

BOARD MEETING DATE: December 3, 2021

AGENDA NO. 32

PROPOSAL: Receive and File 2020 Annual Report on AB 2588 Program

SYNOPSIS: The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) requires local air pollution control districts to prepare an annual report and present it at a public hearing. This report provides information regarding South Coast AQMD's implementation of AB 2588 through Rule 1402 - Control of Toxic Air Contaminants from Existing Sources. This annual report describes quadrennial emissions reporting and prioritization, preparation and review of Air Toxics Inventory Reports, Health Risk Assessments, Voluntary Risk Reduction Plans, Risk Reduction Plans and additional South Coast AQMD activities related to air toxics.

COMMITTEE: Reviewed: Stationary Source Committee, November 19, 2021

RECOMMENDED ACTION:
Receive and File.

Wayne Nastri
Executive Officer

SR:IM:EK:VM

Introduction

The California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) enacted in 1987, is a statewide program implemented by local air districts to address health risks from air emissions associated with existing 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 facilities, and to develop plans to reduce associated risks. South Coast AQMD implements AB 2588 requirements through Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, 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 – New Source Review of Toxic Air Contaminants, rules adopted to address air toxic emissions from certain equipment and processes, enforcement efforts to ensure facilities comply with all applicable air quality requirements, and the Multiple Air Toxics Exposure Study, a study measuring the amount of regional toxic air contaminants and their risks throughout the air basin. Additionally, South Coast AQMD has performed ambient air monitoring in many neighborhoods and has found high levels of air toxics in some communities. This monitoring has helped to identify high risk facilities, which have been required to implement risk reduction measures under Rule 1402. Additional reductions have occurred through voluntary measures, enforcement actions, Orders for Abatement and rule development.

As required under the California Health and Safety Code Section 44363, staff has prepared the "2020 Annual Report on the AB 2588 Program." This annual report summarizes South Coast AQMD's air toxics program activities in 2020, including AB 2588 activities and other air toxic related programs. The annual report will be available on South Coast AQMD's website and distributed to county boards of supervisors, city councils and local health officers.

Background

The AB 2588 Program, combined with implementation of Rule 1402, includes requirements for toxic emissions inventories, categorizing and prioritizing facilities, and reviewing and approving detailed Air Toxic Inventory Reports (ATIRs), Health Risk Assessments (HRAs), public notifications, Voluntary Risk Reduction Plans (VRRPs) and Risk Reduction Plans (RRPs). Depending on the level of risk from a facility, they may be required to do public notification and/or reduce risks.

There are two broad classes of facilities within the AB 2588 Program. Facilities with higher toxics emissions (core facilities) are subject to individual reporting requirements, while facilities that are generally small businesses are grouped into industrywide source categories and have fewer requirements under the AB 2588 Program than core facilities. Industrywide source category facilities are generally small businesses with relatively similar emission profiles (such as gas stations and auto-body shops). Some industrywide categories have requirements in source-specific rules to address toxic air contaminants.

Larger facilities (core facilities) are required to report their air toxic emissions to South Coast AQMD, such as hexavalent chromium, nickel, benzene, formaldehyde, and diesel particulate matter (DPM), every four years through the web-based Annual Emissions

Reporting (AER) Program. This quadrennial emissions reporting is staggered so that not all facilities report their toxics emissions at the same time. Of the 455 facilities in South Coast AQMD's core AB 2588 Program, 128 facilities were required to submit reports in 2020 for reporting year 2019. Additionally, on October 7, 2016, Rule 1402 was amended to add requirements for Potentially High Risk Level facilities. Potentially High Risk Level facilities are facilities that staff believes may pose significant health risk to the local community. Potentially High Risk facilities must implement Early Action Reduction Plans to immediately reduce risk and to submit ATIRs, HRAs and RRP's under expedited timelines. So far, three facilities in Paramount (Anaplex Corp, Aerocraft Inc. and Lubeco Inc.) have been designated as Potentially High Risk Level facilities under Rule 1402. An additional facility in Gardena (High Performance Coatings) was given this designation in 2020.

The AB 2588 Program requires air districts to use reported emissions to categorize each facility as either high, intermediate, or low priority to determine if a facility needs to conduct an HRA. Once a facility is designated as high priority, they may be required to submit an HRA to assess risk to the surrounding community. From the beginning of the AB 2588 Program in 1987 through the end of 2020, staff has reviewed and approved 354 HRAs from 341 facilities. Of these, 62 facilities were required to perform public notification activities and 30 facilities were required to implement risk reduction measures.

2020 Accomplishments

The attached report summarizes activities in 2020 for the AB 2588 Program, implementation of Rule 1402, air toxic monitoring performed in conjunction with the AB 2588 Program and Rule 1402, analysis of toxic program impacts from the addition of new or revised health risk values for air toxics, and future activities.

Summary of Activities for Specific AB 2588 Program Facilities

In 2020, 128 facilities filed quadrennial emission reports. Staff initiated audit activities on 77 facilities including 21 facilities with priority scores greater than 10. Additionally, 48 facilities were subject to AB 2588 review. These include facilities that were notified in prior calendar years and were in various stages of review in 2020. Staff reviewed 29 ATIRs, three HRAs, two RRP's, three VRRP, and six revised priority scores. Approximately 9,300 residences were notified that they were exposed to risks above the AB 2588 thresholds, and five public notification meetings were held. Table 1 lists facilities, in alphabetical order, that submitted documents required by the AB 2588 Program. The attached Annual Report provides detailed information regarding the AB 2588 Program activities at each facility.

Table 1 – AB 2588 Program Facilities in 2020

Facility Name	ID No.	Facility Name	ID No.
Aerocraft Heat Treating Co. Inc.	23752	LA City, Street Maintenance Bureau Department of Public Works	25196
Air Liquide Large Industries U.S., LP	148236	Lubeco Inc	41229
All American Asphalt – Irvine	82207	MM West Covina LLC	113873
All American Asphalt - Irwindale	114264	Motion Picture & Television Fund	16211
All American Asphalt – Perris	148146	PABCO Bldg Products LLC, dba PABCO Paper	45746
Anaplex Corp	16951	Pac Rancho, Inc.	140871
Arconic Global Fasteners & Rings, Inc.	134931	Pacific Clay Products Inc	17953
Bowman Plating Co Inc	18989	Phillips 66 Co/LA Refinery Wilmington Pl*	171107
Breitbart Operating LP	150201	Plains West Coast Terminals LLC	800417
Chevron Products Co.	800030	R J. Noble Company	19167
City of Cerritos - Water Division	74396	Robertson's Ready Mix	42623
Coastline High Performance Coatings, Ltd.	112684	Robertson's Ready Mix	134112
Eco Services Operations Corp.*	180908	San Diego Gas & Electric	4242
Eisenhower Medical Center	3671	So Cal Edison Co*	4477
Elite Comfort Solutions	182610	Schlosser Forge Company	15504
Equilon Enter. LLC, Shell Oil Prod. US	800372	SFPP, L.P.	800278
Evonik Corporation*	183926	So Cal Gas Co/Playa Del Rey Storage Fac	8582
Exide Technologies	124805	Sully Miller Contracting Co	105277
Flare Group, dba Aviation Equip Process	164581	Tesoro Refining and Marketing*	800436 174655 174694 174703
Gerdau/TAMCO	18931	Torrance Refining Company LLC*	181667
Glendale City, Glendale Water & Power	800327	Ultramar Inc*	800026
Hixson Metal Finishing	11818	Vista Metals Corporation*	14495
Light Metals Inc. *	83102	Vorteq Pacific	191677
Long Beach City, SERRF Project	44577	Whittier Fertilizer Co	511

Note: * indicates facilities notified to prepare either an ATIR or a VRRP.

Air Monitoring and Source Testing Activities to Support the AB 2588 Program

Based on monitoring for hexavalent chromium in Paramount, three facilities were designated as Potentially High Risk Level Facilities in 2016 and 2017. High levels of hexavalent chromium were discovered, in some instances increasing cancer risk to

nearby communities. Efforts then followed to identify and address the sources of these emissions. As a result, several facilities made a range of improvements, some voluntary and some through rule changes and enforcement actions. South Coast AQMD's ongoing air monitoring results indicate substantial progress in reducing ambient levels of hexavalent chromium due to these actions.

In June 2019, staff began air monitoring in the West Rancho Dominguez area at 14 different locations. The West Rancho Dominguez area is mostly industrial with concrete batch plants, hexavalent chromium metal finishing facilities, and hexavalent chromium spray coating facilities within close proximity to each other. Staff have been investigating potential sources in the vicinity of these monitors and have brought some facilities into the AB 2588 core program and are working with them to identify actions that could be implemented to reduce hexavalent chromium emissions.

HRA Modeling Projects

In 2020, staff supported permitting and enforcement activities by reviewing air dispersion modeling to determine compliance with Rules 1420.2 – Emission Standards for Lead from Metal Melting Finishing.

Rule 1420.2 establishes standards for lead emissions from metal melting facilities. Air dispersion modeling is used to identify the appropriate location for placement of ambient air monitors. In 2020, staff reviewed one compliance plan with air dispersion modeling under this rule for relief from future monitoring requirements.

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

OEHHA adopted risk values for toluene, *p*-chloro- α,α,α -trifluorotoluene (*p*-chlorobenzotrifluoride, or PCBTF), and cobalt and cobalt compounds in 2020. Chronic RELs, 8-hour chronic RELs and acute RELs were adopted for toluene, and cancer potency factors were adopted for PCBTF and cobalt and cobalt compounds. In reviewing 2017 through 2020 reporting data, 273 facilities reported emissions of toluene. PCBTF and cobalt and cobalt compounds are newly added pollutants with no prior reporting requirements and are not currently required to be reported by AB 2588 facilities. However, facilities required to submit inventory reports under Rule 1402 will be required to report PCBTF beginning inventory year 2022 and cobalt and cobalt compounds beginning inventory year 2021.

Future Activities

In 2021, AB 2588 staff will:

- Audit quadrennial emissions inventories for approximately 95 facilities;

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

-
- 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 and develop uniform reporting guidance for various industries;
- Work with CARB to develop guidance and outreach material for implementation of the CARB EICG. This work will also include ensuring that reporting requirements under South Coast AQMD's AB 2588 program and CARB's EICG are as streamlined as possible with other reporting requirements under CARB's CTR regulation and South Coast AQMD's AER program;
- Continue to work with CARB and through the TARMAC to develop HRA guidelines for the industrywide categories of gasoline dispensing facilities, autobody shops, and diesel internal combustion engines, develop uniform reporting guidance for various industries, and to provide training to South Coast AQMD staff and the regulated community;
- Train new staff on the expanded emissions reporting under amended Rule 301 and CARB's Criteria and Toxics Reporting (CTR) regulation;
- Engage in the Department of Toxics Substances Control (DTSC) SB 673 rulemaking which will fold existing health risks, community vulnerability, and cumulative impacts into DTSC's permitting process; and
- Track development of potential health risk value revisions by OEHHA.

Attachments

1. Annual Report on AB 2588 Air Toxics "Hot Spots" Program
2. Board Meeting Presentation

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



2020

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



December 2021

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



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

December 2021

Deputy Executive Officer

Planning, Rule Development and Area Sources

Sarah L. Rees, Ph.D.

Assistant Deputy Executive Officer

Planning, Rule Development and Area Sources

Ian MacMillan

Authors: Victoria Moaveni, Program Supervisor
Fortune Chen, Senior Air Quality Engineer
Tracy Tang, Senior Air Quality Engineer
Adan Velasco, Air Quality Engineer II
Alberto Jasso, Air Quality Engineer II
Areio Soltani, Air Quality Specialist
Matthew Lee, Air Quality Engineer II
Pierre Sycip, Air Quality Specialist
Vanessa Tanik, Air Quality Specialist
Courtney Watts, Assistant Air Quality Engineer

Contributors: Angela Garcia, Sr. Office Assistant

Reviewed by: William Wong, Principal Deputy District Counsel

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EXECUTIVE OFFICER:

WAYNE NASTRI

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Executive Summary



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

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 2020:

AB 2588 and Rule 1402 Implementation Activities	Prioritized 128 facilities based on their quadrennial toxic emission inventory updates
	Initiated 77 audits based on prioritization scores
	Reviewed 29 ATIRs, 3 HRAs, 2 RRP, and 3 VRRPs, and 6 revised priority scores from 48 facilities
	Conducted 5 public notification meetings
Streamlining and Program Improvement Activities	Provided support to rulemaking and AB 617 staff
	Provided support in implementation of Rule 1420.2

In addition, AB 2588 staff also provided comments to California Air Resources Board (CARB) on the proposed amendments to the Air Toxics “Hot Spots” Emissions Inventory Criteria and Guidelines Regulation including expanding the list of chemicals required for reporting. The amendments were approved in November 2020. CARB proposed additional amendments through a 15-day review process. The regulation is expected to be finalized in 2021.

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 specific activities such as collecting emissions data of toxic air contaminants from stationary sources, identifying facilities having localized impacts, determining potential health risks, and notifying affected individuals. CARB has developed some components of the AB 2588 Program requirements of the "Hot Spots" Act; however, local air districts are required to implement and enforce the requirements. This chapter describes the state requirements of the AB 2588 Program.

Emissions Reporting

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

Prioritization

Core facilities in the AB 2588 Program submit an air toxics inventory once every four years. The AB 2588 Program requires air districts to categorize each facility using the reported emissions as either high, intermediate, or low priority to determine if a facility 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 Guidelines³ presents two procedures for prioritizing facilities. The emission and potency procedure relies on three parameters to prioritize facilities: emissions, potency or toxicity, and the proximity of potential receptors; the dispersion adjustment procedure relies on four parameters: emissions, potency or toxicity, dispersion, and receptor proximity. While there are two procedures, both are similar and involve calculating screening-level scores for separate health effects in order to derive a final score.

¹ *Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program*, September 26, 2017, 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>

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

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*⁴ (OEHHA HRA Guidelines). The 2015 OEHHA HRA Guidelines incorporated age sensitivity factors which resulted in increased cancer risk estimates by approximately three times. The OEHHA HRA Guidelines 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. Evaluating exposure involves emission quantification, air dispersion modeling, and identifying exposure routes and exposure durations.

