A	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0.00	0.00	1999

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.60	0.00	2002
122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21.0	ND	0.10	0.40	2000
124016	O	CHEMETALL U.S., INC,	LA MIRADA	0.0	ND	0.10	0.10	2000
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.50	0.10	1995
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0.00	0.00	2000
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1.0	ND	0.00	0.00	1999
124838	A	EXIDE TECHNOLOGIES	VERNON	0.0	ND	0.00	0.00	2013
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.10	0.00	1995
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0.00	0.00	0.00	2007
126191	A	STERIGENICS US, INC.	LOS ANGELES	3.3	ND	0.00	0.00	1996
126197	A	STERIGENICS US, INC.	LOS ANGELES	3.6	ND	0.00	0.00	1996
126536	A	CPP - POMONA	POMONA	1.5	ND	0.00	0.00	1999
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.60	0.10	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0.00	0.00	1995
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.10	0.50	2000
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0.0	ND	0.20	0.70	1997
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0.00	0.40	0.30	2017
133405	A	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0.00	0.20	1999
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.80	0.40	1998
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.60	0.20	2000
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.90	0.02	1997
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.60	0.00	2008
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.30	0.60	1998
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0.00	0.00	2002
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6.0	ND	0.00	0.50	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2.0	ND	0.10	0.20	2001
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.10	0.20	1999

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
149241	A	REGAL CULTURED MARBLE	POMONA	0.0	ND	0.00	0.20	1995
150201	A	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0.00	0.00	1998
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.10	0.00	1999
151899	A	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0.00	0.20	2000
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0.00	0.10	1996
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.40	0.20	2001
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0.00	0.00	1999
155828	A	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	0.00	0.00	2002
157451	A	BENDER CCP INC	VERNON	4.4	0.00	1.00	0.00	2002
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0.00	0.00	0.00	2013
160916	A	FXI, INC.	ORANGE	0.0	ND	0.40	0.40	1994
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0.00	0.00	0.00	2010
164864	A	ARROWHEAD BRASS & PLUMBING	LOS ANGELES	5.7	ND	0.30	0.00	1995
165192	A	TRIUMPH AEROSTRUCTURES, LLC	HAWTHORNE	19.7	ND	0.64	0.24	1999
166587	A	THE BOEING COMPANY	HUNTINGTON BEACH	7.0	ND	0.00	0.00	1995
167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0.00	0.00	2000
168088	A	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.10	1.60	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	0.10	0.10	1999
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	23.2	0.29	0.10	0.70	2013
171109	A	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	6.6	0.11	0.00	0.30	2011
172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0.00	0.00	1999
174340	A	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0.00	0.00	1995
174591	A	TESORO REF & MKTG CO LLC,CALCINER	LONG BEACH	4.3	ND	0.10	0.20	1995
174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.30	0.10	2000
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3.0	ND	0.00	0.00	1994

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9.0	ND	0.00	0.00	1994
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0.00	0.00	1995
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0.0	ND	0.00	0.00	1996
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.30	0.00	2001
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
180908	A	ECO SERVICES OPERATIONS CORP.	CARSON	0.1	ND	0.00	0.10	2006
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.60	0.30	2009
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.20	0.50	2013
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2.0	ND	0.00	0.50	1998
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.10	0.00	1997
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0.00	0.00	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	0.10	0.80	1999
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0.00	0.10	1997
185059	A	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0.00	0.00	1995
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0.00	0.00	2005
185282	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0.0	ND	0.30	0.00	1999
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.20	0.00	2007
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0.00	0.00	1999
185801	A	BERRY PETROLEUM COMPANY, LLC	SANTA CLARITA	1.6	ND	0.20	0.70	1999
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.20	0.00	2007
187165	A	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0.00	0.00	2002
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0.00	0.00	1999
187823	A	KIRKHILL INC	BREA	18.8	0.07	0.06	0.11	2019
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0.00	0.10	0.40	2012
189043	A	REVLIN DBA ELIMINATOR BOATS	MIRA LOMA	0.0	ND	0.00	0.00	1995

