

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



2021

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



AUGUST 2022

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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 eight 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 2021:

AB 2588 and Rule 1402 Implementation Activities	Prioritized 94 facilities based on their quadrennial toxic emission inventory updates
	Initiated 54 audits based on prioritization scores
	Reviewed 37 ATIRs, 3 HRAs, 2 RRP, and 2 VRRPs, and 4 revised priority scores from 34 facilities
Streamlining and Program Improvement Activities	Provided support to rulemaking and AB 617 staff

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 that was initiated in February 2021. The regulation was finalized in 2022.



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*, March 21, 2022, California Air Resources Board <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2020/hotspots2020/eicgfro.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/cmr/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 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 air district's jurisdiction.

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>

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 applicable regulation in 2021 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. 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 included revising criteria pollutant thresholds and adjusting the phase in schedule. CARB also proposed to establish a Sector Phase 3B including wastewater, landfills, composters, and metal shredders. This group will not be required to report the expanded chemical list until inventory year 2028. CARB staff incorporated these revisions through a 15-day public process. The final 2022 EICG rulemaking package was approved by the Office of Administrative Law and filed with the Secretary of State on March 21, 2022. The EICG effective date is March 21, 2022.



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 2021.

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

South Coast AQMD’s Air Toxics “Hot Spots” Program

Background

The South Coast AQMD’s Air Toxics “Hot Spots” Program incorporates the requirements of the state AB 2588 program, as well as additional and/or more stringent requirements. Despite being one of the smoggiest urban areas in the U.S., South Coast AQMD has achieved significant reductions in air toxics in the Basin. For example, monitoring studies have shown that cancer risks have decreased by more than 50 percent in the past decade alone.⁶ 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.

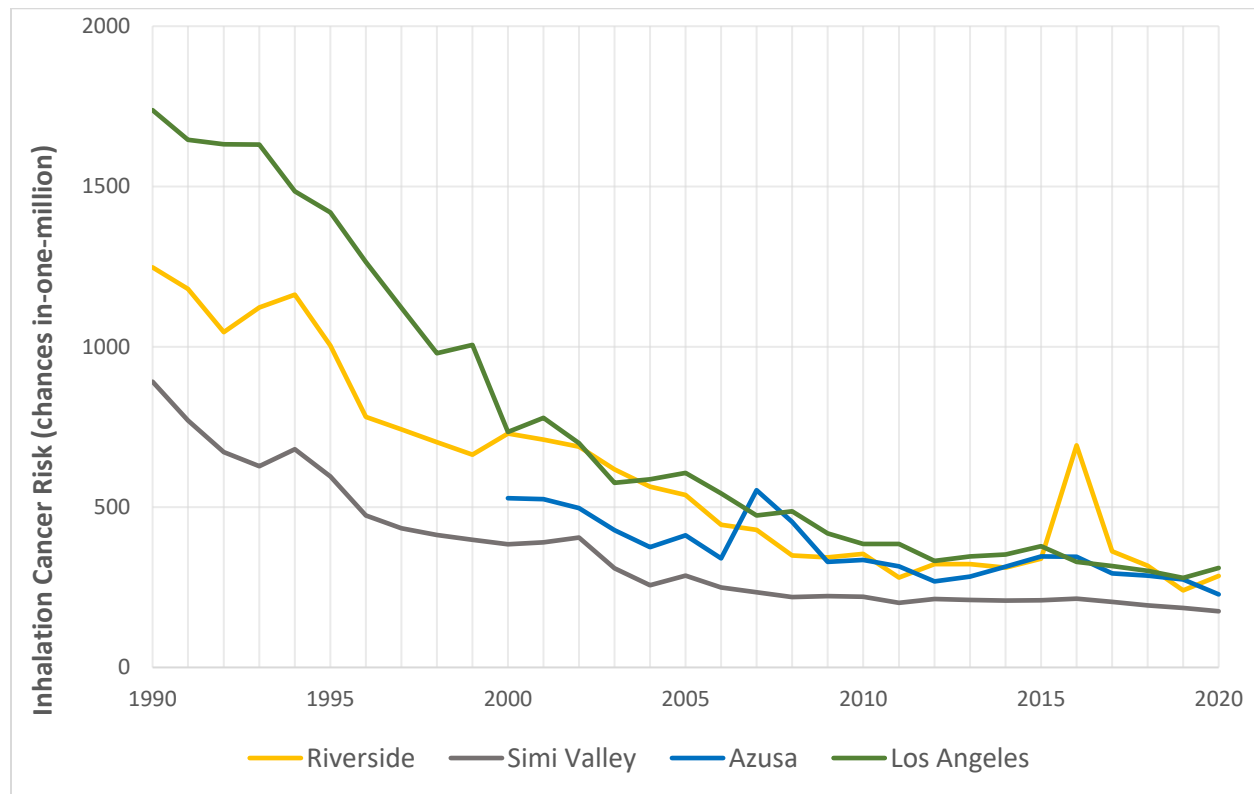


Figure 2-1: Trends in Inhalation Cancer Risks⁷ in the Basin (1990-2020)

⁶ 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

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

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

South Coast AQMD *Rule 1402 - Control of Toxic Air Contaminants from Existing Sources* implements various aspects of AB 2588 and SB 1731 including public notification and risk reduction requirements for facilities. Rule 1402 adopts health risk thresholds and implementation schedules that are more stringent than those specified in AB 2588 and SB 1731. Rule 1402 was amended in October 2016. This amendment included a new provision beyond what is required under state law. 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 2021, 94 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 900 toxic air contaminants, along with detailed information about the processes and release points using the Emissions Inventory Module from the latest CARB Hotspots Analysis and Reporting Program (HARP). For facilities participating in the traditional pathway, if the ATIR indicates that the facility is still considered a high priority, the facility must prepare an

HRA that conforms to the OEHHA HRA Guidelines. Specific instructions for the South Coast AQMD are also available in the *AB 2588 and Rule 1402 Supplemental Guidelines, (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)*.⁸ This document is commonly referred to as the AB 2588 Supplemental Guidelines.

- **Public Notification** – If the health risk reported in the HRA exceeds the Notification Risk Levels of Rule 1402, then the facility is required to provide public notice to the affected community. The Notification Risk Levels of Rule 1402 are triggered when cancer risk from the facility exceeds 10 chances in-one-million, or when the acute or chronic hazard indices are greater than 1. The requirements for public notification are described in the *South Coast AQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402*, October 2016 (South Coast AQMD Public Notification Procedure).⁹ These requirements emphasize transparency in communicating risk to the affected community in the following ways:
 - The notice must clearly identify the area above the notification thresholds.
 - The notice must be distributed to all addresses (individual residences and workplaces), and to parents of children attending school in the area of impact.
 - The approved HRA must also be provided to all schools in the area of impact.
 - South Coast AQMD conducts a public meeting to describe the HRA results to the affected community and to answer questions from community members.
- **Risk Reduction** – Rule 1402 adopts stringent health risk thresholds and aggressive implementation schedules that are beyond the traditional AB 2588 and SB 1731 state requirements (see Table 2-2). Under state requirements, facilities exceeding a significant risk threshold must reduce risk within five years. Under Rule 1402, Potential High Risk Level facilities must submit an Early Action Reduction Plan to immediately reduce risk, followed by a detailed Risk Reduction Plan designed to comprehensively reduce risk. The Risk Reduction Plan under Rule 1402 must be implemented as quickly as feasible, but no later than two years after approval. Facilities exceeding the Action Risk Level under Rule 1402 must also implement risk reduction plans no later than two and a half years after risk reduction plan approval.¹⁰ Rule 1402 also 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.

⁸ *AB 2588 and Rule 1402 Supplemental Guidelines, (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)*, September 2020, South Coast AQMD.

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

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

Table 2-1: AB 2588 Core Facilities by Industry Category

Facility Categories	Number of Facilities
Aerospace	39
Airports	1
Amusement Parks	2
Building / Construction / Mineral Products	49
Bulk Plants	17
Chemical Plants	12
Crude Oil Production	34
Dairy / Poultry Farms	7
Electricity Generation	31
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	3
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
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.