⁴ <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>

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 a risk threshold, 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.⁵ These guidelines provide a cost-effective and uniform method for calculating facility emissions and estimating toxic risks for these facilities under each

⁵ Three IWS risk assessment guidelines have been published: autobody shops, dry cleaners, and retail gasoline stations
<https://ww3.arb.ca.gov/ab2588/riskassess.htm>

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 CARB 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 adopted amendments to the EICG on November 19, 2020 which includes an expanded chemical list required to be reported based on a phased-in schedule and strengthening source testing requirements.⁶ South Coast AQMD falls under District Group A which requires reporting starting with the 2022 inventory year. Additional chemicals are required to be reported starting for inventory year 2026.

- CARB staff was directed to consider additional modifications to the regulation based on public comments received. This include revising criteria pollutant thresholds and adjusting the phase in schedule. CARB also propose to establish a Sector Phase 3B including wastewater, landfills, composters, and metal shredders. This group will not be required to report the expanded chemical list until inventory year 2028.

⁶ The regulation was submitted by CARB to the Office of Administrative Law in October 2021, but has not yet gone into effect.

Chapter 2

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



South Coast AQMD's Air Toxics "Hot Spots" Program incorporates the requirements of the state AB 2588 program through Rule 1402. South Coast AQMD has achieved significant reductions in air toxics in the Basin. This chapter covers the elements and requirements of the South Coast AQMD Air Toxics "Hot Spots" Program and outlines the AB 2588 staff activities in 2020.

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.⁷ 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 2-1 below demonstrates the reductions in risk that have been achieved despite the substantial number of facilities located within our district.

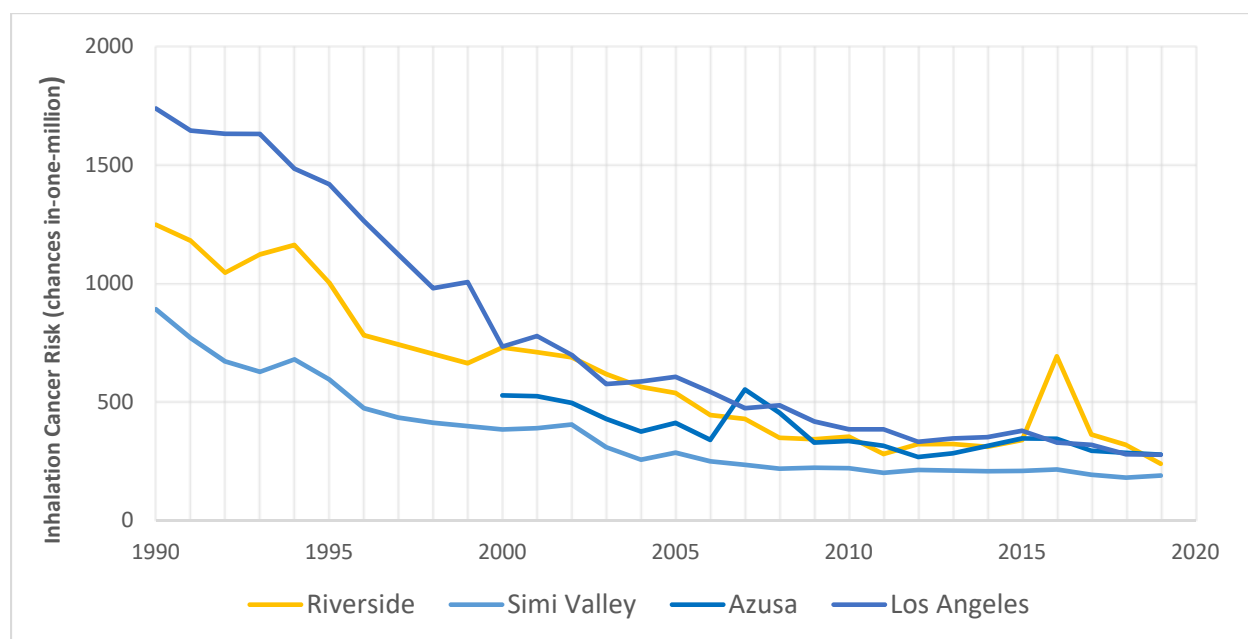


Figure 2-1 – Trends in Inhalation Cancer Risks⁸ in the Basin (1990-2019)

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.

⁷ 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

⁸ Calculated with 2015 OEHHA Risk Assessment Guidelines, excluding cancer risks from DPM.

South Coast AQMD *Rule 1402 - Control of Toxic Air Contaminants from Existing Sources* implements various aspects of AB 2588 and SB 1731 including public notification and risk reduction requirements for facilities. Rule 1402 adopts health risk thresholds and implementation schedules that are more stringent than those specified in AB 2588 and SB 1731. Rule 1402 was 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 approximately 180 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 2020, 128 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 500 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*).⁹ 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).¹⁰ These requirements emphasize transparency in communicating risk to the affected community in the following ways:
 - The notice must clearly identify the area above the notification thresholds.
 - The notice must be distributed to all addresses (individual residences and workplaces), and to parents of children attending school in the area of impact.
 - The approved HRA must also be provided to all schools in the area of impact.
 - South Coast AQMD conducts a public meeting to describe the HRA results to the affected community and to answer questions from community members.
- **Risk Reduction** – Rule 1402 adopts stringent health risk thresholds and aggressive implementation schedules that are beyond the traditional AB 2588 and SB 1731 state requirements (see Table 2-2). Under state requirements, facilities exceeding a significant risk threshold must reduce risk within five years. Under Rule 1402, Potential High Risk Level facilities must submit an Early Action Reduction Plan to immediately reduce risk, followed by a detailed Risk Reduction Plan 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.¹¹ Rule 1402 also 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.

⁹ *AB 2588 and Rule 1402 Supplemental Guidelines, (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)*, September 2020, South Coast AQMD.

¹⁰ http://www.aqmd.gov/docs/default-source/planning/risk-assessment/pn_procedures.pdf

¹¹ 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.

Table 2-1: AB 2588 Facilities by Industry Category

Facility Categories	Number of Facilities
Aerospace	39
Airports	1
Amusement Parks	2
Building/Construction/Mineral Products	46
Bulk Plants	17
Cement Production	1
Chemical Plants	12
Crude Oil Production	34
Dairy/Poultry Farms	7
Electricity Generation	32
Electronic	4
Entertainment	5
Fermentation and Brewing (Breweries/Distilleries/Wineries)	1
Food flavoring manufacturing	1
Furniture/Household Products	2
Glass Production	1
Harbors	1
Hospitals and Health-Related	29
Hydrogen Production	3
Iron and Steel Production	8
Landfill – Industrial Waste	1
Landfill - Municipal Solid Waste	20
Metal and Alloys Products	22
Military Base	4
Other Agricultural Processing	1
Other Food Processing Facility	1
Other Industrial/Manufacturing	61
Other Institutional/Commercial	19
Other Service/Commercial	4
Other Waste Disposal	1
Petroleum Refinery	10
Pharmaceuticals	5
Printing/Publishing	1
Pulp and Paper Manufacturing	4
Schools and Educational Institutions	16
Terminal Depots	15
Wastewater Treatment – Industrial	1
Wastewater Treatment – Municipal	23
Aerospace	39
Total Facilities	455

Table 2-2: Rule 1402 Risk Reduction Categories

Rule 1402 Levels	Thresholds	Requirements	RRP Implementation Timeline
Notification Risk Level	Cancer risk of 10 chances in-one-million or greater Acute or chronic HI of 1.0 or greater Exceeding lead National Ambient Air Quality Standard (NAAQS)	Public notification	No risk reduction required
Voluntary Risk Level	Cancer risk of 10 chances in-one-million or greater Acute or chronic HI of 1.0 or greater Exceeding lead National Ambient Air Quality Standard (NAAQS)	Public notification (modified) and implement VRRP	No later than 2.5 years after approval of plan (an additional 2.5 years extension may be requested)
Action Risk Level	Cancer risk greater than 25 chances in-one-million Cancer burden of 0.5 or more Acute or chronic HI of 3.0 or more Exceeding lead NAAQS	Public notification and implement RRP	No later than 2.5 years after approval of plan (an additional 2.5 years extension may be requested)
Significant Risk Level	Cancer risk of 100 chances in-one-million or greater Acute or chronic HI of 5.0 or more	Public notification and implement RRP	No later than 2 years after approval of plan for facilities designated as Potentially High Risk Facilities

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

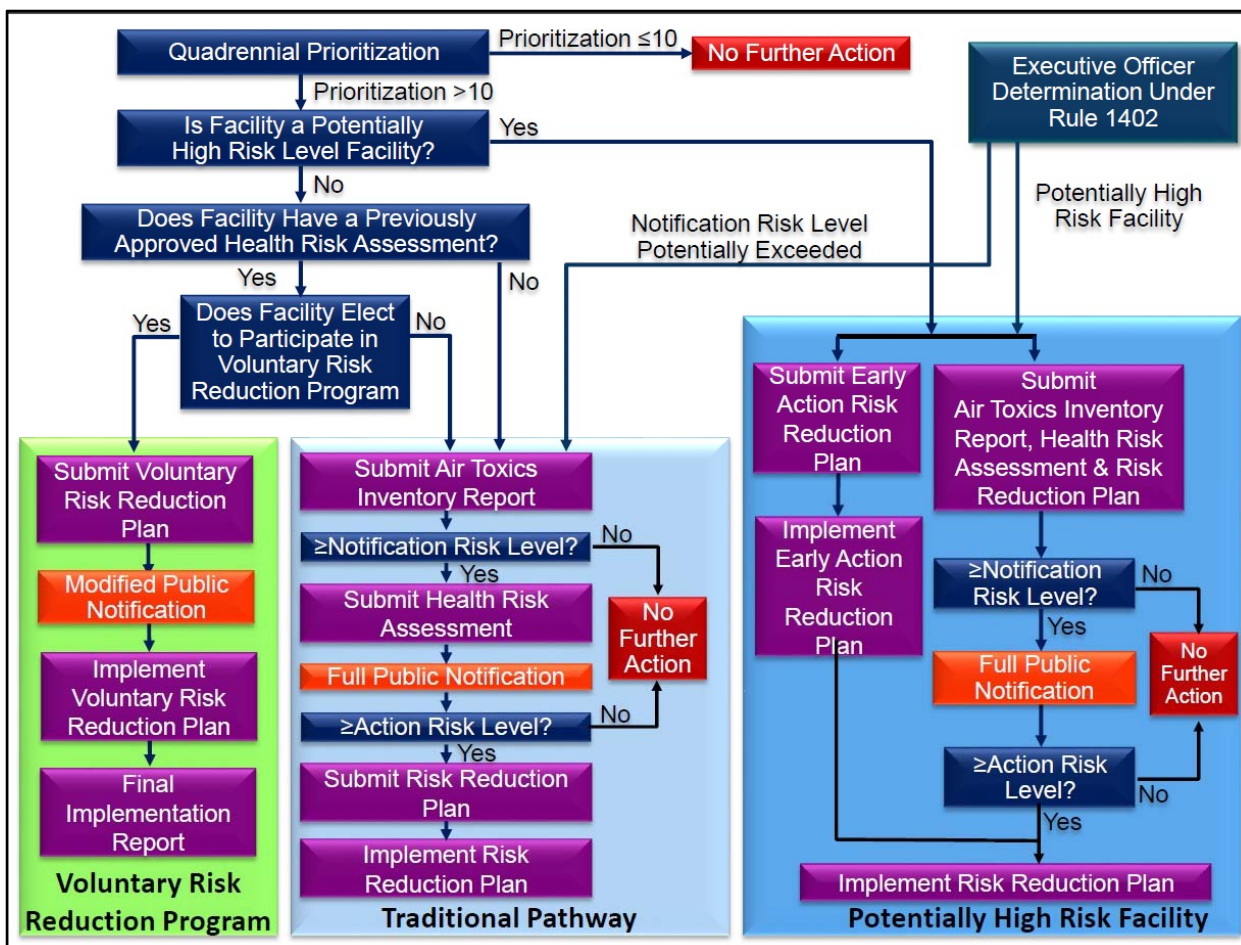


Figure 2-2 – Overview of the AB 2588 Program

Progress in Implementing the AB 2588 Program

From the beginning of the AB 2588 Program in 1987 through the end of 2020, staff has reviewed and approved 354 HRAs from 341 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 341 facilities, 30 were required to implement risk reduction measures, 62 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.