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0.00	0.00	0.00	2002
190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.20	0.10	1999
800003	A	HONEYWELL INTERNATIONAL INC	TORRANCE	1.8	ND	0.00	0.00	1999
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0.00	0.50	2000
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0.0	ND	0.20	0.20	2000
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0.0	ND	0.00	0.40	1994
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0.00	0.10	1999
800026	A	ULTRAMAR INC	WILMINGTON	7.2	0.18	0.70	0.20	2012
800030	A	CHEVRON PRODUCTS CO.	EL SEGUNDO	2.7	0.28	0.30	0.10	2001
800032	A	CHEVRON USA INC	MONTEBELLO	7.5	0.14	0.00	0.20	1999
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0.00	0.10	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	0.00	0.00	1996
800041	A	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.10	0.00	2000
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0.00	0.00	1998
800054	A	GATX RAIL CORP	SAN PEDRO	8.0	ND	0.30	0.50	1997
800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0.00	0.00	1997
800057	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	8.5	ND	0.00	0.10	1999
800063	A	GROVER PROD. CO (EIS USE)	LOS ANGELES	3.3	0.04	0.88	0.07	2001
800066	A	HITCO CARBON COMPOSITES INC	GARDENA	6.4	ND	0.30	0.00	1995
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0.00	0.10	2000
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0.00	0.00	2000
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0.0	ND	0.00	0.00	2000
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0.00	0.20	1998
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0.0	ND	0.00	0.00	1997
800109	A	REYNOLDS METALS CO	TORRANCE	0.0	ND	0.20	0.90	2001
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0.00	0.10	1996

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.90	0.00	2007
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0.00	0.10	1998
800127	A	SO CAL GAS CO	MONTEBELLO	1.0	0.00	0.00	0.00	2009
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0.00	0.00	1996
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0.00	0.00	2000
800150	A	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	7.4	0.02	0.30	0.00	2008
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0.0	ND	0.00	0.00	2000
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.70	0.00	1996
800180	A	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.50	0.80	1999
800181	A	CALIFORNIA PORTLAND CEMENT CO	COLTON	2.0	ND	0.00	0.40	1996
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.10	0.10	2001
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.20	0.10	1997
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.10	0.10	2009
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.30	0.00	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	0.00	0.10	1999
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0.00	0.00	1996
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0.00	0.00	1996
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0.0	ND	0.00	0.00	1996
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0.00	0.10	2000
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.10	0.00	1999
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0.00	0.20	2000
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.20	0.10	2007
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0.0	ND	0.00	0.00	2000
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0.00	0.10	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0.00	0.20	1999
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0.00	0.10	1996

Table C-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)	Cancer Burden (e)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800301	A	ITT GILFILLAN	VAN NUYS	0.9	ND	0.10	0.20	1998
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.10	0.00	2001
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0.0	ND	0.10	0.30	2004
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.10	0.60	1999
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	179.5	4.97	0.80	1.69	2019
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0.00	0.00	2000
800337	A	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0.0	ND	0.00	0.00	1996
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0.00	0.20	1996
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	6.9	ND	0.40	0.10	2001
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.30	0.10	2000
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.10	0.00	2007
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.90	0.10	1998
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.50	0.20	1998
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0.00	0.00	0.10	2009
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.30	0.40	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; OB = Out of Business
- (b) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
- (c) ND = Not Determined