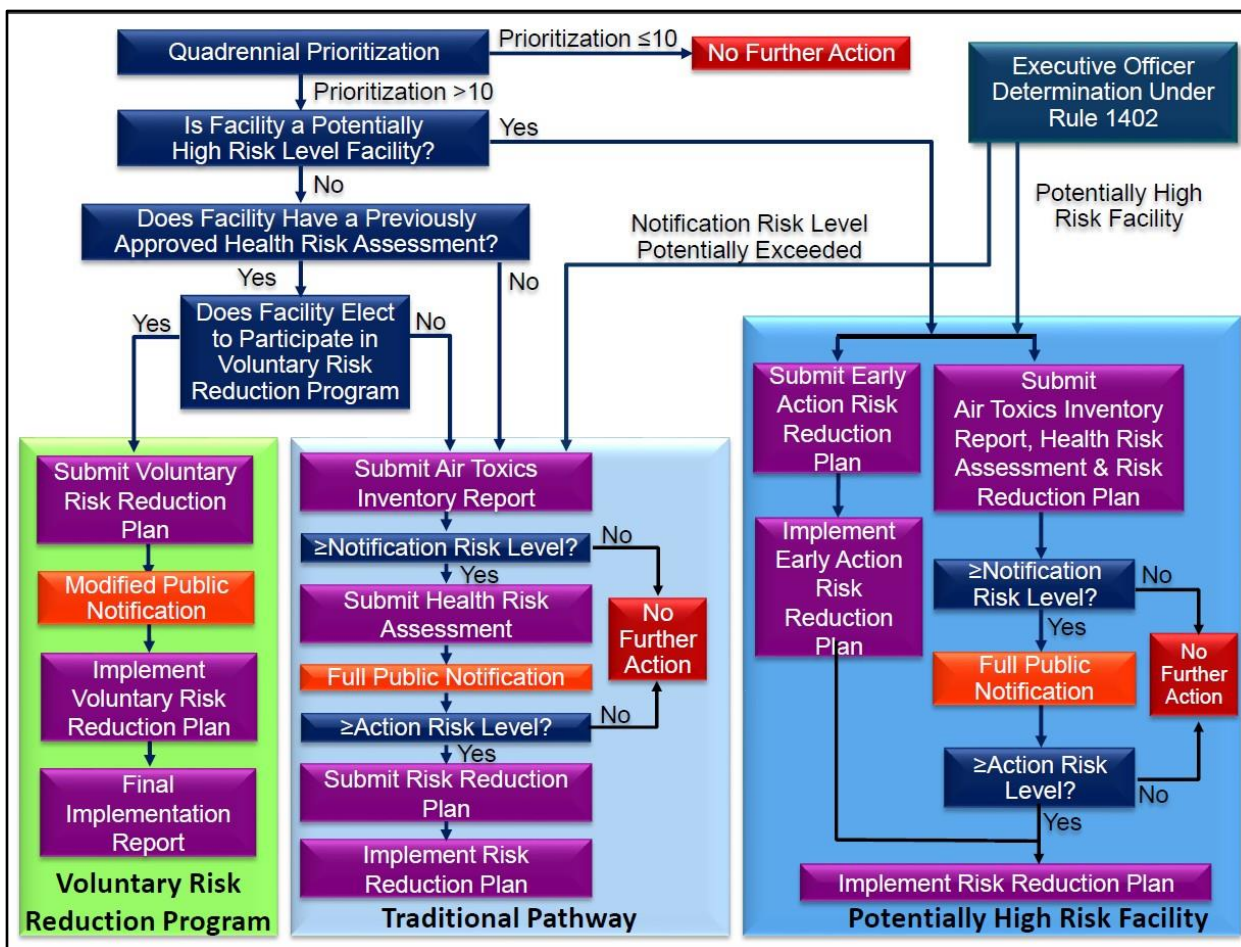


Figure 2-2: Overview of the AB 2588 Program

Progress in Implementing the AB 2588 Program

From the beginning of the AB 2588 Program in 1987 through the end of 2021, staff has reviewed and approved 355 HRAs from 342 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 342 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.

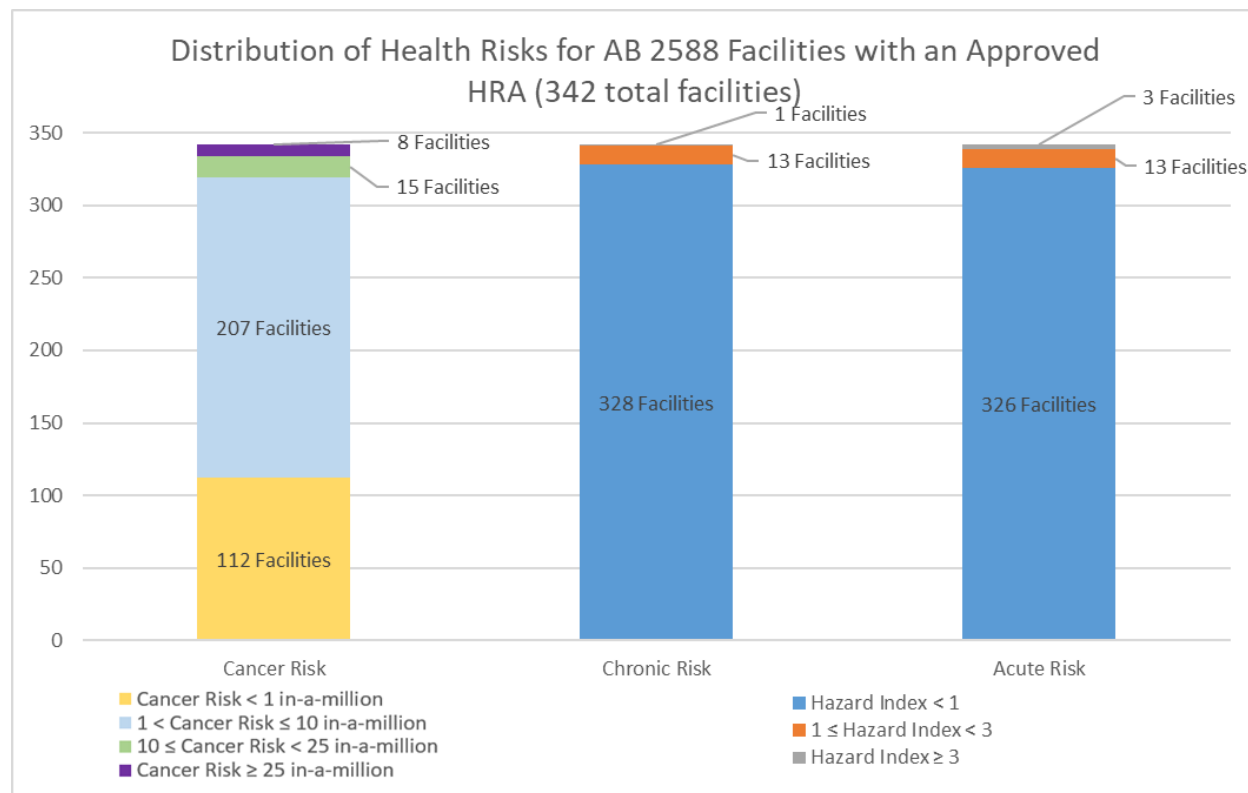


Figure 2-3: Distribution of Risks for AB 2588 Facilities with an Approved HRA

Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2021

In 2021, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on 54 facilities with 10 facilities with priority scores greater than 10. Key activities conducted include review of 37 ATIRs, with four of those leading to revised priority scores, three HRAs, two RRP, two Voluntary Risk Reduction Plans (VRRPs), and four VRRP progress reports. 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 48 documents were reviewed in 2021 from 34 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 2021 for Facilities in the Traditional AB 2588 Program

Facility Name	ID #	ATIR		HRA		RRP		Status
		R	A	R	A	R	A	
A & A Ready Mixed Concrete Inc	21665	X						
A & A Ready Mixed Concrete Inc	38429	X						
Aerocraft Heat Treating Co. Inc. ^a	23752							See Appendix A.3