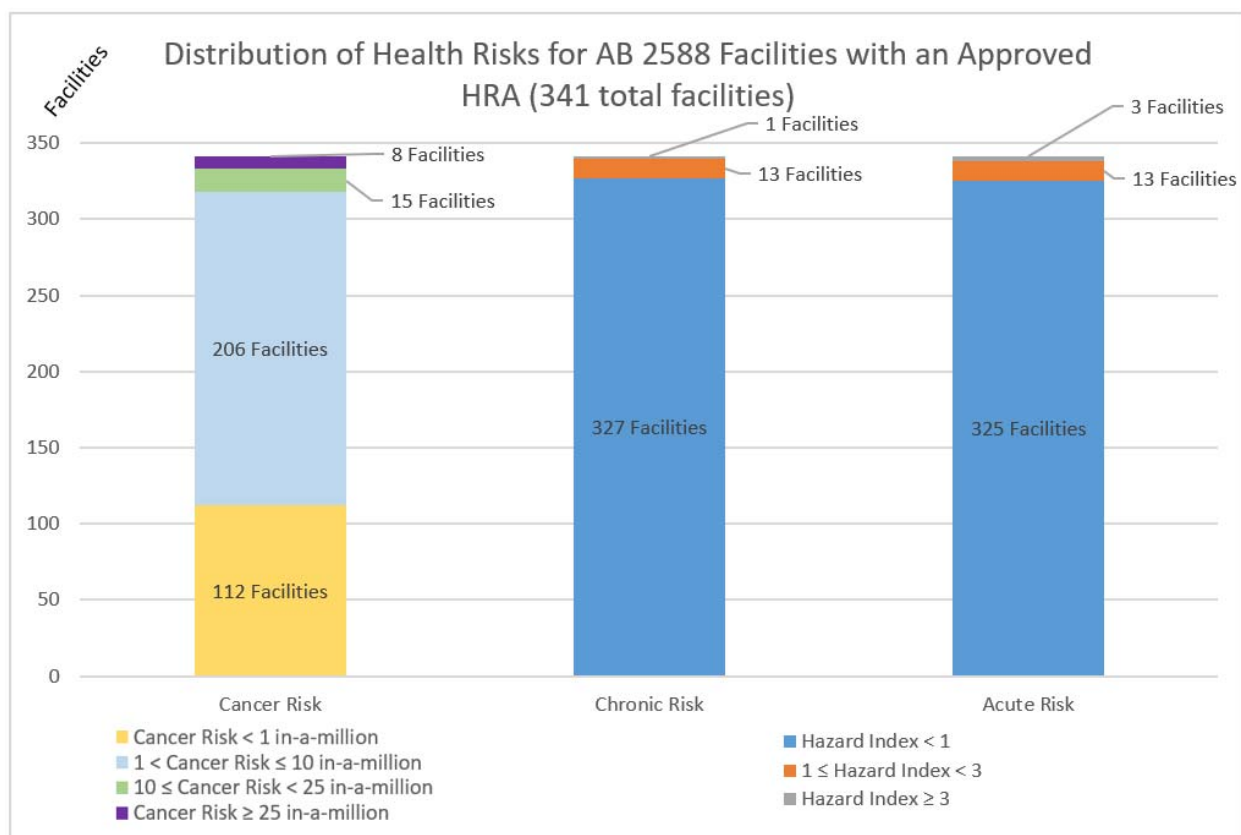


Figure 2-3 – Distribution of Risks for AB 2588 Facilities with an Approved HRA

Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2020

In 2020, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on 77 facilities with 21 facilities with priority scores greater than 10. Key activities conducted include review of 29 ATIRs, three HRAs, two RRP, three Voluntary Risk Reduction Plans (VRRPs), and six 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 120 documents were reviewed in 2020 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 2020 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							See Appendix A.1
Air Liquide Large Industries U.S., LP	148236	X	X	X				
All American Asphalt, - Irvine	82207	X						
All American Asphalt - Irwindale	114264	X						
All American Asphalt - Perris	148146	X						
Anaplex Corp ^a	16951						X	
Arconic Global Fasteners & Rings, Inc.	134931							See Appendix A.7
Bowman Plating Company, Inc.	18989	X						
Breitbart Operating LP	150201	X						
City of Cerritos, Water Division	74396							See Appendix A.11
Coastline High Performance Coatings, Ltd.	112684	X						
Eco Services Operations Corp. ^b	180908	X						
Eisenhower Medical Center	3671							See Appendix A.14
Equilon Enter. LLC, Shell Oil Prod. US ^b	800372				X			Public notification meeting on 7/22/2020
Evonik Corporation ^b	183926	X						
Flare Group, dba Aviation Equipment Processing	164581							See Appendix A.19
Gerdau/TAMCO	18931							See Appendix A.20
Glendale City, Glendale Water & Power ^b	800327						X	
Hixson Metal Finishing	11818							See Appendix A.22
Light Metals b	83102	X						
Long Beach SERRF	44577	X						
LA City, Street Maintenance Bureau Department of Public Works	25196							See Appendix A.25
Los Angeles By-Products	60384							See Appendix A.26

Facility Name	ID #	ATIR		HRA		RRP		Status
		R	A	R	A	R	A	
Lubeco Inc ^a	41229						X	Public notification meeting on 2/5/2020
MM West Covina LLC ^b	113873				X	X	X	Public notification meeting on 5/19/2020
Motion Picture & Television Fund	16211	X						
PABCO Bldg Products LCC	45746							See Appendix A.30
Pac Rancho, Inc.	140871	X	X	X				
Pacific Clay Products, Inc.	17953	X						
Phillips 66 Co/LA Refinery Wilmington Plant ^b	171107			X	X	X		Public notification meeting on 10/1/2020
Plains West Coast Terminals	800417							See Appendix A.34
R.J. Noble Company	19167	X						
Robertson's Ready Mix – Gardena	134112	X						
Robertson's Ready Mix – Redlands	42623	X						
San Diego Gas & Electric	4242	X						
Schlosser Forge Company	15504							See Appendix A.39
SFPP, L.P ^b	800278	X						
So Cal Edison Co ^b	4477				X			Public notification meeting on 6/24/2020
So Cal Gas Co./Playa del Rey Storage Facility	8582							See Appendix A.42
Sully Miller Contracting Company	105277							See Appendix A.43
Vista Metals Corporation ^b	14495	X						
Vorteq Pacific	191677	X						
Whittier Fertilizer	511				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 2020 for Facilities in the Voluntary Risk Reduction Program

Facility Name	ID #	VRRP		Status
		R	A	
Chevron Products Co. (El Segundo Refinery)	800030			See Appendix A. 10
Elite Comfort Solutions	182610	X	X	
Tesoro Refining & Marketing Co., LLC, Los Angeles Refinery	800436			See Appendix A.44
	174655			
	174694			
	174703			
Torrance Refining Company LLC	181667	X	X	
Ultramar Inc	800026	X		

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. Because hexavalent chromium levels in Paramount have been declining steadily and are now within the typical levels, the size of this monitoring network was reduced to focus on other areas that have higher potential for air toxics exposure. In 2020, South Coast AQMD collected air samples for hexavalent chromium analysis at seven locations in the City of Paramount. Among these monitoring locations, four 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.

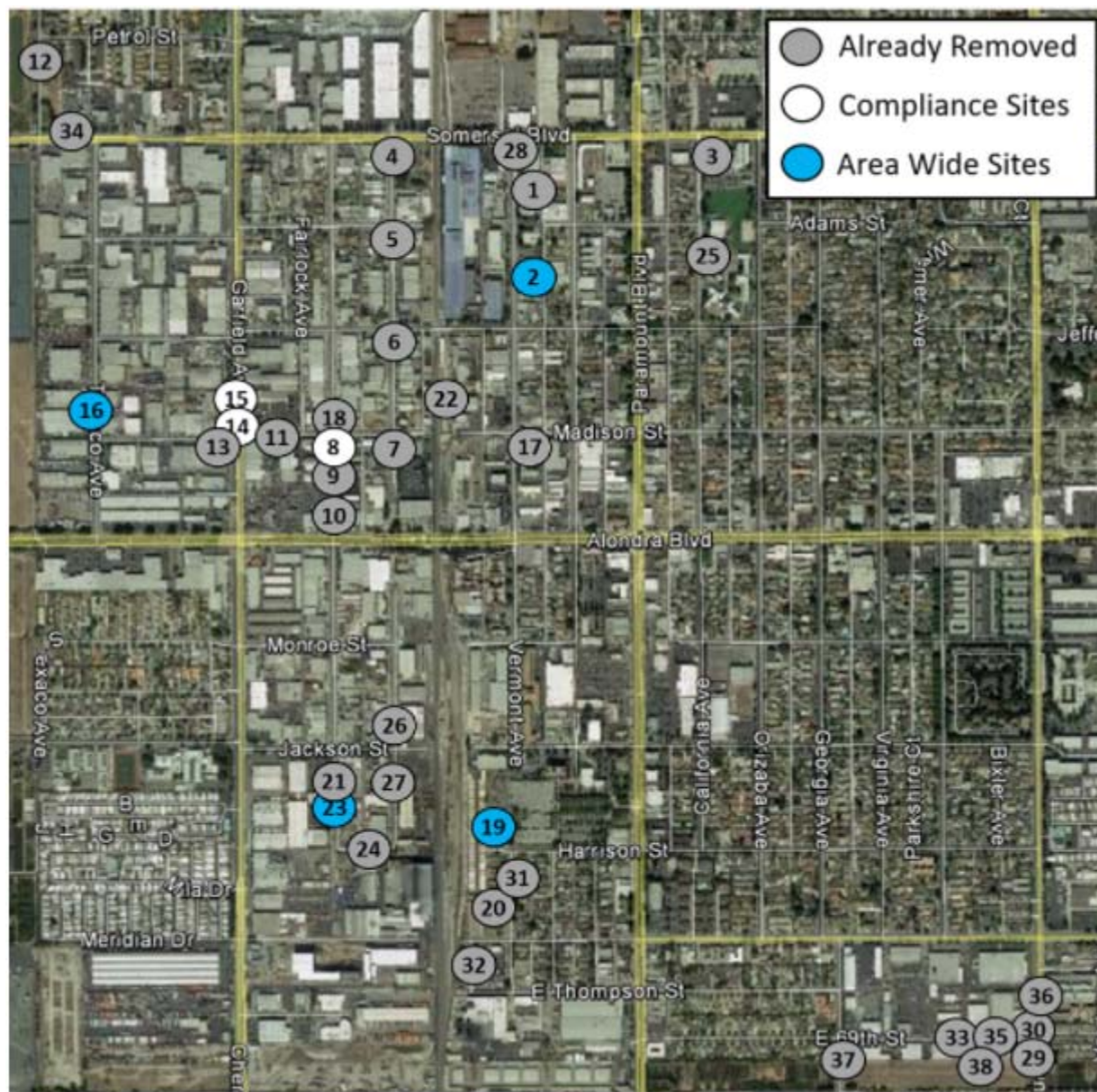


Figure 2-4: Location of the monitoring sites in the City of Paramount

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, in 2017 the Board directed staff to continue to investigate, identify, and pursue remediation of additional sources across our four-county region that may emit high levels of toxic air contaminants.¹² If facilities are identified with high levels of toxic emissions, South Coast AQMD may seek Orders for Abatement from the independent South Coast AQMD Hearing Board to require these facilities to quickly reduce their emissions to a level that does not pose an immediate threat to public health. South Coast AQMD may also designate facilities as Potentially High Risk Level Facilities under Rule 1402.

The goal of this initiative 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 focuses 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, 2019. Due to consistently low readings, Sites #1, 3, 4, 6 8-10, 12, and 13 are no longer active as of October 2020.

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. This rule for chromic acid anodizing and chrome plating facilities requires 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 with ongoing investigation of potential sources within the vicinity of the monitoring network, and with some facilities brought into the AB 2588 core program.

¹² <http://www.aqmd.gov/docs/default-source/news-archive/2017/air-toxics-action-plan-april-7-2017.pdf>



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. South Coast AQMD uses criteria, such as air pollution data and community nominations, to select and recommend communities to the California Air Resources Board (CARB) for the AB 617 program.

In September 2018, CARB approved three communities for Year 1, which include:

- Wilmington, Carson, West Long Beach;
- San Bernardino, Muscoy; and
- East Los Angeles, Boyle Heights, West Commerce.

In December 2019, CARB approved two additional communities for Year 2, including:

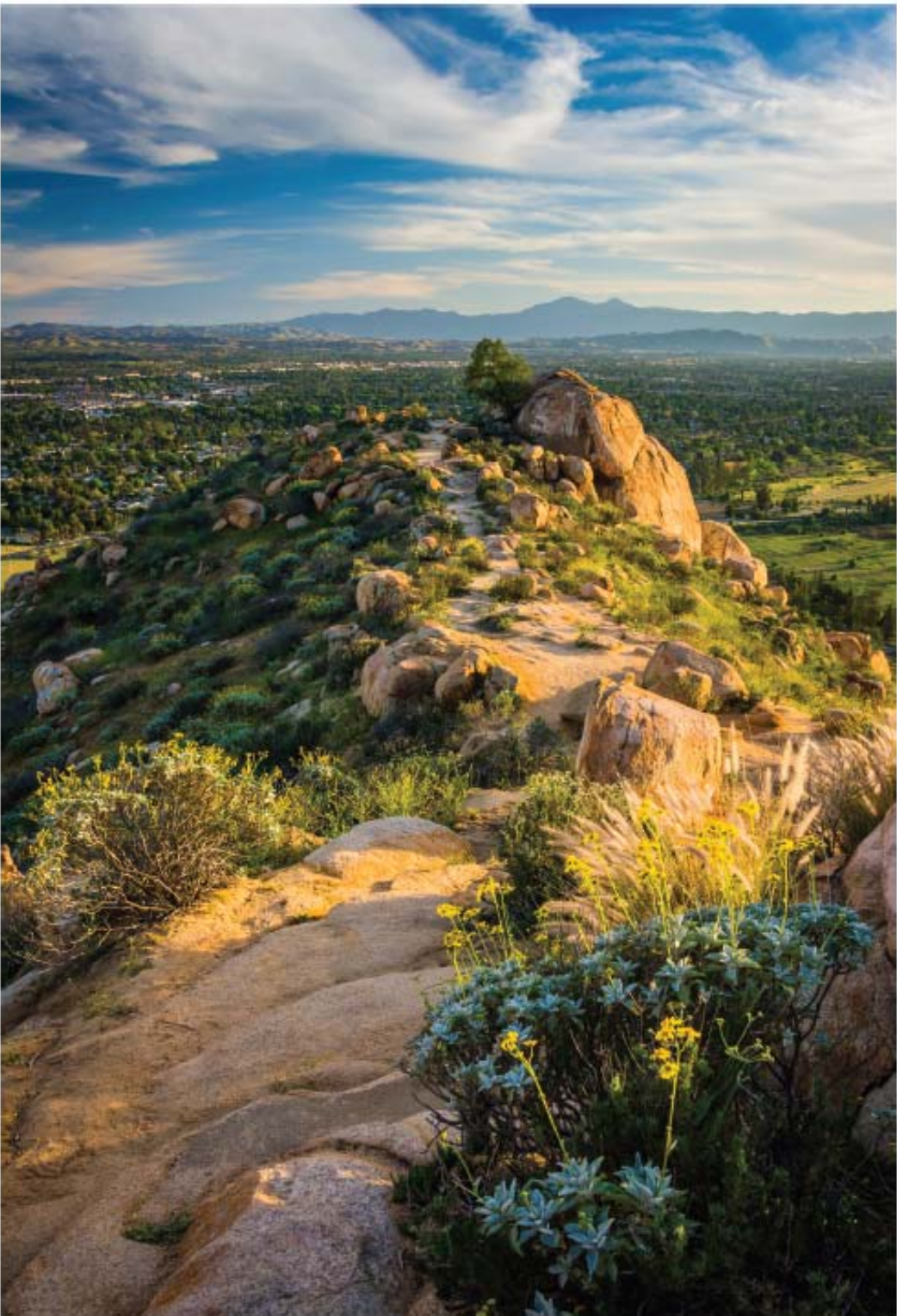
- Southeast Los Angeles; and
- Eastern Coachella Valley.

In 2020, CARB approved the South Los Angeles community for Year 3.

The air quality priorities for each community are identified by a Community Steering Committee (CSC). Additionally, each CSC works with South Coast AQMD staff to develop plans for community air monitoring and emissions reductions. Additional information about the AB 617 program is available online at www.aqmd.gov/ab617.

Chapter 3

South Coast AQMD AB 2588 Implementation Tools



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

South Coast AQMD AB 2588 Implementation Tools

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. This same system will be used to assist in implementing CARB's recently adopted Criteria and Toxics Reporting regulation and its upcoming amendment to its Emissions Inventory Criteria Guidelines regulations.