Appendix D — Approved Risk Reduction Plans and Voluntary Risk Reduction Plans

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

Table D-1 — Status of Risk Reduction Plans

Facility ID	Facility Name	Submitted	Approved	Implemented	Residual Risk			
					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	Yes	1.0	0.03	1.34	0.00
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	In Progress	TBD	TBD	TBD	TBD
11818	HIXSON METAL FINISHING	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
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 (d)	Yes	In Progress	In Progress	TBD	TBD	TBD	TBD
18294	NORTHROP GRUMMAN SYSTEMS CORP	Yes	Yes	Yes	7.6	0.13	0.05	N/A
18931	GERDAU/TAMCO	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
18989	BOWMAN PLATING CO INC	Yes	Yes	Yes	17.0	0.01	0.01	0.00
22410	PALACE PLATING (b)	Yes	Yes	Yes	5.6	0.73	0.38	N/A
23752	AEROCRAFT HEAT TREATING CO INC	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
25012	AMADA AMERICA, INC.	Yes	Yes	Yes	0.0	0.00	0.00	0.00
41229	LUBECO INC (d)	Yes	In Progress	In Progress	TBD	TBD	TBD	TBD
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
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
134931	ARCONIC GLOBAL FASTENERS & RINGS, INC.	Yes	Yes	Yes	0.6	1.90	0.02	0.00
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
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
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	In Progress	In Progress	TBD	TBD	TBD	TBD

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) HRA and RRP review is in progress and residual risk is to be determined after implementation of risk reduction measures.

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. Facilities that participate in the Voluntary Risk Reduction Program reduce their health risks sooner and below the thresholds required under Rule 1402. Facilities that participate in this program have already had a HRA approved by South Coast AQMD that shows the facility’s risks were below risk reduction thresholds at the time of HRA approval. An HRA is a study that estimates how a facility’s emissions affect people’s health risks in the surrounding community.

On March 6, 2015, OEHHA approved revisions to its guidelines (2015 OEHHA Guidelines) that are used by all air districts throughout the state to prepare HRAs. The 2015 OEHHA Guidelines incorporates age sensitivity factors which will increase cancer risk estimates to residential and sensitive receptors by approximately three times, and more than three times in some cases depending on whether the TAC has multiple pathways of exposure in addition to inhalation. Under the 2015 OEHHA Guidelines, even though the toxic emissions from a facility have not increased, the estimated cancer risk to a residential receptor will increase. Cancer risks for offsite worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged. The Voluntary Risk Reduction Program provides an opportunity for participating facilities to address the increase in their estimated cancer risk due to the 2015 OEHHA Guidelines.

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

Table D-1 — Facilities with Approved Voluntary Risk Reduction Plans

Facility ID	Facility Status (a)	Facility Name	Address	City	VRRP Approval Year (e)
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

Appendix E — List of Acronyms and Abbreviations

Acronym	Description
AB 2588	Air Toxics “Hot Spots” Information and Assessment Act
AB 617	Assembly Bill 617
AER	Annual Emissions Reporting
ATIR	Air Toxics Inventory Report
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEMS	Continuous Emissions Monitoring System
CEQA	California Environmental Quality Act
DPM	Diesel Particulate Matter
EGBE	Ethylene Glycol mono-n-Butyl Ether
EIR	Environmental Impact Report
F.I.N.D	Facility Information Detail
H&S Code	California Health and Safety Code
HARP	Hotspots Analysis and Reporting Program
HI	Hazard Index
HRA	Health Risk Assessment
LPG	Liquefied Petroleum Gas
MATES	Multiple Air Toxics Exposure Study
MDI	Methylene Phenyl Diisocyanate
NAAQS	National Ambient Air Quality Standard
OEHHA	Office of Environmental Health Hazard Assessment
PAMS	Photochemical Assessment Monitoring Stations
REL	Reference Exposure Levels
RRP	Risk Reduction Plan
SB 1731	Facility Air Toxic Contaminant Risk Audit and Reduction Plan
South Coast AQMD	South Coast Air Quality Management District
TBAc	Tert-Butyl Acetate
TS	Total Facility Score
U.S. EPA	United States Environmental Protection Agency
VRRP	Voluntary Risk Reduction Plan