Facility Name	ID #	ATIR		HRA		RRP		Status
		R	A	R	A	R	A	
Air Liquide Large Industries U.S., LP	148236				X			
All American Asphalt, All Amer Aggregates	82207	X	X	X				
All American Asphalt	114264	X						
All American Asphalt	148146	X						
Bowman Plating Co Inc	18989							See Appendix A.9
Breitbart Operating LP	150201		X					
Carpenter Co. ^b	7730	X						
City of Cerritos - Water Division	74396	X						
Coastline High Performance Coatings, Ltd. ^a	112684			X		X		
Demunno-Kerdoon dba World Oil Recycling ^b	800037	X						
Eco Services Operations Corp. ^b	180908	X	X	X				
Embee Processing ^b	186519	X						
Evonik Corporation ^b	183926	X	X					
Flare Group, dba Aviation Equip Process	164581	X						
Glendale City, Glendale Water & Power ^b	800327							See Appendix A.21
Hixson Metal Finishing	11818							See Appendix A.22
Holliday Trucking, Inc	12036	X						
Honeywell International Inc ^b	800003	X						
Howmet Global Fastening Systems Inc.	134931	X						
Howmet Global Fastening Systems Inc ^b	134943	X						
Light Metals Inc. ^b	83102	X	X	X				
Long Beach City, SERRF Project	44577							See Appendix A.28
Los Angeles By-Products	60384							See Appendix A.29
Lubeco Inc ^a	41229							See Appendix A.30

Facility Name	ID #	ATIR		HRA		RRP		Status
		R	A	R	A	R	A	
Motion Picture & Television Fund	16211	X	X					
Pac Rancho, Inc.	140871	X		X				
Pacific Clay Products Inc	17953	X	X	X				
Phillips 66 Co/LA Refinery Wilmington Plant ^b	171107	X						
R J. Noble Company	19167	X						
Robertson's Ready Mix	134112							See Appendix A.37
Robertson's Ready Mix	42623							See Appendix A.38
Schlosser Forge Company ^b	15504	X						
SFPP, L.P. ^b	800129	X						
SFPP, L.P. ^b	800278	X						
So Cal Gas Co/Playa Del Rey Storage Fac	8582							See Appendix A.42
Sonoco Products Co	14871							See Appendix A.43
Vista Metals Corporation ^b	14495							See Appendix A.47

Notes:

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

^a Classified as Potentially High Risk Level Facility.

^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 2021 for Facilities in the Voluntary Risk Reduction Program

Facility Name	ID #	VRRP		Status
		R	A	
Altair Paramount, LLC	187165	X		
Chevron Products Co. (El Segundo Refinery)	800030			See Appendix A. 12
Elite Comfort Solutions	182610			See Appendix A.17
Northrop Grumman Systems Corporation	800409	X		
Tesoro Refining & Marketing Co., LLC, Los Angeles Refinery	800436			See Appendix A.44
	174655			
	174694			
	174703			
Torrance Refining Company LLC	181667			See Appendix A.45
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 and emission investigations. In 2013, South Coast AQMD staff began investigating 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 2013, South Coast AQMD staff began investigating 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. 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 concluded its air monitoring efforts in Paramount in 2021 to focus on other potential sources throughout 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. More information is available online at: <http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities>

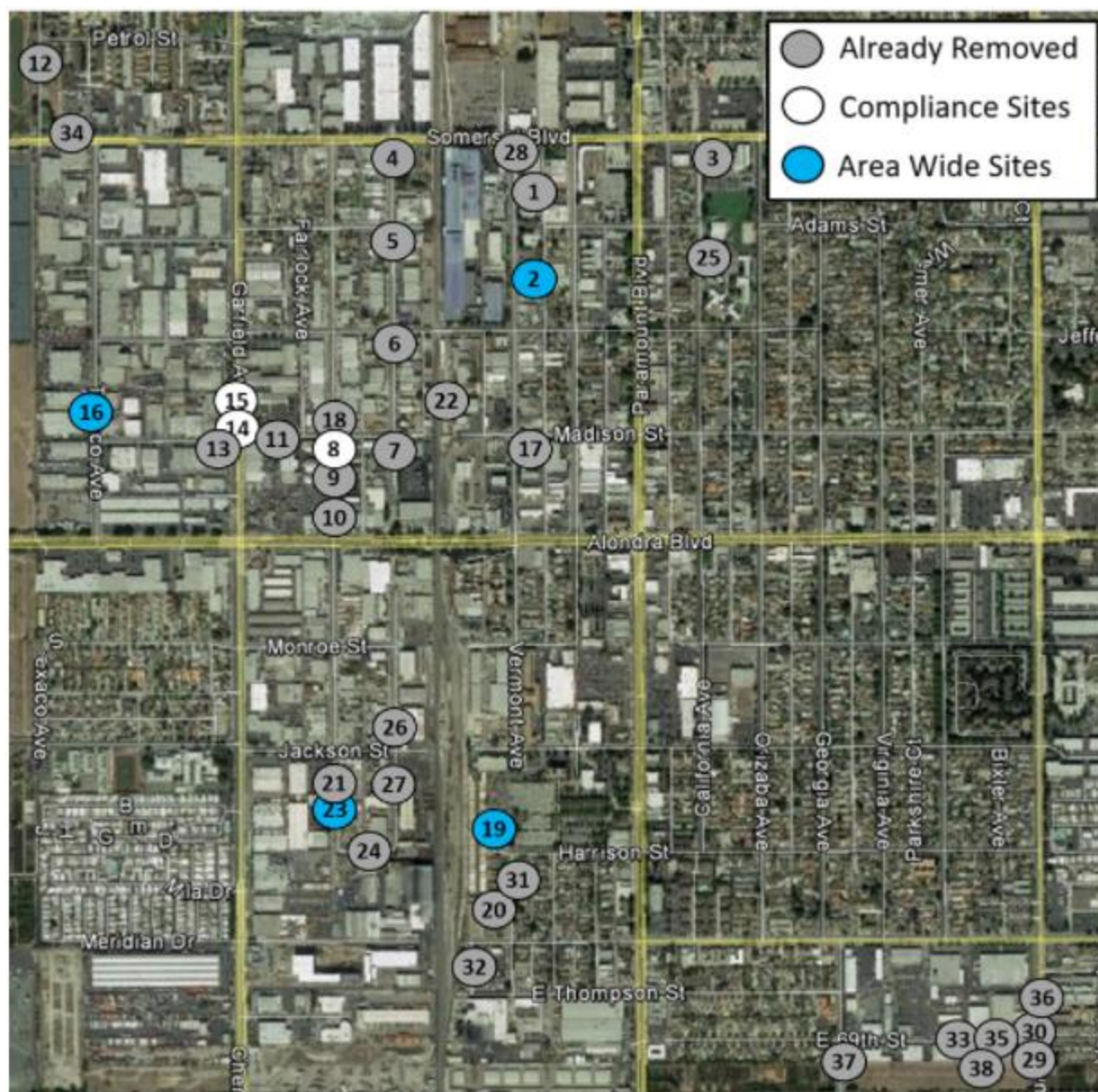


Figure 2-4: Location of the monitoring sites in the City of Paramount

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.¹¹ 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.

¹¹ <http://www.aqmd.gov/docs/default-source/news-archive/2017/air-toxics-action-plan-april-7-2017.pdf>

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, monitoring at Sites #1, 3, 4, 6 8-10, 12, and 13 stopped.



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

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 continued in this area through 2021 along with investigation of potential sources - within the vicinity of the monitoring network, and with some facilities brought into the AB 2588 core program. More information is online at: <http://www.aqmd.gov/home/news-events/community-investigations/west-rancho-dominguez-emissions-investigations>

Assembly Bill 617 (AB617)

AB 617, passed by the California legislature in 2017, is a law that focuses on reducing air pollution in Environmental Justice (EJ) communities throughout the State. This law provides an opportunity for South Coast AQMD to further address community air quality issues in disadvantaged areas. For each community approved by CARB, South Coast AQMD staff will form and work with a community steering committee (CSC), local stakeholders, and members of the public to identify their major air pollution concerns and propose specific strategies to address these concerns. Depending on the specific needs of each community, South Coast AQMD staff will develop and implement a tailored Community Emissions Reduction Plan (CERP) and a Community Air Monitoring Plan (CAMP). South Coast AQMD staff will work with CARB and other stakeholders to implement the CERP and CAMP to reduce local air pollution emissions and benefit public health. 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. The table below lists the communities CARB has designated for the AB 617 program in the South Coast Air Basin.