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.¹³ This streamlining is highly effective since less facilities are immediately notified each year, and allowing staff to focus resources more on higher risk facilities.

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.

¹³ <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-facility-prioritization-procedure.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 compared to the Action Risk Level. Guidelines that describe the requirements of a VRRP are available online.¹⁴

Air Dispersion Modeling

Modeling Guidance

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

¹⁴ 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>

modelers such as the use of regulatory defaults, averaging times, receptor grids and elevation data.¹⁵ 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 Implementation Tools and Programs

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 Procedures¹⁶ 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 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 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

¹⁵ South Coast AQMD modeling guidance is available at:

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

¹⁶ *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>

per week and the tool also includes a very useful interactive map with aerial imagery from the U.S Geological Service.¹⁷

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.¹⁸ 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 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 8-Hour Reference Exposure Levels (RELs) and also modified existing chronic and acute RELs¹⁹ for toluene in August 2020. RELs are airborne concentrations of a

¹⁷ <http://www.aqmd.gov/nav/FIND/facility-information-detail>

¹⁸ <http://www3.aqmd.gov/webappl/complaintsystemonline/NewComplaint.aspx>;
Telephone hotline: 1-800-CUT SMOG® (1-800-288-7664)

¹⁹ <https://oehha.ca.gov/air/cmr/notice-adoption-reference-exposure-levels-toluene>

chemical that are not anticipated to result in adverse non-cancer health effects for specified exposure durations in the general population, including sensitive subpopulations. Toluene is a solvent that is used in various industries including the production of coatings, cosmetics, cleaning agents, inks, adhesives, and pharmaceuticals. Toluene also occurs naturally as a component of crude oils and is produced in petroleum refining and is also a byproduct from combustion fuels.

OEHHA also adopted a new cancer potency factors for *p*-chloro- α,α,α -trifluorotoluene (*p*-chlorobenzotrifluoride, or PCBTF) in August 2020.²⁰ PCBTF is used in the preparation of dyes, pharmaceuticals, and pesticides. It is also used as a solvent in paints, inks, metal cleaning, and high-solids coating formulations.

Lastly, OEHHA adopted new cancer potency factors for cobalt and cobalt compounds in October 2020.²¹ Some of the main stationary sources in California that use and/or emit cobalt include the petroleum industry, concrete and cement manufacturing facilities, electronic computer manufacturers, semiconductor and electronic components facilities, military and commercial aerospace product and parts manufacturing, tungsten carbide and other super alloy manufacturing, mining and refining operations, lumber mills, and battery manufacturers. Cobalt occurs naturally in the Earth's crust and usually in the form of arsenide and sulfides.

The adopted and revised RELs are summarized in Table 3-1, and the adopted cancer potency factors are summarized in Table 3-2. The previous values are shown in parentheses below the current values; N/A within parentheses indicate no previous value existed.

Table 3-1: New and Revised RELs Health Values in 2020 from OEHHA

CAS #	Name	Chronic REL $\mu\text{g}/\text{m}^3$	8-Hour Chronic REL $\mu\text{g}/\text{m}^3$	Acute REL $\mu\text{g}/\text{m}^3$
108-88-3	Toluene	420 (300)	830 (N/A)	5000 (37,000)

Table 3-2: New Cancer Potency Values in 2020 from OEHHA

CAS #	Name	Inhalation Cancer Potency Factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹
98-56-6	<i>p</i> -chloro- α,α,α -trifluorotoluene (<i>p</i> -chlorobenzotrifluoride, PCBTF)	3.0×10^{-2} (N/A)
7440-48-4	Cobalt	27 (N/A)

Assessment of Impacts to Existing Facilities

Toluene is a previously listed pollutant and is subject to reporting by AB 2588 facilities every four years. Data from the 2017-2020 reporting years was used to account for facilities reporting toluene

²⁰ <https://oehha.ca.gov/air/crnrr/notice-adoption-cancer-inhalation-unit-risk-factor-p-chloro-aaa-trifluorotoluene>

²¹ <https://oehha.ca.gov/air/crnrr/notice-adoption-cancer-inhalation-unit-risk-factors-cobalt-and-cobalt-compounds>

in different reporting phases. 273 facilities reported annual emissions of toluene. A breakdown of the types of facilities and the number of those types of facilities that reported toluene emissions are presented in Table 3-3.

Table 3-3: 2017-2020 Summary of Toluene Emitting Facilities

Facility Description	Number of Facilities
Petroleum Refinery	53
Water Treatment	40
Petroleum Storage and Transfer	38
Electric Power Generation	35
Metal Work	28
Asphalt Paving	17
Aircraft and Aerospace	16
Waste Disposal	15
Plastics, Rubber, and Foam Manufacturing	13
Construction/Building Activities	4
Paint, Coatings, and Adhesives	3
Parts Manufacturing	3
Motion Pictures	3
Special Warehousing, Buildings	3
Consulting Services	2
Total:	273

Ninety-eight of the 273 facilities have previously approved HRAs. The HRAs for these facilities were approved between 1993 and 2020. Toluene is required to be reported on a quadrennial cycle and therefore is examined when screening and prioritization occurs in accordance with program requirements. Cobalt and PCBTF are currently not included in the list of compounds required to be reported on a quadrennial cycle. Cobalt is required for reporting in ATIRs, whereas PCBTF was previously not required to be reported under the 2007 revision of the CARB Emissions Inventory Criteria Guidelines (EICG) but was included during the November 19, 2020 draft revision to the CARB EICG.

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 2021, staff will prioritize approximately 95 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 2021.

Other Support Activities

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

- Begin to engage in the Department of Toxic Substances Control's (DTSC) SB 673 rulemaking which will fold existing health risks, community vulnerability, and cumulative impacts into DTSC's permitting process.
- Continue to provide support to rulemaking staff;
- Work with CARB and through the CAPCOA Toxics and Risk Managers Committee (TARMAC) to update CARB AB 2588 Guidelines and develop uniform reporting guidance for various industries;
- Work with CARB to develop guidance and outreach material for implementation of the CARB EICG. This work will also include ensuring that reporting requirements under South Coast AQMD's AB 2588 program and CARB's EICG are as streamlined as possible with other reporting requirements under CARB's Criteria and Toxics Reporting (CTR) regulation and South Coast AQMD's AER program;
- Continue to work with CARB and through CAPCOA-TARMAC to develop HRA guidelines for the industry-wide 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 CARB's CTR regulation; and
- Track development of potential health risk value revisions by OEHHA.

Appendix A — Description of Active AB 2588 Related Projects

A.1. 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, and an HRA and 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.²²

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 conference calls with Aerocraft 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 Aerocraft 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 Aerocraft, 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 Aerocraft's property boundary.

Since the HRA results were above the Significant Risk Level in Rule 1402, Aerocraft 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

²² 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>

Coast AQMD staff held a public notification meeting at the Progress Park Community Center on December 1, 2018 to explain the impact of Aerocraft'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 Aerocraft to construct permanent total enclosures with associated baghouses and Ultra Low Particulate Air (ULPA) filters for Buildings 2 and 3 by December 20, 2019. The building with controls were constructed and operational by August 2019. A source test to demonstrate compliance with permit conditions was conducted on April 23, 2020. A follow-up source test was conducted in late October 2020 and submitted in December 2020 for review.

A.2. 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.

South Coast AQMD staff sent a letter approving the ATIR and requiring Air Liquide to prepare an HRA on May 1, 2020. The HRA was submitted on July 30, 2020. Staff had completed review of the HRA at the end of 2020 and is expected to finalize the HRA in 2021.

A.3. All American Asphalt, All American Aggregates (ID 82207) – Irvine²³

All American Asphalt is an asphalt plant located in Irvine (AAA Irvine). The facility 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 February 20, 2020, South Coast AQMD staff sent a letter requesting AAA Irvine to prepare an ATIR due to facility having a priority score greater than 10 based on its 2016 annual emissions with polycyclic aromatic hydrocarbons (PAHs) being the main air toxic contributor to the high priority score. PAH emissions are primarily from operation of the rotary dryer at the facility.

On July 21, 2020, AAA Irvine submitted an ATIR. South Coast AQMD staff reviewed the submittal and has had ongoing discussion with the facility representatives and follow-up questions regarding accuracy of emission calculations. AAA Irvine staff used default emission factors to estimate their emissions, so in order to provide a more accurate emission estimate, on December 10, 2020, South Coast AQMD staff asked AAA Irvine to conduct site-specific source testing to develop a more accurate emissions profile that could be used in their ATIR. All American Asphalt

²³ <http://www.aqmd.gov/home/news-events/community-investigations/all-american-asphalt>

provided an initial response with additional information on December 24, 2020. South Coast AQMD will continue to ensure AAA Irvine follows all the requirements of the AB 2588 process in 2021.

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

All American Asphalt is an asphalt plant located in Irwindale (AAA 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 AAA Irwindale 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 and estimated using a default emission factor.

On January 21, 2020, AAA Irwindale submitted an ATIR. After review of the ATIR, South Coast AQMD staff provided comments on April 2, 2020. As a result of these comments, a source test protocol for the rotary dryer was submitted by the facility on June 2, 2020. The source test protocol for this facility was approved on July 9, 2020. Staff is currently reviewing the ATIR for the remainder of the devices and processes that do not require source testing. Once the source test is completed, the ATIR must be updated and staff will review the full ATIR.

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

All American Asphalt is an asphalt plant located in Perris (AAA 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 AAA Perris 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 and estimated using a default emission factor.

On January 21, 2020, AAA Perris submitted an ATIR. After review of the ATIR, South Coast AQMD staff provided comments on April 2, 2020. As a result of these comments, a source test protocol for the rotary dryer was submitted by the facility on June 2, 2020. The source test protocol for this facility was approved on July 9, 2020. Staff is currently reviewing the ATIR for the remainder of the devices and processes that do not require source testing. Once the source test is completed, the ATIR must be updated and staff will review the full ATIR.

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.²⁴

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 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 Guidelines²⁵. 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

²⁴ <http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities/facilities---order-for-abatement/anaplex-corp>

²⁵ <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines-201809.pdf>

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 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. After review by South Coast AQMD staff, a conditional approval of the RRP was issued on February 6, 2020. All elements of the RRP were fully implemented at the end of 2020 and a final implementation report is expected in 2021.

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 metal finishing 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. The facility submitted two permit applications in October 2020 and staff is currently working with the facility to resolve the outstanding issues.

A.8. Bowman Plating Co Inc (ID 18989) – Compton

Bowman Plating Company Inc. (Bowman) is a metal finishing facility, located in the city of Compton which has been in operation since 1945 and performs anodizing, plating, and coating operations on parts for use in the aerospace and defense industries. Bowman operates chrome

anodizing tanks, nickel and cadmium plating tanks, as well as spray coating operations which generate toxics air contaminants including nickel and hexavalent chromium.

Bowman had previously submitted an HRA which was approved on December 11, 2015, with the results showing that the facility exceeded the Rule 1402 Action Risk Level. The facility subsequently submitted a RRP that was approved on February 10, 2017. The required risk reduction measures were to install ULPA filters on the paint spray booths. The ULPA filters were installed as of March 2017.

South Coast AQMD staff reviewed the 2018 annual emission report for the facility and calculated a priority score greater than 10 with hexavalent chromium as the main contributor to the priority score. In their review, staff discovered that the emissions from devices such as the dichromate seal and nickel strike tanks were omitted from the 2018 inventory. Additionally, based on previous site visits from Engineering and Compliance staff, there were fugitive emissions from incomplete capture of tank emissions and poor housekeeping practices which were not accounted for. Staff conducted a preliminary risk assessment accounting for the fugitive emissions and found that risk levels were significantly above Rule 1402 thresholds.

On April 14, 2020, staff held a conference call with Bowman to explain the concerns and options available to them. Bowman had the option to either be designated as a Potentially High Risk Level Facility or opt into an expedited risk reduction and plan submittal process. Bowman opted to submit an updated ATIR, HRA, and RRP based on 2019 annual emissions according to an expedited schedule. Bowman submitted the ATIR on June 19, 2020. Staff communicated the deficiencies to Bowman and the facility submitted a revision on July 8, 2020. Due to repeated delays and problems with submitted reports, staff ultimately sent a notice letter that Bowman may be designated a Potentially High Risk Level Facility on August 7, 2020.

Staff held a conference call and sent an email detailing the issues with the previously submitted ATIR on August 11, 2020. On August 13, 2020, Bowman informed South Coast AQMD staff that they were conducting a source test on Bowman's Anodizing Room Permanent Total Enclosure (PTE) without obtaining prior submittal and approval of a source test protocol. As such, since the source test was not conducted according to South Coast AQMD approved test methods, staff found the source test not acceptable.

Consequently, staff sent a rejection letter for the Bowman ATIR on September 25, 2020. Bowman sent a response on October 7, 2020 stating disagreement with South Coast AQMD staff's position but proposed to retest. Staff received letters from Bowman on October 22 and October 27, 2020 regarding the applicability of the source test and answers to the reasons staff rejected the ATIR. Staff will focus on bringing Bowman through a completion of the AB 2588 process through 2021.

A.9. Breitburn Operating LP (ID 150201) – Santa Fe Springs

Breitburn Operating LP (Breitburn) in Santa Fe Springs is an oil and gas field company with associated processing equipment. The facility draws the oil, gas, and water mixture from several oil production and injection wells. The recovered crude oil (about 476 barrels per day) is shipped out by a third party for further refining. The produced water is treated to permissible discharge limits and reinjected back into the wells. The recovered field gas is burned in permitted equipment: either 14 microturbines or a thermal oxidizer. According to the reported emissions, the major source of toxic air contaminants are the 14 microturbines.

On March 25, 2020, South Coast AQMD staff sent a notification letter requiring Breitburn to prepare either an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2016 annual emissions of polycyclic aromatic hydrocarbons (from the microturbines). In response, Breitburn stated they used the default emission factors for internal combustion engines to calculate emissions from the 14 microturbines. At the end of 2020, South Coast AQMD staff is evaluating applicable reference source emission factors for the microturbines, including use of the California Toxic Emission Factors for gas turbines combusting field gas. In 2021, staff expects to complete the review of emission factors for the microturbines and require the facility to amend the reported emissions using the reference source emission factors.

A.10. Chevron Products Co. (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 internal combustion engines that don't require a permit along with reductions of hexavalent chromium from welding activity that also does not require a permit 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 and required Chevron to upgrade two diesel engines to Tier IV, electrify existing diesel engines, eliminate welding rods that result in high hexavalent chromium emissions, and electrify diesel fired light towers.