September 2018 (Year 1)	December 2019 (Year 2)	February 2021 (Year 3)
Wilmington, Carson, West Long Beach	Southeast Los Angeles	South Los Angeles
San Bernardino, Muscoy	Eastern Coachella Valley	
East Los Angeles, Boyle Heights, West Commerce		

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.

Community air monitoring plays an important role in supporting actions to reduce emissions of and exposure to air pollution within communities that are disproportionately impacted by air pollution. This could include enhancing ongoing or upcoming community-led and agency-led air monitoring programs or conducting new monitoring activities in various geographical areas within South Coast AQMD's jurisdiction to enhance our understanding of air pollution impacts in EJ communities. A variety of air monitoring approaches will be used, and the objectives, tools, and stakeholders involved will differ from community to community and/or from air quality priority to priority.

Implementation of the AB 617 CAMPs generate a large amount of data, and as part of AB 617 implementation, quarterly meetings of the CSC are held in order to provide updates to the community on CERP and CAMP activities. These quarterly meetings are the primary forum for updating community members on implementation and data from the air monitoring plan, answer questions and receive comments on the CAMP.

Additional information on the AB 617 air monitoring data is available online at <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/ab-617-community-air-monitoring>

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.¹² This streamlining is highly effective since fewer facilities are immediately notified each year, which allows 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.

¹² <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 number of general inquiries and preliminary discussions, providing 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. Rule 1402 was amended to provide this option in response to industry interest in a mechanism to voluntarily reduce health risks from their facilities in return for modified public notification requirements. A facility may participate in the Voluntary Risk Reduction Program only if it has a previously approved HRA that is below the Action Risk Level and is not a Potentially High Risk Level facility. This program provides a more expeditious risk reduction program than the traditional pathway under state requirements, and also reduces notification requirements and other process for participating facilities. Under the traditional program, facilities are required to reduce cancer risk below 25 chances in-one-million. To successfully participate in the Voluntary Risk Reduction Program, risks from the participating facility must be reduced below 10 chances in-one-million, which is up to 60% reduction in cancer risk compared to the Action Risk Level. Guidelines that describe the requirements of a VRRP are available online.¹³

Air Dispersion Modeling

Modeling Guidance

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

¹³ *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>

data.¹⁴ 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 Procedures¹⁵ 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

¹⁴ South Coast AQMD modeling guidance is available at:

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

¹⁵ *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.¹⁶

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) 396-3616 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 and West Rancho Dominguez.

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.¹⁷ 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.

¹⁶ <http://www.aqmd.gov/nav/FIND/facility-information-detail>

¹⁷ <http://www3.aqmd.gov/webappl/complaintsystemonline/NewComplaint.aspx>;

Telephone hotline: 1-800-CUT SMOG® (1-800-288-7664)

Toxic Air Contaminants with New or Proposed Health Values

OEHHA did not adopt or amend any health values in 2021; however, draft technical documents were released in 2021 to evaluate potential health risk posed by inorganic water-soluble trivalent chromium and 1-bromopropane.

Two draft technical support documents were released in 2021 by OEHHA to evaluate chronic and acute RELs for water-soluble trivalent chromium. Trivalent chromium compounds are used for decorative plating, manufacture of dye and pigments and in leather tanning.

The third draft technical support document released in 2021 by OEHHA evaluated a potential inhalation cancer risk for 1-bromopropane. This compound was proposed to be added to the list of substances to be quantified under the revised EICG. Common uses for 1-bromopropane include being used as a solvent for adhesives used in laminates and foam products. It is also used as a degreaser or cleaning agent for metal, plastic and glass components, and as an alternative for dry cleaning machines.

Staff continues to monitor OEHHA's progress in adopting new health values for the compounds described, in addition to tracking other progress in revising health values for new or existing substances that are listed in Appendix A of the EICG.

Federal Toxics Activities

National Air Toxics Assessment (NATA) and Air Toxics Screening Assessment AirToxScreen

Every three years, beginning in 1996, U.S. EPA prepared a National Air Toxics Assessment (NATA).¹⁸ The purpose of NATA was to provide census-tract modeled ambient and exposure concentrations and risks by: (1) identification and prioritization of toxic air contaminants of greatest concern and, (2) determination of the relative risk contribution from each of the major source categories (i.e., on-road, off-road, point, and area). In 2021, U.S. EPA announced a transition to an annual toxics review that would be under the Air Toxics Screening Assessment (AirToxScreen)¹⁹. Similar to NATA, AirToxScreen is intended as a tool for state, local and tribal air agencies to help identify which pollutants, emission sources and places that may require further analysis to better understand any possible risks to public health from air toxics.

In August 2021, U.S. EPA initiated a review process of 2017, 2018 and 2019 data. As part of this process, staff coordinates with U.S. EPA and CARB staff to ensure that AirToxScreen incorporates the best available local emissions data. For the 2017 data, U.S. EPA provided point source data for review from the 2017 National Emissions Inventory, which included over 1,500 facilities within South Coast AQMD's jurisdiction while identifying 13 ethylene oxide facilities for priority review. South Coast AQMD staff made several corrections to emissions and point source data for these facilities and provided the corrections to U.S. EPA in September 2021. U.S. EPA publicly released the 2017 AirToxScreen data in December 2021. Review of the 2018 and 2019 data will continue in 2022.

¹⁸ <https://www.epa.gov/national-air-toxics-assessment>

¹⁹ <https://www.epa.gov/AirToxScreen>

Ethylene Oxide (NESHAP Rulemaking)

During the 2014 NATA review period, U.S. EPA announced a change in inhalation unit risk estimate for evaluation of potential cancer risk from ethylene oxide, which initiated a review for ethylene oxide emissions from industrial sources. U.S. EPA also announced proposed rulemaking for two National Emissions Standards for Hazardous Air Pollutants (NESHAP): Ethylene Oxide Commercial Sterilizers and Miscellaneous Organic Chemical Manufacturing.

In January 2021, U.S. EPA requested South Coast AQMD assistance in reviewing data from an information collection request sent to commercial sterilizers. This process continued through 2021 and overlapped with the review of the data for AirToxScreen. During the review process, South Coast initiated an investigation to assess fugitive releases of ethylene oxide at commercial sterilizers within our jurisdiction. Further investigation is planned for 2022, including ambient monitoring of ethylene oxide concentrations in the vicinity of several commercial sterilizing facilities. In 2022, South Coast AQMD will also initiate rulemaking activity for Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions From Sterilization or Fumigation Processes.

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 2022, staff will prioritize approximately 171 facilities, and notify those with high priority scores to prepare ATIRs or VRRPs, if eligible, and HRAs and RRP, if necessary.

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 for toxics rules including Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes;
- 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;
- Track development of potential health risk value revisions by OEHHA;
- Continue coordination with U.S. EPA and CARB staff to ensure AirToxScreen incorporates the best available local emissions data;
- Track development of U.S. EPA proposed rulemaking for two National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Ethylene Oxide Commercial Sterilizers and Miscellaneous Organic Chemical Manufacturing; and
- Track U.S. EPA change in inhalation unit risk estimate for evaluation of potential cancer risk from ethylene oxide and its impact on industrial sources within our basin.

Appendix A — Description of Active AB 2588 Related Projects

A.1. *A & A Ready Mixed Concrete (ID 21665) – Gardena*

A&A Ready Mixed Concrete (A&A Gardena) is a concrete batch plant located within the West Rancho Dominguez community in the city of Gardena. This facility is located approximately one block west of another A&A Ready Mixed Concrete facility. The facility blends cement, sand, aggregate, and other components to manufacture ready mix concrete. This concrete is then transported out of the facility by mixing trucks to support construction projects.

On March 24, 2021, South Coast AQMD staff sent a letter requiring A&A Gardena to submit an ATIR due to elevated ambient hexavalent chromium emissions detected in the vicinity of this facility by the ongoing West Rancho Dominguez monitoring project.

On August 16, 2021, A&A Gardena submitted an ATIR. At the end of 2021, the ATIR was under review by South Coast AQMD staff. Staff expects to finalize the review in mid-2022.

A.2. *A & A Ready Mixed Concrete (ID 38429) – Gardena*

A&A Ready Mixed Concrete (A&A Gardena) is a concrete batch plant located within the West Rancho Dominguez community in the city of Gardena. This facility is located approximately one block east of another A&A Ready mixed Concrete facility. The facility blends cement, sand, aggregate, and other components to manufacture ready mix concrete. This concrete is then transported out of the facility by mixing trucks to support construction projects.

On March 24, 2021, South Coast AQMD staff sent a letter requiring A&A Gardena to submit an ATIR due to elevated ambient hexavalent chromium emissions detected in the vicinity of this facility by the ongoing West Rancho Dominguez monitoring project.

On August 16, 2021, A&A Gardena submitted an ATIR. At the end of 2021, the ATIR was under review by South Coast AQMD staff. Staff expects to finalize the review in mid-2022.

A.3. *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.²⁰

²⁰ 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>

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 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, submitted in December 2020 for review, and was approved by South Coast AQMD in February 2021. The RRP demonstrates that the risk reduction measures have been fully implemented and other recurring measures, such as housekeeping provisions, have been adopted as conditions in the Facility Permit.

A.4. 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. Following review by staff, the HRA was approved on January 29, 2021. The HRA results were below both the Action Risk level and the Notification Risk level in Rule 1402.

A.5. All American Asphalt, All American Aggregates (ID 82207) – Irvine²¹

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 the 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.

The facility submitted its ATIR in July 2020. The submitted ATIR used allowable default emission factors rather than site-specific factors to estimate emissions. Non-site-specific, default emissions factors often result in overestimation of emissions for facilities. South Coast AQMD asked AAA to conduct site-specific source testing of the rotary dryer to develop a more accurate emissions profile.

The source test for the rotary dryer was conducted over several days in June and July 2021 and the facility also analyzed aggregate materials used at the facility to measure concentrations of trace metals. The source test for the rotary dryer was submitted by the facility in August 2021 and results were reviewed by Source Test Engineering staff and final approval granted on November 4, 2021. AAA used the information from the approved source test and submitted a revised ATIR on October 22, 2021; however, technical deficiencies were identified and the ATIR was rejected. South Coast AQMD received a revised ATIR on December 7, 2021, which was approved with minor corrections. In the ATIR approval letter, an HRA was required by February 3, 2022.

A.6. 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

²¹ <http://www.aqmd.gov/home/news-events/community-investigations/all-american-asphalt>

emissions, with hexavalent chromium being the main air toxic contributor to the high priority score. Hexavalent chromium emissions are primarily from the rotary dryer and are 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. It was later established that the protocol should be adjusted to account for additional test methods required by CARB's Emissions Inventory Criteria Guidelines (EICG). However due to AAA Irvine gaining a lot of public attention in 2021, it was agreed that South Coast AQMD would first finalize source testing and the associated ATIR for the Irvine facility before continuing forward with the AAA Irwindale facility.

The most recent ATIR was submitted on April 16, 2021, which addressed some consistency issues between the methodologies used in the AAA three facility ATIR's in Irvine, Perris, and Irwindale. Review of this ATIR as well as resubmittal of the source test protocol will be completed once the HRA for AAA Irvine has been finalized.

A.7. 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 are primarily from the rotary dryer and are 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. It was later established that the protocol should be adjusted to account for additional test methods required by CARB's Emissions Inventory Criteria Guidelines (EICG). However due to AAA Irvine gaining a lot of public attention in 2021, it was agreed that South Coast AQMD would first finalize source testing and the associated ATIR for the Irvine facility before continuing forward with the AAA Perris facility. The most recent ATIR was submitted on April 13, 2021, which addressed some consistency issues between the methodologies used in the AAA's three facility ATIR's in Irvine, Perris, and Irwindale. Review of this ATIR as well as resubmittal of the source test protocol will be completed once the HRA for AAA Irvine has been finalized.

A.8. Altair Paramount, LLC (ID 187165) – Paramount

Altair Paramount, LLC (Altair) is a renewable fuels refinery located in Paramount and processes beef tallow and vegetable oils into renewable fuels. The feedstocks primarily arrive via rail car. The refining technology utilize and repurpose existing infrastructure at the facility which was formerly Paramount Petroleum, to convert the tallow and vegetable oils into diesel, jet fuel,

naphtha, and liquified petroleum gas. Final products are either sent out by truck or shipped via pipeline.

On January 15, 2021, South Coast AQMD staff sent a letter requesting Altair to prepare either an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2019 reported emissions. The main toxic air contaminant contributing to the high priority score is diesel particulate matter from non-emergency engines being used at the facility. Altair chose to prepare a VRRP and submitted it on June 15, 2021. South Coast AQMD staff has reviewed the submittal and asked the facility to correct the deficiencies identified in the baseline and post-VRRP inventories. At the end of 2021, South Coast AQMD staff continues to work with Altair to finalize any outstanding issues related to the VRRP.

A.9. 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. During review, staff discovered that the emissions from devices such as the dichromate seal and nickel strike tanks were omitted from the 2018 inventory in addition to several unaccounted fugitive emissions from incomplete capture of tank emissions and poor housekeeping practices. Based on available data, staff conducted a preliminary risk assessment accounting for the fugitive emissions and found that risk levels were significantly above Rule 1402 thresholds.

On an April 14, 2020, conference call with Bowman, staff explained that Bowman had the option to either be designated as a Potentially High Risk Level Facility or opt into an expedited risk reduction 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. However, 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 27, 2020 regarding the applicability of the source test and answers to the reasons staff rejected the ATIR. Staff found the answers given in Bowman's letters to be insufficient. Staff sent a letter on November 20, 2020, agreeing to retest if Bowman met staff's requirements and for the source test results to be used in the next ATIR revision. The letter also notified Bowman that staff would modify the ATIR if a retest could not be performed. Bowman indicated its intent to retest in a letter sent on December 1, 2020. Staff and Bowman worked out details for the retest and ATIR issues in a series of letters.

On April 20, 2021, Source Test Engineering staff conditionally approved the source test protocol for the retest. The retest was conducted on April 27 and 28, 2021 but housekeeping issues caused part of the retest to be conducted on July 7, 9, and 12, 2021. The source test results were finalized on October 19, 2021. Bowman was required to prepare a revised ATIR incorporating the source test results. This revised ATIR is due no later than April 5, 2022.

A.10. 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 is the 14 microturbines.

On March 25, 2020, South Coast AQMD staff sent a 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 burning field gas. In response, Breitburn stated they used the default emission factors for internal combustion engines burning natural gas to calculate emissions from the 14 microturbines. After review by staff, Breitburn was required to submit a revision to the AER.

On May 3, 2021, Breitburn submitted a revised emission inventory using California Air Toxics Emission Factors (CATEF) for turbines burning field gas. Based on the revised emissions, South Coast AQMD staff calculated a revised priority score and the facility was no longer categorized as a high priority facility. On May 28, 2021, South Coast AQMD staff sent a letter to Breitburn notifying them of the revised priority score and no further action was required.

A.11. Carpenter Co. (ID 7730) – Riverside

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

On March 5, 2021, South Coast AQMD staff sent a letter requesting that Carpenter Co. prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its

2019 annual emissions. The main toxic air contaminant contributing to the high priority score is toluene diisocyanates from the foam recycling process.

Carpenter Co. elected to prepare an ATIR and submitted it on August 3, 2021. The ATIR was reviewed by South Coast AQMD staff and revisions were requested. A revised ATIR was submitted on October 25, 2021, and was under review as of the end of 2021.

A.12. 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 toxic air contaminants 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. During 2018, staff worked with the permitting teams to evaluate options for incorporating these requirements so that they would be 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.

Annual progress reports received on April 24, 2020, and April 13, 2021, indicate that Chevron had completed four of the five approved voluntary risk reduction measures. Chevron reported that they were working on obtaining city permits for the wiring needed to electrify the light towers. The fifth and final risk reduction measure was completed prior to the final implementation deadline of October 22, 2021.

A.13. 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 emission 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. The source test report was approved by South Coast AQMD staff

on February 2, 2021. City of Cerritos, Water Division submitted the full ATIR on February 9, 2021, including estimated emissions based on the source test data.

The 2017 priority score was revised based on the results of the full ATIR and the score was calculated to be less than 1. Based on the revised priority score, the facility is now categorized as a low level facility and therefore not subject to future reporting for the AB 2588 Program. On March 12, 2021, South Coast AQMD staff sent City of Cerritos, Water Division a letter informing them of the revised score and recategorization as low level.

A.14. 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 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 emission calculations.