An annual progress report was received on April 24, 2020. Chevron reported that four of the five approved voluntary risk reduction measures had been completed. Chevron reported that they were working on obtaining city permits for the wiring needed to electrify the light towers and anticipate project completion by the VRRP implementation deadline of October 22, 2021.

A.11. 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.

City of Cerritos, Water division submitted a partial ATIR on January 21, 2020 and opted to conduct a source test on the main engine to determine emissions factors for the risk drivers. A source test

was conducted on August 6, 2020 and the report was submitted to South Coast AQMD for review on October 14, 2020. As of the end of 2020, the source test report is still under review. In 2021, staff expects the review of the source test report to be completed and for the facility to provide the complete ATIR based on the approved source test.

A.12. Coastline High Performance Coatings, Ltd. (ID 112684) – Garden Grove

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

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

Coastline HPC did not submit the ATIR on or before the deadline of July 7, 2020. As a result, a Notice of Violation was issued to the facility and a compliance inspection of the facility was conducted on September 17, 2020. The inspectors confirmed equipment status, gathered samples, and requested records to assist with calculating emissions.

On September 24, 2020, Coastline HPC submitted the ATIR. South Coast AQMD staff evaluated the inventory and noted several deficiencies. Coastline HPC resubmitted the ATIR multiple times, each needing corrections. The final ATIR was received by staff on November 11, 2020. Staff conducted a preliminary risk assessment using the submitted data and found that potential risk levels were significantly above Rule 1402 thresholds.

On December 18, 2020, staff sent a letter informing Coastline HPC that they may be designated as a Potentially High Risk Level facility based on the preliminary risk assessment. In 2021, staff expects to approve the ATIR and to determine if designation of the facility as a Potentially High Risk Level facility is warranted.

A.13. Eco Services Operations Corp. (ID 180908) – Carson

Eco Services Operations (Eco Services) in Carson regenerates spent sulfuric acid from refineries. In addition to the sulfuric acid plant, Eco Services 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 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 sulfuric acid emissions is from their primary furnace. Eco Services Operations elected to submit an ATIR.

On January 6, 2020, Eco Services submitted their Initial Information for the ATIR. Staff found this to be incomplete and therefore, on February 26, 2020, Eco Services submitted a revised Initial Information to the ATIR.

On May 6, 2020, Eco Services submitted their ATIR. The ATIR was still under review as of the end of 2020. Staff anticipates completing its review of this ATIR in 2021.

A.14. 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 a revised ATIR was submitted 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 approving the ATIR. A follow up letter was sent on January 2, 2020 informing the facility that it would be exempt from the AB 2588 program due to a priority score below one.

A.15. 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 staff comments was received on January 16, 2020. Staff reviewed the submittal and conditionally approved the VRRP on June 19, 2020. The Rule 1402 Progress Reports are required to be submitted no later than June 19, 2021 and June 19, 2022.

A.16. 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 approved the HRA on June 5, 2020.

The approved HRA showed that the residential cancer health risk was 22 in-a-million and the acute HI was 1.30. These values exceeded the Notification Risk Levels of Rule 1402 and a public notification meeting was required. Notice of the public meeting was sent to approximately 200 residential addresses within the public notification area. A public notification meeting was held on July 22, 2020 by a videoconference. The results from the approved HRA did not exceed the Rule 1402 Action Risk Level and therefore risk reduction was not required.

A.17. 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). The MDA emissions came primarily from fugitive components. The ATIR was received in July 2020. Staff requested corrections to the ATIR at the end of 2020. In 2021, staff expects a corrected ATIR to be submitted for review.

A.18. Exide Technologies (ID 124805) – Commerce²⁶

Exide Technologies is located in the city of Commerce. This facility received and processed lead into lead oxide, which was used in the battery manufacturing industry. The equipment at the facility included lead melting pots, lead oxide reactors, and storage tanks for incoming and outgoing material. The emissions from the processes were controlled by baghouses equipped with HEPA filters.

The facility had an approved Rule 1420.2 Monitoring and Sampling Plan from September 2017. The facility conducted ambient air monitoring for a year and demonstrated that the 30 consecutive

²⁶ <http://www.aqmd.gov/home/news-events/community-investigations/exide-updates>

day average ambient air lead concentration for the entire duration of ambient air monitoring activities onsite was below the Rule 1420.2 concentration limits. The facility submitted a Rule 1420.2 Ambient Monitoring Relief Plan in October 2019 pursuant to Rule 1420.2 (o)(1). South Coast AQMD completed review of the modeling files and found that the project complied with the limits of Rule 1420.2 (o)(1)(A). After approval of the Rule 1420.2 Ambient Monitoring Relief Plan, the facility shut down operations in May 2020.

A.19. Flare Group, dba Aviation Equip Process (ID 164581) – Costa Mesa

Flare Group dba Aviation Equip Process (Flare Group) is located in the city of Costa Mesa. The facility processes parts for the aviation and aerospace industries. The operations include anodizing tanks, paint spray booths and natural gas-fired ovens. The facility failed to submit AER data since 2011. South Coast AQMD staff reached out numerous times through email and phone to obtain an accurate and updated annual emissions inventory. Since staff did not receive a response, staff sent a letter on February 5, 2020 requiring Flare Group to prepare a complete inventory in the form of an ATIR based on 2018 annual emissions

On March 6, 2020, staff received the Initial Information for the ATIR. Staff review found that several toxic air contaminants from the spray booths, tanks, and ovens were not reported. An unapproved source test was also referenced for some emission calculations. Staff communicated these and other inventory issues to Flare Group and worked with the facility to revise tanks, coatings, and other process emission calculations. Staff anticipates the ATIR to be submitted in 2021.

A.20. Gerdau/TAMCO (ID 18931) – Rancho Cucamonga²⁷

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 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.

²⁷ <http://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/gerdau>

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. As South Coast AQMD staff continued to monitor the progress of the RRP, one of the remaining items was Gerdau having difficulty obtaining proper negative pressure on the Melt Shop Emissions Control System identified in Risk Reduction Measure #1. Ultimately, the permit for the electric arc furnace was inactivated and all melt shop operations were shut down on October 31, 2019. Additionally, the permit for the billet heating furnace at the facility was inactivated on December 20, 2020 along with other miscellaneous equipment. The facility now has only a small number of permitted processes which are mainly for slag clean-up activities. All metal melting and associated metal heating has ceased at the facility. Any recurring risk reduction measures such as housekeeping actions required by the Rule 1402 RRP have been incorporated into the housekeeping and monitoring plan which was signed as a voluntary agreement by Gerdau and South Coast AQMD on July 31, 2020. With the shutdown of manufacturing operations at the facility, along with the adoption of the housekeeping and monitoring provisions of the enforceable voluntary agreement, the risk reduction targets required under the Rule 1402 RRP have been met.

A.21. 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 was 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. The RRP proposed two risk reduction measures. South Coast AQMD staff reviewed the RRP and ultimately approved one of the risk reduction measures on February 18, 2020. The approved RRP required GWP to modify their existing permits to prohibit the use of landfill gas to power their boilers. On August 6, 2020, GWP submitted three applications for permit modifications and one application for a Title V amendment. As of the end of 2020, the applications were still under review.

A.22. Hixson Metal Finishing (ID 11818) - Newport Beach ²⁸

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

²⁸ <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/hixson-metal-finishing>

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 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. During the test, it was determined that there were gaps between the ULPA filters and the housing. Therefore, Hixson modified the system and retested the air pollution control system on March 12 and 13, 2020. The source test report was submitted to South Coast AQMD on May 12, 2020 and is currently under review by Source Test Engineering staff.

A.23. Light Metals Inc. (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 toxic air contaminants contributing to the high priority score.

Light Metals chose the ATIR option and submitted their ATIR on December 31, 2019. On January 30, 2020, South Coast AQMD staff provided comments on the ATIR and received a response from Light Metals on February 25, 2020. Further comments were provided by South Coast AQMD on March 18, 2020. Light Metals provided a response to comments on April 7, 2020. Among other comments, South Coast AQMD staff noted the requirement for any source tested emission factors to be reviewed and approved by South Coast AQMD. On April 30, 2020, Light Metals submitted a revised ATIR which among other revisions, included use of dioxin and furan emission factors from an industry group guidance document. After a review of this guidance document, South Coast AQMD staff requested a site-specific source test be conducted for dioxins and furans. Light Metals was able to find the historic source test reports and protocols to submit to South Coast AQMD for review. These evaluations were completed in early August 2020. Light Metals submitted a revised ATIR to incorporate these source testing results on August 27, 2020. Upon final review, it was determined that certain emission sources and toxic air contaminants from certain processes that were not included. South Coast AQMD staff also notified the facility on September 29, 2020 that the formaldehyde factor being used would need to be adjusted due to information gathered from the California Air Toxics Emission Factor database. Revised ATIR's which updated all

outstanding issues besides the formaldehyde factors were submitted on November 11, 2020 and November 17, 2020. Ultimately, Light Metals elected to source test two reverberatory furnaces for formaldehyde; the protocol for this source test was submitted on December 1, 2020. At the end of 2020, the protocol for this source test is still under review.

A.24. Long Beach City, SERRF Project (ID 44577) – Long Beach

Long Beach City, SERRF Project (SERRF) is a Refuse-to-Energy facility that burns municipal solid waste refuse in three resource recovery systems. Each resource recovery system consists of a combustor with a boiler, which in turn produces steam that drives a steam turbine generator (common to all three resource recovery systems) that produces electricity. Exhausts from the combustors are vented to air pollution control systems.

On February 5, 2020, South Coast AQMD staff sent a letter requiring SERRF to submit an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2017 annual emissions inventory, with polychlorinated dibenzofuran emissions as the main toxic air contaminant contributing to the high priority score.

The facility submitted the Initial Information for the ATIR on March 3, 2020 and the ATIR on July 7, 2020. Upon review of the submitted information, the ATIR cites two source tests that have not been reviewed or approved by South Coast AQMD. The source tests were sent for review in October 2020, and as of the end of 2020, were still under review.

A.25. 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. The facility submitted amendments to their quadrennial report on October 3, 2019. Staff found that the facility had not applied the correct control efficiency. Staff requested that the facility submit the Initial Information and the ATIR on March 17, 2020. The facility sent updated calculations on April 30, 2020. Staff reviewed the revised calculations and reran the priority score which was less than 10. Staff sent a letter on May 1, 2020 notifying the facility that since the priority score was less than 10, the facility was not required to submit an ATIR. The facility submitted an AER amendment on May 19, 2020.

A.26. Los Angeles By-Products (ID 60384) – Sun Valley

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

On August 23, 2019, South Coast AQMD staff sent a letter requesting LA By-Products to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions. The main toxic air contaminants contributing to the high priority score were PAHs from the combustion of landfill gas at the flare. On October 8, 2019, LA By-Products submitted the Initial Information for the ATIR.

On January 20, 2020, LA By-Products submitted an ATIR. After review of the ATIR, South Coast AQMD provided comments on February 21, 2020. As a result of these comments and corresponding discussions with the facility, a source test protocol was submitted on May 15, 2020. The source test protocol was approved on July 14, 2020. LA By-Products conducted the source test on the flare beginning on October 7, 2020. A source test report was submitted by LA By-Products on December 28, 2020. As of the end of 2020, South Coast AQMD staff is currently awaiting the evaluation of the source test report to be completed.

A.27. 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 designated Lubeco 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, 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 that was conditionally approved on January 23, 2020. Notice of the public meeting was sent to over 450 addresses within the public notification area and a public notification meeting was held on February 5, 2020.

The facility sent a Risk Reduction Plan Final Implementation report on December 2, 2020. However, a source test for the air pollution control device conducted in February 2020 was deemed unacceptable in September of 2020. A re-test was performed November 2020 and as of the end of 2020, the facility had not submitted the source test report.

A.28. 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 an 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. MM West Covina submitted a revised HRA and alternate HRA on January 27, 2020. After a review by South Coast AQMD staff, a final revision was required in order to clarify within the report that the facility had accepted modeling results provided by South Coast AQMD as a result of a fine grid analysis. This revision was made and submitted by MM West Covina on January 29, 2020. South Coast AQMD approved the HRA on February 7, 2020. The approved HRA found a maximum residential cancer risk of 67.2 chances in-one-million mainly from dioxins, furans, hexavalent chromium, and arsenic. The approved HRA also found a maximum acute hazard index of 1.70 mainly from nickel.

Since the HRA results were above the Notification Risk Level in Rule 1402, MM West Covina was required to notify the public about the health risk. Notices for the public notification meeting were sent out to over 7,700 addresses in the area of impact. South Coast AQMD staff held a virtual public notification meeting on May 19, 2020 to explain the impact of MM West Covina's emissions on public health and to discuss next steps.

Since the HRA results were above the Action Risk Level in Rule 1402, MM West Covina was required to prepare a RRP, which was received on June 5, 2020. South Coast AQMD reviewed the RRP which utilized the source testing from the alternate HRA as the sole risk reduction action. South Coast AQMD approved the RRP on July 2, 2020 and noted the source test results were enough to reduce the facility's risk below the Action Risk Level and Notification Level of Rule 1402.

A.29. 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 burning natural gas, 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.

MPTF submitted Initial Information for the ATIR on January 10, 2020. Following the review of the Initial Information for the ATIR, staff found the use of an unapproved source test results for the internal combustion engine emissions. The facility submitted corrections on May 6, 2020. Due to staff shortages caused by COVID-19, the facility did not submit the ATIR in accordance to required timeline. Staff anticipates that the ATIR will be submitted in early 2021.

A.30. PABCO Bldg Products LLC, dba PABCO Paper (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. South Coast AQMD staff reviewed PABCO's sodium hydroxide emission revisions and found them to be acceptable. Based on the revised emissions, the priority score was less than 10. The facility was not required to prepare an ATIR and a priority score revision letter was sent to the facility on January 14, 2020.

A.31. Pac Rancho, Inc. (ID 140871) – Rancho Cucamonga

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

On September 4, 2019, South Coast AQMD staff sent a letter requiring Pac Rancho to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2018 annual emissions report. The facility submitted the Initial Information for the ATIR in November 2019 and the ATIR on February 21, 2020. South Coast AQMD staff provided several comments in April 2020. A revised ATIR was submitted on June 23, 2020. South Coast AQMD staff approved the ATIR on August 7, 2020, and notified the facility to prepare and submit a HRA by November 5, 2020. Pac Rancho submitted an HRA on November 5, 2020. South Coast AQMD staff is currently reviewing the submitted HRA at the end of 2020.