On September 24, 2020, Coastline HPC submitted the ATIR. After staff's review, South Coast AQMD staff requested revision and resubmittal of the ATIR due to 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, and a pre-designation conference was held on January 28, 2021. On February 4, 2021, staff sent a letter informing the facility that they had been designated as a Potentially High Risk Level facility and would be required to submit an Early Action Reduction Plan, HRA, and RRP on an accelerated timeline.

South Coast AQMD staff approved the ATIR on April 1, 2021. The Early Action Reduction Plan was received on April 28, 2021, and detailed the actions that Coastline HPC had taken to immediately reduce risk. These actions included ceasing the use of coatings containing hexavalent chromium in the paint spray booths that were not equipped with HEPA filters and submitting permit modification applications to South Coast AQMD for HEPA filters to be installed on two additional paint spray booths.

Coastline HPC submitted the HRA on July 14, 2021, and the RRP on July 29, 2021, in accordance with the required deadlines. The Early Action Reduction Plan was approved on August 25, 2021. On September 29, 2021, South Coast AQMD staff provided Coastline HPC with comments and recommendations on the submitted RRP and requested a revision and resubmittal. The revised RRP was received on September 30, 2021. South Coast AQMD staff reviewed the HRA and found a discrepancy in the methodology used to calculate the cancer burden. On November 18, 2021,

staff updated the cancer burden calculation which did not result in any significant increase. The cancer burden remained below notification and action risk thresholds. The HRA was submitted to OEHHA for review and was conditionally approved by OEHHA on December 15, 2021.

The HRA representing the 2019 inventory year indicated that Coastline HPC posed a maximum cancer risk of 46 chances-in-one million for a residential receptor located at the corner of Kirby Way and Hardee Way, based on a 30-year residential exposure, and 1,091 chances-in-one million for the worker receptor located immediately east of Coastline HPC, based on a 25-year worker exposure. The cancer risk was mainly due to hexavalent chromium emissions from paint spray booth operations. Since the HRA results were above the Significant Risk Level in Rule 1402, Coastline HPC will be required to notify the public about the health risk.

In 2022, staff expects to conditionally approve the HRA and RRP, as well as hold a public notification meeting.

A.15. Demenno-Kerdoon dba World Oil Recycling (ID 800037) – Compton

Demenno-Kerdoon dba World Oil Recycling (Demenno-Kerdoon) operates a recycling, storage, treatment, and transfer facility in the city of Compton that processes hazardous waste such as waste oil, waste antifreeze, and oil water. The facility utilizes several storage tanks, afterburners, and other equipment which generate hexavalent chromium and other toxic air contaminants.

South Coast AQMD staff calculated a priority score greater than 10 and driven by hexavalent chromium emissions from a packed bed scrubber and internal combustion engines based on Demenno-Kerdoon's 2019 annual emission inventory. On January 15, 2021, staff notified Demenno-Kerdoon to prepare either an ATIR or VRRP. Demenno-Kerdoon elected to submit an ATIR which was submitted on May 12, 2021.

During review, staff found errors in items like welding emission calculations and building parameters. Staff discussed these issues with Demenno-Kerdoon and requested all the changes be submitted in a revision by January 19, 2022.

A.16. 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 elected to submit an ATIR.

On May 6, 2020, Eco Services submitted their ATIR. Following review of the ATIR, South Coast AQMD approved the ATIR on November 3, 2021, and required Eco Services to prepare an HRA based on the approved ATIR. The HRA is due February 3, 2022.

A.17. Elite Comfort Solutions (ID 182610) – Commerce

Elite Comfort Solutions (Elite) operates a facility in the 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 submitted revisions to the VRRP on December 3, 2018, and December 17, 2018. After further review, staff discovered additional issues regarding receptor exposure, 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. These revisions addressed discrepancies in the toluene diisocyanates emissions calculations as well as building parameter corrections and numerous errors in risk modeling. A final revised VRRP was submitted on January 16, 2020. Staff reviewed the submittal which proposed installation of carbon adsorption units for control of emissions from foam production processes and conditionally approved the VRRP on June 19, 2020.

Elite submitted the VRRP Progress Report on June 16, 2021 detailing the submittal of applications for Permits to Construct for the carbon adsorption units.

A.18. Embee Processing (ID 186519) – Santa Ana

Embee Processing is a metal finishing facility in Santa Ana. They operate metal finishing lines, spray coating, combustion, abrasive blasting, and other miscellaneous equipment.

On January 15, 2021, South Coast AQMD staff sent a letter requesting Embee Processing to prepare either an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2019 annual emissions inventory. The primary air toxic contaminant contributing to the high priority score is hexavalent chromium which comes mainly from hard chrome tanks. The facility elected to submit an ATIR. After requesting two extensions, the ATIR was submitted on July 6, 2021. Staff found deficiencies in this ATIR which included errors in emission calculations for hexavalent chromium from the hard chrome tanks, missing equipment and associated emissions, incorrect emission factors, and incorrect control efficiencies. To address these deficiencies, the facility submitted ATIR revisions on August 17 and October 12, 2021, along with supporting documents. At the end of 2021, the latest revised ATIR and supporting documents were under review.

A.19. 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. The primary air toxic contaminant contributing to the high priority score is 4,4'-methylenedianiline (MDA) from fugitive components. The ATIR was received in July 2020. Staff found deficiencies in this ATIR regarding emissions estimates of MDA and requested corrections to the ATIR on June 7, 2021.

The facility submitted the revised ATIR on June 2, 2021, that included a revision to the calculations for MDA. Staff reviewed the revised ATIR and found an incorrect vapor pressure was used for MDA. Using the corrected vapor pressure and the revised ATIR, staff calculated a revised priority score that was less than 10. On December 15, 2021, South Coast AQMD sent the facility a letter notifying them of the revised priority score, with no further action required.

A.20. 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.

Flare Group submitted the ATIR on April 14, 2021. Following review, staff found that the ATIR was missing some required elements such as facility total emission rates and building data. Flare Group submitted some of the missing information on November 2, 2021, and the remaining items are expected to be submitted in early 2022.

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 toxic air contaminants 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 both the Notification Risk Level and the Action Risk Level in Rule 1402, GWP was required to conduct public notification and prepare an RRP. The public notification meeting was held at the Glendale Downtown Central Library on June 26, 2019. The RRP which was received on October 9, 2019, 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 other risk reduction measure could not be approved since risk reduction for this measure was not quantified in the RRP and implementation of this component will exceed the 2.5 years as required under South Coast AQMD Rule 1402 (i)(1). 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.

On October 13, 2021, South Coast AQMD staff approved the applications and revised permits to operate were granted for the boilers. GWP has ceased using landfill gas to power the boilers, and the future use of landfill gas is prohibited, therefore the facility has fully implemented the RRP measures.

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

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 an HRA and 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

²² <http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/hixson-metal-finishing>

7,300 people in the area of impact. South Coast AQMD staff held a public notification meeting at the Hoag Conference Center on June 18, 2015.

Hixson submitted its first RRP on March 2, 2015. On May 8, 2015, South Coast AQMD staff rejected Hixson's first RRP and required resubmittal. Hixson subsequently submitted a second RRP on June 5, 2015. On June 26, 2015, South Coast AQMD staff rejected Hixson's second RRP due to its failure to demonstrate that the proposed controls reduce risks below Rule 1402 thresholds. Hixson resubmitted a revised RRP on July 1, 2015, and South Coast AQMD staff conditionally approved it on July 24, 2015. The associated permits to construct implementing the RRP were approved on December 11, 2015, and a second public notification meeting was held on February 11, 2016, at the Hoag Conference Center to inform interested parties regarding the key activities surrounding the RRP. In the 2016 Annual Report for the AB 2588 Program, staff incorrectly stated that the RRP was fully implemented as of December 31, 2016. The Order for Abatement expired on December 31, 2016, as Hixson had constructed all the measures contained in the RRP. However, one of the risk reduction measures requires all emissions from Building 2 to 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. 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. At the end of 2021, the source test report was pending review by Source Test Engineering staff.

A.23. Holliday Trucking, Inc (ID 12036) – Rialto

Holliday Trucking, Inc. (Holliday Trucking) is a concrete batch plant in the city of Rialto. Holliday Trucking operates cement silos, hoppers, belt conveyors, and other equipment which generate emissions of PM containing nickel, arsenic, and hexavalent chromium. On January 15, 2021, South Coast AQMD staff sent a letter requiring Holliday Trucking to prepare an ATIR due to the facility having a priority score greater than 10 based on the 2019 annual emissions inventory. Manganese is the main toxic air contaminant driving the high priority score.