A.32. Pacific Clay Products Inc (ID 17953) – Lake Elsinore

Pacific Clay Products (Pacific Clay) in Lake Elsinore manufactures bricks and other clay products. It also operates both an aggregate and concrete batch plant at the same location. The facility operations include clay kilns, dryers, aggregate conveyors, silos, crushers, and associated baghouses.

On August 23, 2019, South Coast AQMD staff sent a letter requiring Pacific Clay 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 lubricant to ease the finished bricks and tiles from their molds.

Pacific Clay submitted their first ATIR on February 11, 2020. In response to South Coast AQMD staff reviews of the ATIR submittals and requested corrections, Pacific Clay submitted subsequent ATIRs on May 6 and 26, and September 26.

On October 2, 2020, South Coast AQMD staff sent Pacific Clay a rejection letter of the ATIR submitted on September 26, 2020. In response to the rejection letter, Pacific Clay submitted the

latest ATIR on December 14, 2020. At the end of 2020, South Coast AQMD staff was in the process of modifying the latest ATIR for final corrections.

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

The Phillips 66 Company, LA Wilmington 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 and 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. 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. This revised HRA was submitted on January 17, 2020. After review of the updated HRA, minor revisions were requested by South Coast AQMD staff and Wilmington Refinery submitted a final HRA on June 9, 2020. South Coast AQMD sent an HRA approval letter on August 21, 2020.

Since the HRA results were above the Significant Risk Level in Rule 1402, Wilmington Refinery was required to notify the public about the health risk. Notices for the public notification meeting were sent out to approximately 800 addresses in the area of impact. South Coast AQMD staff held a virtual public notification meeting on October 2, 2020 to explain the impact of Wilmington Refinery's emissions on public health and to discuss next steps.

Since the HRA results were above the Action Risk Level in Rule 1402, Wilmington Refinery was also required to prepare an RRP, which was received on December 16, 2020. South Coast AQMD staff is currently reviewing the submitted RRP at the end of 2020.

A.34. Plains West Coast Terminals LLC (ID 800417) – Compton

Plains West Coast Terminals (Plains West Coast) is a petroleum products 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.

On December 12, 2020, Plains West Coast provided facility boundary information that led staff to reassess the receptor distances. Additionally, South Coast AQMD staff requested emissions calculations for the storage tanks as part of the review for potential priority score revision. After review, South Coast AQMD staff recalculated the priority score. The revised priority score was below 10 and the facility was informed of this revised priority score on March 26, 2020.

A.35. R.J. Noble Company (ID 19167) – Orange

R.J. Noble Company (R.J. Noble) is a hot mix asphalt plant located in the city of Orange that produces hot mix asphalt from aggregate and asphalt oil. The facility also processes sand, gravel, and recycled asphalt pavement. The facility's operations include aggregate handling and screening equipment, storage silos, asphalt storage tanks, and a rotary dryer.

On September 5, 2014, South Coast AQMD staff notified R.J. Noble to prepare an ATIR based on 2013 annual emissions. Due to the changes in the 2015 OEHHA Guidance Manual as well as Rule 1402, staff requested R.J. Noble to submit the ATIR based on the 2017 annual emissions. Staff sent a letter on January 29, 2020 notifying R.J. Noble to prepare the ATIR based on the 2017 annual emissions.

On June 30, 2020, staff received the ATIR. Following staff review and comments to the facility, the facility provided responses and corrections in November and December 2020. These responses and corrections were under review at the close of 2020.

A.36. Robertson's Ready Mix (ID 134112) – Gardena

Robertson's Ready Mix operates a concrete batch plant located in the city of Gardena (RRM Gardena).

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 2016 ATIR was submitted on January 7, 2020. Staff review found that an unapproved method for calculating speciated PM emissions was used. RRM Gardena proposed using the test results from a sampling plan for both RRM Gardena and Robertson's Ready Mix (Redlands). Staff held a call with RRM Gardena to discuss the plan on January 22, 2020. Since there was some uncertainty in the methodology presented in the sampling plan, staff allowed RRM Gardena the option to use San Diego County Air Pollution Control District emission factors for aggregate speciation in lieu of the sampling plan on November 13, 2020. RRM Gardena revised the 2016 emissions according to staff's comments but continued to seek staff approval on the sampling plan for future use. The 2016 ATIR submittal is anticipated in 2021.

A.37. Robertson's Ready Mix (ID 42623) – Redlands

Robertson's Ready Mix processes aggregates and operates a concrete batch plant at their facility located in the city of Redlands (RRM Redlands).

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. The priority score was driven mainly by arsenic, nickel, and manganese emissions produced by the crushing and screening operations. The 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. South Coast AQMD staff held a call with RRM Redlands on January 22, 2020. Since there was some uncertainty in the methodology presented in the sampling plan, staff allowed RRM Redlands the option to use San Diego County Air Pollution Control District emission factors for aggregate speciation in lieu of the sampling plan on November 13, 2020. Staff anticipates approval of the 2017 ATIR submittal in 2021.

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 toxic air contaminant contributing to the high priority score.

The facility submitted the initial information on October 11, 2019 and the ATIR on February 5, 2020. Upon review of the submitted information, South Coast AQMD staff determined receptor distances used to determine the original priority score were inaccurate. Staff updated the receptor distances which resulted in an updated priority score below 10. Staff sent a letter on March 5, 2020 informing the facility that no further action regarding the 2017 inventory was required.

A.39. Schlosser Forge Company (ID 15504) – Rancho Cucamonga

Schlosser Forge Company (Schlosser) is a manufacturer of forged seamless rings used primarily for turbine engines and other aerospace applications. Schlosser is located in the City of Rancho Cucamonga. The facility operates heat treating and forging furnaces along with a plasma arc cutter, metal grinding equipment, and abrasive blasting equipment and associated baghouses.

On March 26, 2020, South Coast AQMD staff sent a letter requiring Schlosser to prepare an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2018 annual emissions, with arsenic and nickel from grinding operations being the main toxic air contaminants driving the score.

Due to staff shortages caused by COVID-19, the facility did not submit the ATIR in accordance to required timeline but instead was received in April 9, 2020. During review, staff found that Schlosser was using emission factors from a source test for three baghouse systems controlling grinding emissions that was deemed to be unacceptable and required to be retested. Staff anticipates the revised ATIR and the baghouse retest to be completed and submitted in 2021.

A.40. SFPP, L.P. (ID 800278) – Carson

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

On August 23, 2019, South Coast AQMD staff sent a letter requiring SFPP to submit an ATIR or VRRP 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. The facility did not elect for the VRRP within the required timeline and thus was required to submit an ATIR.

SFPP submitted their first ATIR on February 28, 2020. South Coast AQMD staff reviewed this ATIR and requested supporting clarification and documentation. After comparing the ATIR and supporting documentation, South Coast AQMD staff asked SFPP for appropriate ATIR revisions. The revised ATIR is due January 22, 2021.

A.41. So Cal Edison Co (ID 4477) – Avalon

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. SCE Pebbly Beach submitted a revision to their HRA on September 12, 2019 to address staff's comments. Staff conducted a field evaluation of the facility in November 2019 to discuss the HRA and the public notification meeting. The HRA was approved on January 23, 2019. The approved HRA found a maximum residential cancer risk of 11.8 chances in-one-million mainly from diesel PM.

Since the HRA results were above the Notification Risk Level in Rule 1402, SCE Pebbly Beach was required to notify the public about the health risk. South Coast AQMD staff held a public notification meeting on June 24, 2020 by videoconference to explain the impact of SCE Pebbly Beach's emissions on public health and to discuss next steps.

A.42. So Cal Gas Co/Playa Del Rey Storage Fac (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 received the RRP Annual Progress Report on December 6, 2020 detailing completed RRP measures. Staff will continue to monitor the implementation of So Cal Gas' Risk Reduction Plan in 2021.

A.43. Sully Miller Contracting Co (ID 105277) – Irwindale

Sully Miller Contracting (Sully Miller) in Irwindale operates a hot mix asphalt plant located in the city of Irwindale that produces hot mix asphalt from aggregate and asphalt oil. The facility also processes sand, gravel, and recycled asphalt pavement. The facility's operations include aggregate handling and screening equipment, storage silos, asphalt storage tanks, and a rotary dryer.

On April 24, 2020, South Coast AQMD staff sent a notification letter requiring Sully Miller to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2017 annual emissions with hexavalent chromium from the asphalt rotary dryer as the main contributor to the priority score.

On June 11, 2020, the facility provided corrected information detailing the locations of the rotary dryer as well as receptors. Using the new source and receptor information, South Coast AQMD staff recalculated the priority score with the revised priority score less than 10. On June 25, 2020, South Coast AQMD staff notified the facility of the revised priority score.

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.²⁹ The Tesoro Refinery will be comprised

²⁹ http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/tesoro_feir.pdf

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. In January 2020, Marathon Petroleum took over Andeavor and the Los Angeles Refinery.

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. 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 requiring submittal of the source test protocols and additional documentation on the emissions inventory. Tesoro submitted the requested information on March 7, 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. South Coast AQMD staff reviewed and approved the last source test report on April 2, 2020. After the approval of the source tests, staff reviewed the results and developed a representative emission profile to be used at Carson. Staff expects the profile analysis to be completed and provided to Tesoro by February 2021.

A.45. Torrance Refining Company LLC (ID 181667) – Torrance

The Torrance Refinery covers 750 acres in the City of Torrance and has a 155,000 barrels per day of crude oil processing capacity. It is owned and operated by the Torrance Refining Company LLC, a subsidiary of PBF Energy.

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. The facility submitted the VRRP on August 24, 2017 for the 2016 inventory year as the 2015 inventory year was affected by unit shutdown due to a major breakdown. Several revisions to the VRRP were received on November 17, 2017, August 3 and December 5, 2018, March 25 Decemb[dates] following South Coast AQMD staff comments as well as facility modifications to risk reduction measures. Torrance Refining submitted the final VRRP revision on April 17, 2020 that was conditionally approved by South Coast AQMD on July 17, 2020. A progress report for the VRRP is anticipated in 2021.

A.46. 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 held a conference call with Ultramar to discuss the air dispersion modeling receptor grid and clarify language in the VRRP regarding the risk reduction measure of detailed recordkeeping for diesel engines. Although staff received another revision on January 17, 2020, the recordkeeping language was not enforceable or specific leading to another conference call. Examples for approvable recordkeeping were provided and revisions were expected by January 31, 2020. Staff emailed Ultramar on January 28, 2020 to remind Ultramar of the discussion and deadline but did not receive any submittal by the due date. As a result, staff rejected the VRRP on February 20, 2020.

Ultramar submitted another revision on March 19, 2020 but staff found remaining issues with the language and modeling. Ultramar submitted another VRRP revision on April 16, 2020.

After reviewing the submittal, staff requested a few additional items such as an update to the recordkeeping log to account for unpermitted equipment. Staff received Ultramar's response, and this was under review by staff at the close of 2020.

A.47. 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 submitted a partial ATIR on January 21, 2020 and an initial evaluation was completed by South Coast AQMD staff.

Vista Metals opted to conduct source tests on a dryer, a furnace, and associated control equipment to evaluate the emissions of toxic metals, hexavalent chromium, dioxins and furans. Source test protocols were submitted on April 21, 2020. South Coast AQMD staff reviewed and conditionally approved the protocols. Source tests for the equipment were conducted in 2020 on August 4th, September 29th, and October 5th. The source test reports were submitted on December 4, 2020 and are currently under review by South Coast AQMD staff.

A.48. 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. Due to the change in ownership, Vorteq was responsible for submitting the ATIR. Vorteq submitted the ATIR on January 21, 2020 with a subsequent revision submittal on April 24, 2020 to address errors in calculating particulate toxic air contaminant emissions from spray coating. The ATIR was approved on May 22, 2020.

A.49. Whittier Fertilizer Co (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. On February 5, 2020, South Coast AQMD approved the revised HRA. Whittier Fertilizer was below the Rule 1402 Notification Risk Level and therefore was not required to conduct public notification.

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.³⁰ In this chapter, trends in cancer risks based on monitoring data from both CARB and South Coast AQMD monitors are illustrated for sites in the South Coast Air Basin. Health risk levels for the most recent three-year period (i.e., 2017 to 2019) are also shown for the air toxics which are monitored. CARB's and South Coast AQMD's monitoring networks do not directly measure 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 within the Basin are located in Azusa, Los Angeles, and Riverside-Rubidoux. Simi Valley is included in this analysis since it is located just outside the western edge of the Basin and represents conditions at the western end of San Fernando Valley. Measurements from CARB monitors consist of 24-hour integrated samples collected once every 12 days. Measurements from South Coast AQMD monitors consist of 24-hour integrated samples collected once every 6 days.³¹ Table B-1 lists the toxic air contaminants that are monitored with the carcinogenic compounds identified with an asterisk.

³⁰ Information and data from both CARB's toxic monitoring network and EPA's Air Quality Stream (AQS) which also hosts South Coast AQMD data are available at the links below:

<http://www.arb.ca.gov/adam/toxics/toxics.html>

<https://www.epa.gov/aqs>

³¹ Data used in this appendix utilizes South Coast AQMD data when available. CARB data is used to supplement when a lack of data is available.