Upon review of the Initial Information for the 2019 ATIR, staff found that Holliday Trucking was using an unapproved source test for calculation of emissions from aggregate processes. As a result, staff instructed the facility to estimate PM emissions using South Coast AQMD guidance, which is based on U.S. EPA AP-42 emission factors in addition to utilizing speciation profiles from San Diego Air Pollution Control District to estimate concentrations of metals in the PM.

Holliday Trucking submitted revisions on June 15 and July 13, 2021. Staff found that additional corrections to emission calculations and the submitted HARP files were required, and staff expects the completed revised ATIR to be submitted in January 2022.

A.24. Honeywell International Inc (ID 800003) – Torrance

Honeywell International Inc. (Honeywell) is a facility in Torrance serving the aerospace industry. They operate equipment that includes metal finishing lines, laser and plasma cutters, spray coating, combustion, and abrasive blasting equipment.

On January 15, 2021, South Coast AQMD staff sent a letter requesting Honeywell to prepare either an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2019 annual emissions inventory. The primary air toxic contaminant contributing to the high priority score is nickel which comes mainly from brazing tanks. During review, staff discovered that while the high nickel emissions from the brazing tanks were reported in error, some emission sources of toxic air contaminants were not reported. The facility elected to submit an ATIR. The ATIR was received June 29, 2021, after an extension was granted. Staff found deficiencies in this ATIR that included errors in using values from safety data sheets, missing equipment and associated emissions, incorrect emission factors, and incorrect control efficiencies. To address these deficiencies, the facility submitted an ATIR revision on October 5, 2021, along with supporting documents. At the end of 2021, the latest revised ATIR and supporting documents were under review.

A.25. Howmet Global Fastening Systems Inc. (ID 134931) – Fullerton

Howmet Global Fastening Systems Inc., formerly Arconic Global Fasteners & Rings, Inc., manufactures precision fastening systems and components for the aerospace industry in Fullerton. They operate equipment that includes 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. Staff requested and received additional information on March 16, 2021, June 15, 2021, and July 16, 2021. At the end of 2021, the latest supporting documents were under review.

A.26. Howmet Global Fastening Systems Inc. (ID 134943) – Torrance

Howmet Global Fastening Systems Inc. (Howmet) manufactures precision fastening systems and components for the aerospace industry in Torrance. Their operations include metal finishing lines, ovens, and abrasive blasting equipment.

On April 2, 2021, South Coast AQMD staff sent a letter requesting Howmet to prepare either an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2018 annual emissions inventory. The primary air toxic contaminant contributing to the high priority score is hexavalent chromium which comes mainly from metal finishing tanks. The facility elected to submit an ATIR. The ATIR was received September 17, 2021, after an extension was granted. Staff found deficiencies in this ATIR that included errors in emission calculations for process tanks with hexavalent chromium, nickel and cadmium, missing equipment and associated emissions, incorrect emission factors, and incorrect control efficiencies. To address these deficiencies, the facility submitted an ATIR revision on December 15, 2021, along with supporting documents. At the end of 2021, the latest revised ATIR and supporting documents were under review.

A.27. 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, with a response from Light Metals on April 7, 2020. Among comments, South Coast AQMD staff noted the requirement for any source tested emission factors to be reviewed and approved by South Coast AQMD prior to use in any emission reporting. 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 found previous site-specific source test reports and protocols and submitted them 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, staff determined that some emission sources and toxic air contaminants from certain processes were not included; staff also noted a deficiency in the emission factor for formaldehyde. The facility submitted revisions to the ATIR updating all outstanding issues on November 11, 2020, and November 17, 2020, except for the formaldehyde emission factors. Ultimately, Light Metals elected to source test two reverberatory furnaces for formaldehyde; the protocol for this source test was submitted on December 1, 2020. Source testing took place starting on December 15, 2020. The source test report was submitted on February 9, 2021, and was conditionally approved by staff on July 28, 2021. At that time, South Coast AQMD became aware of Rule 1407 metals testing that Light Metals conducted and asked them to incorporate the results once the evaluation was complete. The source test for Rule 1407 was

approved on August 19, 2021. All required revisions were eventually incorporated into the ATIR which was submitted on October 22, 2021. The ATIR was approved on December 2, 2021, and the facility was required to prepare an HRA. South Coast AQMD staff is currently awaiting submittal of the HRA which is due March 2, 2022.

A.28. 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 two source tests were submitted for review in October 2020, and as of the end of 2021, one source test review has been completed, while the other source test for polychlorinated dibenzofurans is still under review.

A.29. 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 are 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, which 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. Staff anticipates that the evaluation of the source test report will be completed in 2022.

A.30. Lubeco Inc (ID 41229) – Long Beach

Lubeco, Inc. (Lubeco) is a metal finishing facility 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 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 submitted 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 in November 2020 and was deemed acceptable in February 2021. A field evaluation by the Engineering and Permitting staff is required prior to issuance of a permit for the air pollution control device, and as of the end of 2021, this field evaluation has not been completed.

A.31. 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 with the required timeline. Staff received the ATIR on April 1, 2021, and found that the unapproved source test results were still being used in addition to other deficiencies such as incorrect or missing building data and device information. MPTF submitted a revised ATIR on April 29, 2021, using default South Coast AQMD emission factors. Staff review identified inconsistencies with the reporting of toxic air contaminants and required further revisions. MPTF submitted ATIR revisions on May 8, and May 14, 2021. Based on the revised ATIR, staff recalculated the Priority Score to be below 1.0 which exempted MPTF from South Coast AQMD's AB 2588 Program on September 16, 2021. MPTF was also required to submit an amendment to their Annual Emissions Report. This amendment process was completed on October 12, 2021.

A.32. Northrop Grumman Systems Corporation (ID 800409) – Redondo Beach

Northrop Grumman Systems Corporation (Northrop Grumman) in Redondo Beach is an aerospace manufacturing company. They perform research, development, and manufacturing of electronic components for military aircraft, satellites, and space vehicles.

On January 15, 2021, South Coast AQMD staff sent a letter requiring Northrop Grumman to submit an ATIR or VRRP 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 diesel particulate matter (DPM). The main sources of DPM emissions are their 21 diesel internal combustion engines. Northrop Grumman elected to prepare a VRRP.

Northrop Grumman submitted their VRPP on August 15, 2021. At the end of 2021, the VRRP and supporting documents were under review by staff. Staff anticipates completing review of the supporting documents in mid-2022.

A.33. 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. Based on preliminary results from the HRA, South Coast AQMD pre-designated Pac Rancho as a Potentially High Risk Level Facility on March 11, 2021. South Coast AQMD and Pac Rancho held a pre-designation meeting to discuss possible solutions for reducing risk as well as options for source testing to obtain site specific emission factors. After pre-designating Pac Rancho as a Potentially High Risk Level Facility, a virtual tour of the facility was scheduled on April 7, 2021. During the virtual tour, South Coast AQMD staff discovered heat treating operations that were not originally reported in the ATIR. As a result of these findings, the HRA and corresponding ATIR were rejected on September 15, 2021. Pac Rancho later provided information about the heat treating operations and it was determined the heat treating occurs at a low enough temperature that process emissions would be negligible. Additionally, South Coast AQMD staff took samples from the quench tanks and results showed negligible levels of hexavalent chromium. Therefore, the revised ATIR would only make minor corrections to metal grinding emissions calculations. On October 15, 2021, Pac Rancho submitted the revised ATIR which ultimately revised some minor grinding calculations. South Coast AQMD Approved the revised ATIR on November 16, 2021.

Pac Rancho also elected to move forward with source testing the steel melting furnace and submitted a protocol on May 10, 2021. The protocol was approved on July 14, 2021, but due to technical issues during the scheduled test, the facility had to stop the test and submit a revised protocol.

The revised protocol was submitted on October 19, 2021, and was issued an amended approval from South Coast AQMD on November 2, 2021.

On November 15, 2021, Pac Rancho submitted the revised HRA. South Coast AQMD reviewed the submittal and provided comments on December 17, 2021. An updated HRA is now due on January 4, 2022, and source testing is scheduled to reconvene in January 2022.