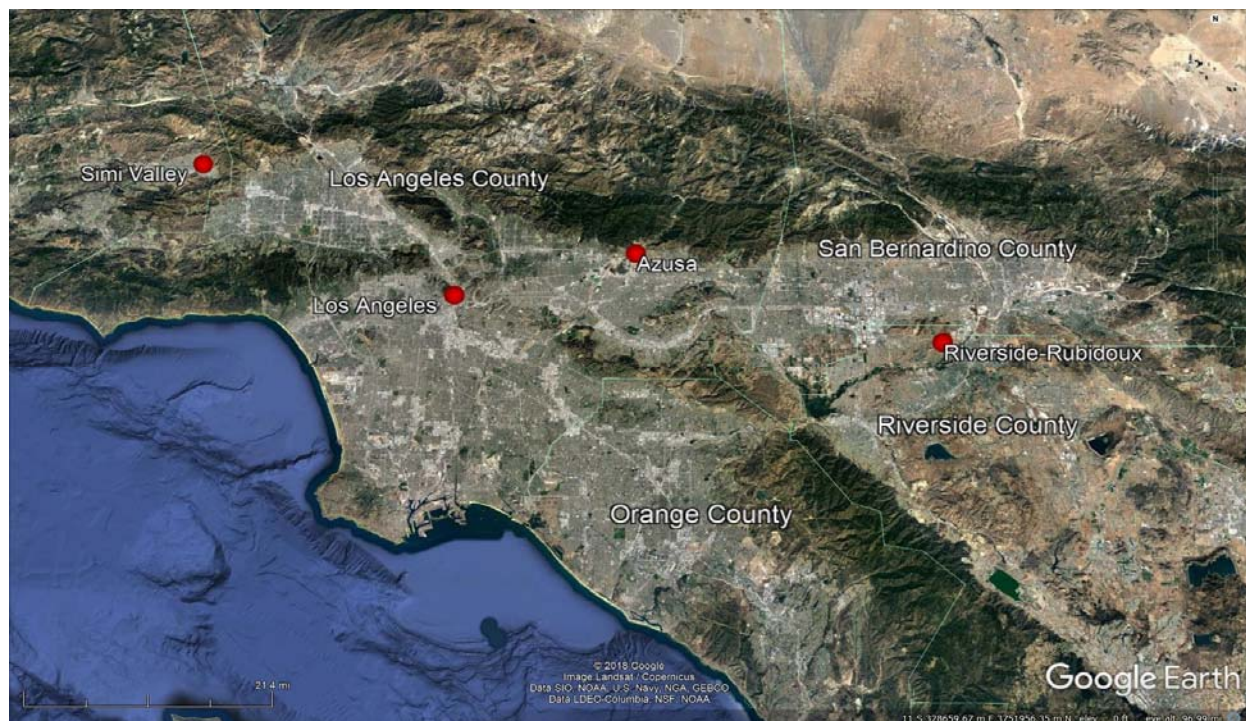


Figure B-1 — CARB toxic monitoring sites in the South Coast Air Basin

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.³² The inhalation cancer risk shown is estimated based on a 30-year exposure. Inhalation cancer health

³² Cancer Risks from toxic air contaminants in Table B-1. Excludes cancer risks from DPM.

risks have decreased significantly at all stations since 1990. Cancer risks have decreased by approximately 81, 84, and 78 percent at Riverside, Los Angeles, and Simi Valley, respectively.³³ Azusa station shows a decrease in cancer risk by 47 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 through present, however, have 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 2019, 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.

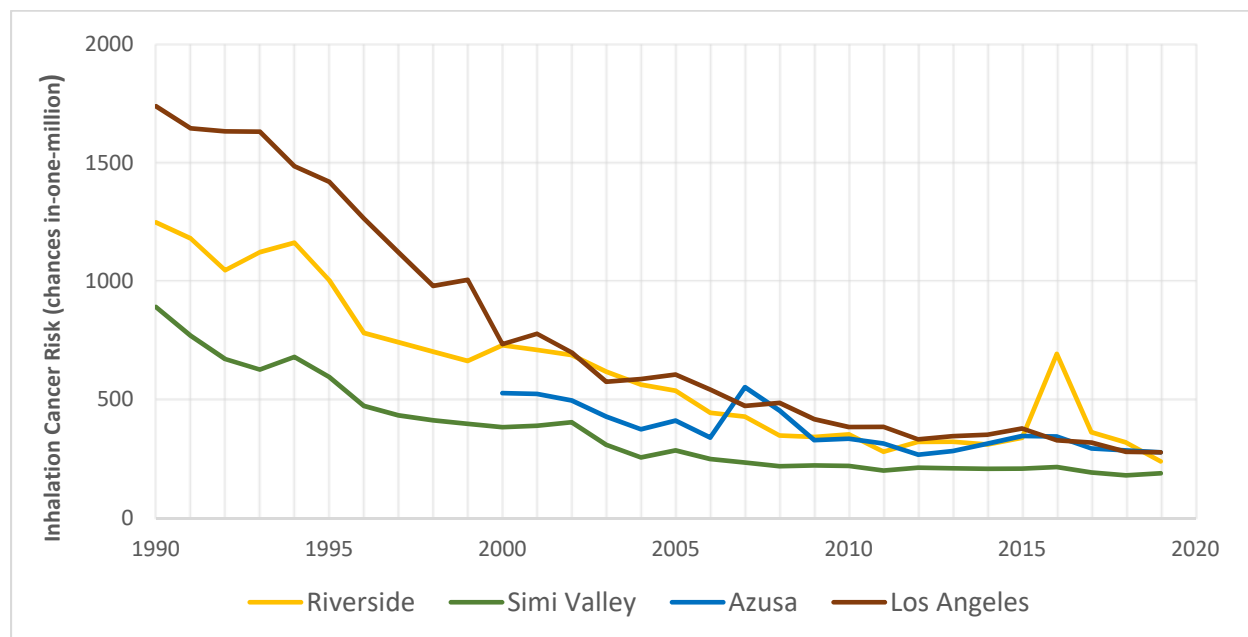


Figure B-2 — Trends in Inhalation Cancer Risks in the Basin (1990-2019)

³³ 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.

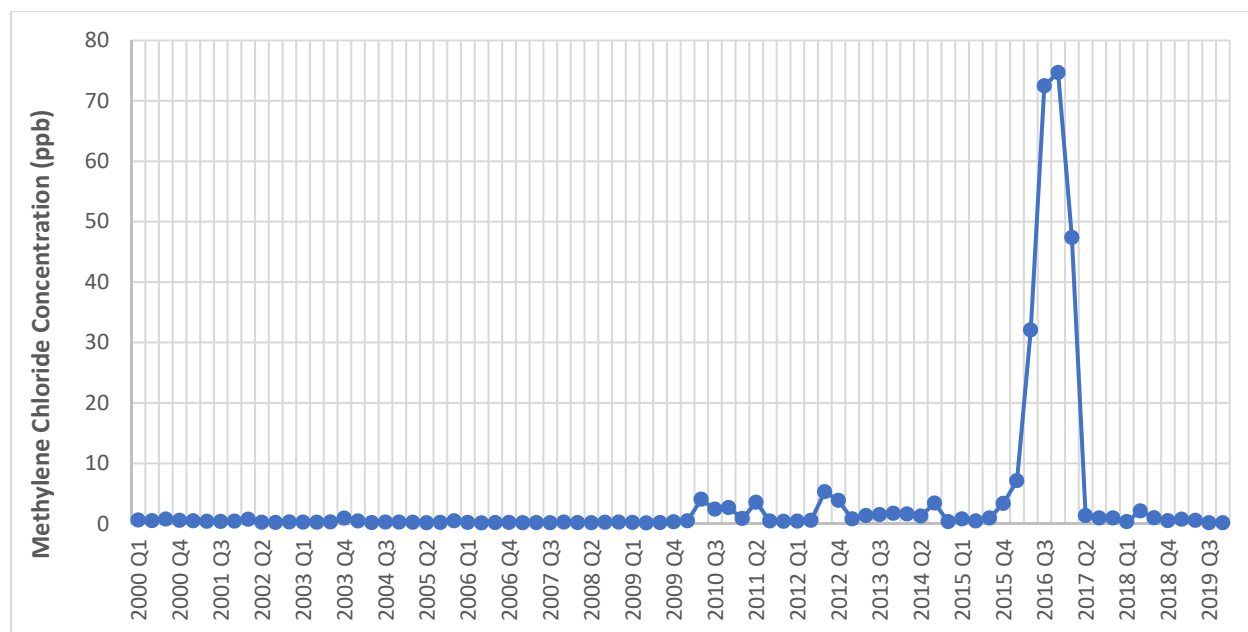


Figure B-3 — Methylene Chloride Monitored Concentrations at Riverside Station, Averaged by Quarter (2000 to 2019)

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.

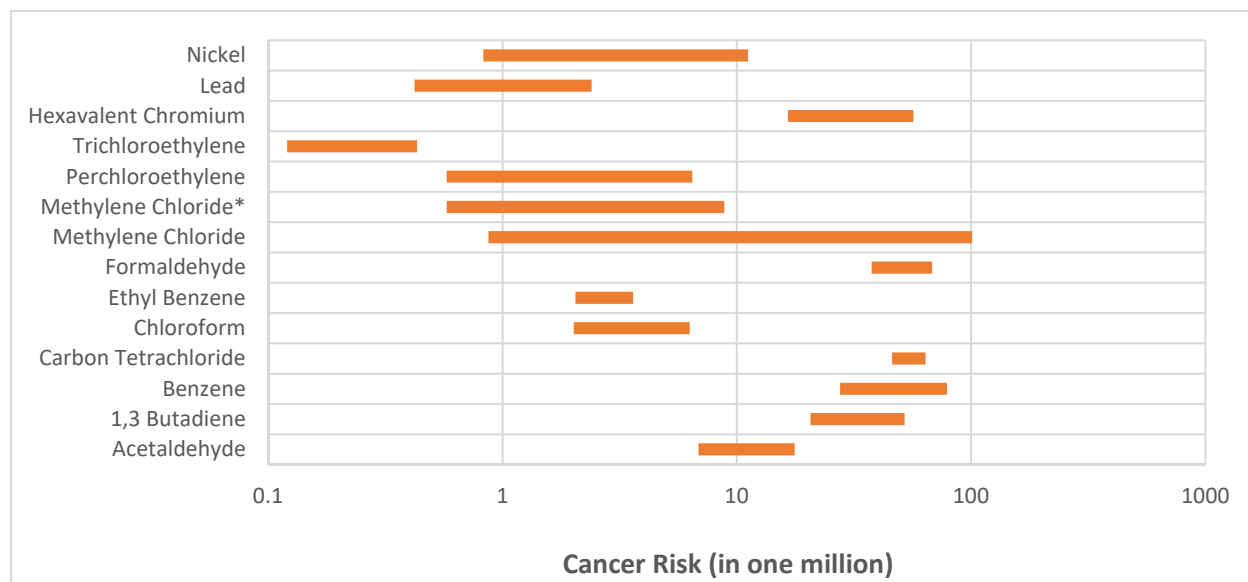
The reduction in cancer risk at the Azusa station is primarily from reductions in ambient concentrations of benzene and 1,3-butadiene. Benzene accounts for 42 percent of the cancer risk reduction and 1,3-butadiene accounts for 45 percent of the cancer risk reduction.

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 42 percent since 1990 and daily vehicle miles traveled), vehicle population, and daily fuel consumption increased by 47, 59, and 35 percent, respectively.

Table B-2 — Change in Population and Vehicle Activity in the Basin Since 1990³⁴

Activity Variable	1990	2020	Percentage Increase
Population	13,083,594	18,638,550	42.5%
Daily Vehicle Miles Traveled (1,000 mile per day)	282,561	414,267	46.6%
Vehicle Population	7,547,354	11,961,100	58.5%
Daily Fuel Consumption (1,000 gal per day)	18,338	24,712	34.8%

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 (2017 to 2019). 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 the first quarter of 2017

Figure B-4 — Inhalation Cancer Risks in the Basin (2017 to 2019)

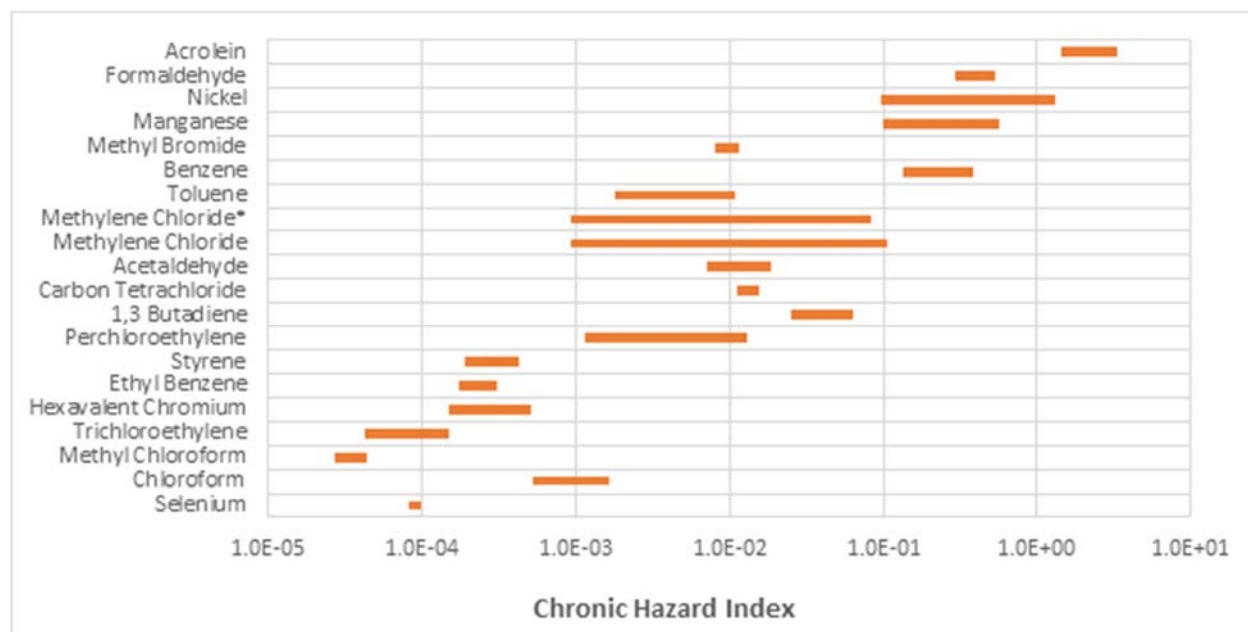
Benzene, 1,3-butadiene, formaldehyde, carbon tetrachloride, hexavalent chromium, methylene chloride, acetaldehyde, and ethyl benzene are the largest contributors to the inhalation cancer risks, contributing individually from approximately 0.5 to 396 chances in-one-million. The ambient carbon tetrachloride 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

³⁴ Source: http://www.arb.ca.gov/app/emsinv/trends/ems_trends.php.

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 2012,³⁵ compared to 84 percent in MATES III based on emissions in 2005.³⁶ The total cancer risks shown 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. Note that MATES V study is anticipated in 2021.

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 (2017 to 2019). 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).



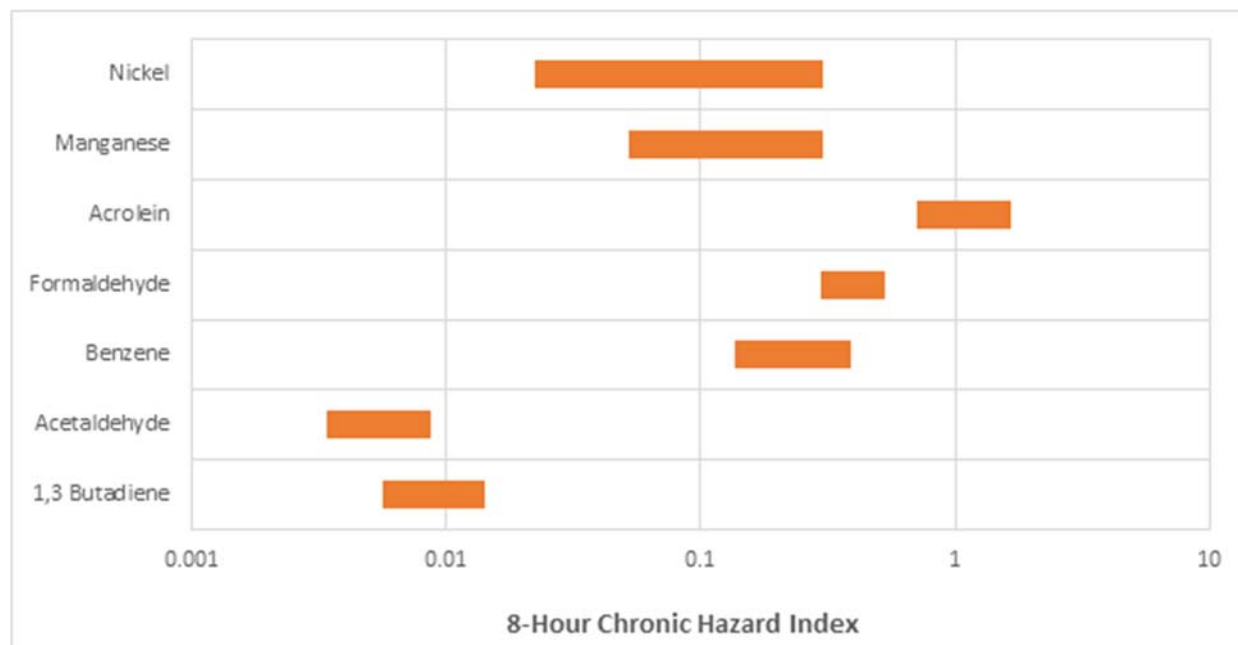
* Excludes peak readings from Riverside station in the first quarter of 2017

³⁵ 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>

³⁶ 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>

Figure B-5 — Non-cancer Chronic Risks in the Basin (2017 to 2019)

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.³⁷ 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 (2017 to 2019)**

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 (2017 to 2019).

³⁷ 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.

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.

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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
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	HIKSON 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
113873	A	MM WEST COVINA	WEST COVINA	67.2	6.11	1.70	0.99	2020
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	33.8	0.64	0.44	0.19	2020
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	22.0	0.26	1.30	0.07	2020
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	KIRKILL 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
4477	A	SO CAL EDISON CO	AVALON	11.8	0.05	0.44	0.02	2020
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.30	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

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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
187165	A	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0.00	0.00	2002
511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0.00	2020
15504	A	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	9.5	0.07	1.59	1.11	2002
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0.00	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
7203	A	HESSCO IND INC	LA HABRA	8.6	ND	0.00	0.00	1995
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0.00	0.00	0.20	2002
194431	A	GC HUNTINGTON PARK, LLC	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
7730	A	CARPENTER CO	RIVERSIDE	8.0	ND	0.03	1.34	2003
800054	A	GATX RAIL CORP	SAN PEDRO	8.0	ND	0.30	0.50	1997
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

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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
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
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
174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.30	0.10	2000
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0.00	0.10	1998
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
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

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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
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
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
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
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0.00	0.10	2000
800180	A	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.50	0.80	1999
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
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.30	0.60	1998
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0.00	0.00	1996
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
54424	A	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.20	0.20	2001
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.20	0.00	2007
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.50	0.20	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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.10	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
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
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
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.60	0.20	1998
151183	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.30	0.10	2003
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

Table C-1 (cont'd)
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7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1.00	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

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151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.10	0.00	1999
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
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
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0.00	0.20	2000
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
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
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.10	0.80	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
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0.00	0.10	1999
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

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800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0.00	0.10	1996
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
142267	A	FS PRECISION TECH LLC	COMPTON	2.0	ND	0.10	0.20	2001
155474	A	BICENT (CALIFORNIA) MALBURG LLC	VERNON	2.0	0.00	0.00	0.00	2007
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2.0	ND	0.00	0.50	1998
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
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
185801	A	BERRY PETROLEUM COMPANY, LLC	SANTA CLARITA	1.6	ND	0.20	0.70	1999
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

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800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.90	0.10	1998
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
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
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0.00	0.00	2000
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
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
800301	A	ITT GILFILLAN	VAN NUYS	0.9	ND	0.10	0.20	1998
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
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0.00	0.00	1995
150201	A	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0.00	0.00	1998
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.20	0.00	2007
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
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
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.10	0.00	2000

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24756	A	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0.00	0.10	1997
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

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800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0.00	0.20	1996
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
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
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0.00	0.00	1995
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
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
180908	A	ECO SERVICES OPERATIONS CORP.	CARSON	0.1	ND	0.00	0.10	2006
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
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
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

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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
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
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
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
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
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
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

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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
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
160916	A	FXI, INC.	ORANGE	0.0	ND	0.40	0.40	1994
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0.0	ND	0.00	0.00	1996
189043	A	REVLIN DBA ELIMINATOR BOATS	MIRA LOMA	0.0	ND	0.00	0.00	1995
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0.0	ND	0.30	0.00	1999
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
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
800109	A	REYNOLDS METALS CO	TORRANCE	0.0	ND	0.20	0.90	2001
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0.0	ND	0.00	0.00	2000
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0.0	ND	0.00	0.00	1996
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
16951	A	ANAPLEX CORP	PARAMOUNT	2836.0	9.73	23.84	2.02	2018

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 (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0.00	2020
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	11.8	0.05	0.44	0.02	2020
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

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5887	A	NEXGEN PHARMA INC	IRVINE	2.7	ND	0.00	0.00	1997
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
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

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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
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
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
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

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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
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

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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
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

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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
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

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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
113873	A	MM WEST COVINA	WEST COVINA	67.2	6.11	1.70	0.99	2020
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
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

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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
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

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151183	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.30	0.10	2003
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
155474	A	BICENT (CALIFORNIA) MALBURG LLC	VERNON	2.0	0.00	0.00	0.00	2007
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	33.8	0.64	0.44	0.19	2020
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

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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
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
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0.00	0.00	0.00	2002

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190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.20	0.10	1999
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0.0	ND	0.30	0.00	1999
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0.00	0.00	0.20	2002
194431	A	GC HUNTINGTON PARK, LLC	HUNTINGTON PARK	8.5	ND	0.00	0.00	2000
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

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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
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

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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
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	22.0	0.26	1.30	0.07	2020
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 (d)	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
113873	MM WEST COVINA LLC	Yes	Yes	Yes	13.3	0.98	1.7	0.31
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	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 toxic air contaminant 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
181667	A	TORRANCE REFINING COMPANY	3370 W 190 TH ST	TORRANCE	2020
182610	A	ELITE COMFORT SOLUTIONS	4542 E DUNHAM ST	COMMERCE	2020
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

AB 2588 Toxic Hot Spots 2020 Annual Report

**Board Presentation
December 3, 2021**





Introduction

- AB 2588 Program Annual Report summarizes
 - Activities implemented under AB 2588 “Hot Spots Act” consistent with state law
 - South Coast AQMD activities to reduce toxic air contaminants
 - Future activities relating to AB 2588
 - Updates to AB 2588 guidance documents
- H&S Code §44363 requires a public hearing to present results of Annual Report

Goals and Objectives of AB 2588

Collect
emissions data
for air toxics

Identify facilities
with localized
impacts

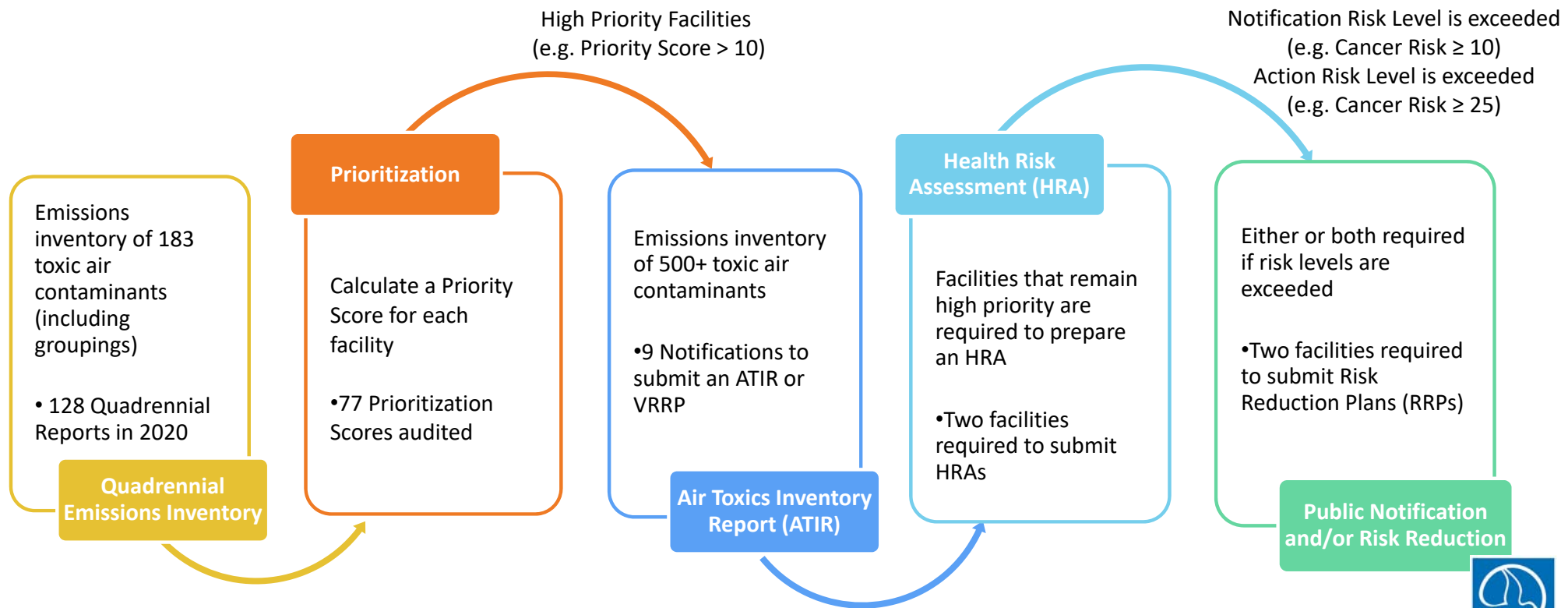
Determine
potential health
risks

Provide public
notification

Reduce
significant risks

AB 2588 is one piece of South Coast AQMD's overall approach to air toxics

AB 2588 Traditional Process for 'Core' Facilities



Pathways for Facilities in Rule 1402

Traditional Approach

Facilities with cancer risks <100 chances in-one-million

- Air Toxic Inventory Report
- Health Risk Assessment
- Public Notification (if cancer risks > 10 in-one-million)
- Risk Reduction Plan (if cancer risks > 25 in-one-million)

Voluntary Risk Reduction Program

Facilities with cancer risks <100 chances in-one-million and approved Health Risk Assessment

- Air Toxic Inventory Report
- Voluntary Risk Reduction Plan committing to reduce cancer risks below 10 in-one-million
- Modified Public Notification

Potentially High Risk Level

Facilities with cancer risks ≥ 100 chances in-one-million

- Early Action Reduction Plan
- Air Toxic Inventory Report
- Health Risk Assessment
- Public Notification (if cancer risks ≥ 10 per million)
- Risk Reduction Plan (if cancer risks ≥ 25 per million)

120

Reviews

Reviews in 2020

6

Revised Priority Score

- 6 Revised Priority Score < 10 (No further action)

110

Traditional AB 2588

- 77 Quadrennial Emission Reports
- 28 Air Toxics Inventory Reports
- 3 Health Risk Assessments
- 2 Risk Reduction Plans

3

Voluntary Risk Reduction Program

- 3 Voluntary Risk Reduction Plans

1

Potentially High Risk Level Facilities

- 1 Air Toxics Inventory Report

Other Key Toxics-Related Activities in 2020

Rulemaking



Proposed Rule 1407.1 to reduce emissions of hexavalent chromium from chromium alloy melting operations by establishing new requirements such as control equipment and mass emissions limits.

Proposed amendments to Rule 1426 to reduce fugitive emissions of hexavalent chromium, nickel, cadmium, and lead from metal finishing facilities.

Special Monitoring

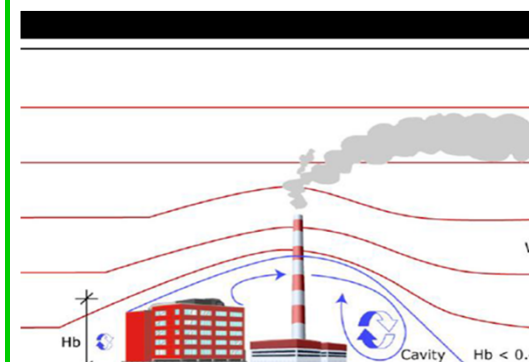


Continued air monitoring in Paramount

Continued mobile monitoring campaign in the Greater Los Angeles Area

Continued air monitoring in West Rancho Dominguez Area

Rules 1420.2



Reviewed air dispersion modeling for lead emissions from one facility under Rule 1420.2

2021 Toxics-Related Activities

- Details will be provided in 2021 Annual Report provided in 2022
 - Audit quadrennial emissions inventories for approximately 174 facilities
 - Track development of potential additions or revisions to health values by OEHHA
 - Work with CARB and through the CAPCOA Toxics and Risk Managers Committee (TARMAC) regarding:
 - Updates to the AB 2588 guidelines, including review of additional chemicals to be added for evaluating risk
 - Amendments to CTR (Criteria and Toxics Reporting) guidelines that will overlap with the updated AB 2588 guidelines
 - Work with CARB to develop or update HRA guidance for Industrywide Sources (i.e., gasoline dispensing facilities, autobody shops)



Projected 2022 Activities

- Cumulative toxic community impacts
 - Long-standing environmental justice concerns
 - Community vulnerability
 - Engage in the Department of Toxics Substances Control's (DTSC) SB 673 rulemaking
 - AB 617 communities
- Develop new internal tools for project tracking and program streamlining



Recommended Action

- Receive and File the 2020 AB 2588 Annual Report