A.34. 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, 2020.

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. South Coast AQMD staff found additional deficiencies in this revised ATIR, made various corrections and approved the ATIR as modified on May 26, 2021, and required Pacific Clay to prepare an HRA.

South Coast AQMD staff then identified additional areas requiring correction in the modified ATIR and had multiple discussions with Pacific Clay staff to resolve these additional discrepancies, which centered on PM emissions. Staff anticipates that the final modified ATIR will be provided to Pacific Clay in mid-2022 and will again require an HRA submittal based on this final ATIR.

A.35. 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 Notification 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.

The HRA results were also above the Action Risk Level in Rule 1402, and Wilmington Refinery was required to prepare an RRP, which was received on December 16, 2020. South Coast AQMD provided initial comments in January 2021 and held discussions with Phillips 66 to address various discrepancies found in the RRP model and asked for revisions. The most recent RRP revision was submitted on October 29, 2021. At the end of 2021, South Coast AQMD staff was working on finalizing approval of the RRP and the approval is anticipated in mid-2022.

A.36. 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. After review, staff requested revision and resubmission. Staff held several conference calls with R.J. Noble representatives to discuss deficiencies and R.J. Noble representatives also proposed conducting a source test to determine fugitive aggregate dust emissions. Staff received the source test protocol on January 18, 2021, and held another conference call on February 5, 2021, to discuss the sampling plan. The call resulted in changes to the proposed test to accommodate Emission Inventory Criteria Guidelines Appendix D requirements and the addition of hexavalent chromium to the test analysis. On May 14, 2021, R.J. Noble submitted a revised source testing protocol. R.J. Noble submitted a revised ATIR on August 4, 2021.

Source Test Engineering staff reviewed and conditionally approved the source test protocol on August 6, 2021. R.J. Noble disagreed with some of the conditions of the approval resulting in further discussions between South Coast AQMD staff and R.J. Noble representatives. As a result, an extension was granted to R.J. Noble for conducting the test until January 27, 2022. Staff anticipates the completion of the source test and the submittal of a revised ATIR incorporating the results of the approved source test report in 2022.

A.37. 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 6, 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. During review, staff found that an unapproved method for calculating speciated PM emissions was used. On November 13, 2020, staff informed RRM Gardena of the option to use San Diego County Air Pollution Control District emission factors for aggregate speciation in lieu of the sampling plan. RRM Gardena revised the 2016 emissions according to staff's comments but continued to seek staff approval on the sampling plan for future use. A revised sampling plan was submitted on December 21, 2021. Staff expects the sampling plan to be finalized and the revised ATIR incorporating the results of the sampling plan to be submitted in 2022.

A.38. 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 used in the aggregate processing operations at RRM. Staff's review of the Initial Information for the ATIR revealed that the facility was not using an allowable method for calculating speciated PM emissions. Staff informed RRM Redlands of the option to use San Diego County Air Pollution Control District emission factors for aggregate speciation on November 13, 2020. Staff contacted RRM Redlands several times regarding appropriate emission factor methodology and the items that should be in the sampling plan for incorporation into the ATIR. RRM Redlands submitted a revised sampling plan on December 21, 2021, and staff anticipates finalizing the plan in 2022.

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 with the required timeline but did submit the Initial Information for the ATIR on April 9, 2021. 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. Schlosser submitted the ATIR on June 25, 2021, which did not include the results of the baghouse source test. Staff is expecting the source test to be evaluated in 2022 and after approval of the source test, an ATIR revision will be required which will incorporate the source test results.

A.40. SFPP, L.P. (ID 800129) – Bloomington

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

On January 15, 2021, South Coast AQMD staff sent a letter requiring SFPP Bloomington to submit an ATIR or VRRP due to the facility having a priority score greater than 10 based on its 2019 annual emissions inventory. The primary air toxic contributing to the high priority score is benzene in the form of fugitive losses from their 44 product storage tanks. The facility elected to submit an ATIR.

SFPP Bloomington submitted their ATIR on June 14, 2021. At the end of 2021, the ATIR and supporting documents were under review. Staff anticipates that the review will be completed in mid-2022.

A.41. SFPP, L.P. (ID 800278) – Carson

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

On August 23, 2019, South Coast AQMD staff sent a letter requiring SFPP Carson 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 Carson submitted their first ATIR on February 28, 2020. Based on South Coast AQMD staff review and comments, SFPP Carson submitted revised ATIRs on May 26 and October 21, 2021. At the end of 2021, the latest revised ATIR and supporting documents were under review. Staff anticipates that the review will be completed in mid-2022.

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 includes 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. On 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. So Cal Gas provided a final implementation report on September 30, 2021, detailing all permit revisions and installation of the carbon adsorbers to satisfy the RRP measures. As a result, no additional annual reports will be required.

A.43. Sonoco Products Co (ID 14871) – City of Industry

Sonoco Products Co (Sonoco) is a papermill that is located in City of Industry. The facility operates boilers, a large mixer, and various mechanical processing systems to recycle cardboard and paper materials to manufacture cardboard products for industrial use.

On September 23, 2021, South Coast AQMD staff sent a letter requesting that Sonoco prepare an ATIR due to the facility having a priority score greater than 10 based on its 2020 annual emissions with sodium hydroxide as the main toxic air contaminant contributing to the high priority score.

Sonoco submitted the initial information for the ATIR on November 9, 2021, and proposed an update to the emission factor for the spray bar that was the main source of the reported sodium hydroxide. On December 8, 2021, South Coast AQMD staff visited Sonoco to evaluate the spray bar and the proposed emission factor. The facility previously reported that all sodium hydroxide was emitted to the atmosphere, and nothing was transferred onto the cardboard or recycled into the processing system. The proposed emission factor incorporated a transfer efficiency, which was conservative and was found acceptable by staff. As a result, the priority score was updated, and the revised 2020 priority score was less than 10. A letter informing the facility that the ATIR will no longer be required is scheduled to be sent in January 2022.

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.²³ The Tesoro Refinery will be comprised of approximately 930 acres with a processing capacity of approximately 380,000 barrels per day. In 2017, the Tesoro Corporation underwent a name change to Andeavor. 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

²³ http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/tesoro_feir.pdf

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 three 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 three source test protocols and additional documentation on the emissions inventory. Tesoro Refinery completed the three source tests on June 28, 2019, and submitted the final report on August 20, 2019. South Coast AQMD source testing staff reviewed and approved the last source test report on April 2, 2020. Based on the approval of the source tests, South Coast AQMD AB 2588 staff developed a representative emission profile to be used for the Carson boilers and heaters and provided it to Tesoro Refinery. On November 11, 2020, Tesoro Refinery provided facility emission calculations that included the representative emission profile. However, another part of this facility emission calculations included formaldehyde emissions for cogeneration turbines from unapproved source tests. The four source tests, one for each turbine, is under review.

On April 13, 2021, Tesoro Refinery notified South Coast AQMD staff that one of the Wilmington heaters (H-304) was subject to source testing for metals for permitting purposes and requested to use the results of this test for estimation of emissions of metals from heaters and boilers. They expressed concern that the default emission factors were overly conservative, and the testing would be completed quickly. South Coast AQMD staff agreed, and Heater H-304 was tested on May 21-26, 2021. South Coast AQMD source testing staff approved the Heater H-304 source test report on December 8, 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 in 2017, 2018, and 2019 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, which was conditionally approved by South Coast AQMD on July 17, 2020. Torrance Refining submitted a six-month progress report on January 19, 2021, evaluating the use of electrical alternatives to diesel powered equipment as required in their VRRP. Torrance Refining also submitted quarterly welding emission and diesel emission reports on April 30, July

7, and October 29, 2021, as required in the VRRP. Staff expects a 2021 fourth quarter and an annual report in March 2022.

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 from miscellaneous fugitive emissions and storage tank 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, several items were found to be missing, which included throughput data, emission factors, calculation basis, certain devices and device descriptions. Ultramar subsequently provided the missing information which staff found to be deficient. As a result, staff provided additional comments and held numerous conference calls with the facility and requested revision and resubmission of the VRRP. Ultramar provided information during 2017, 2018, 2019, and the final revised RRP was expected in 2020. In May of 2019, Ultramar was given notice that their VRRP would be rejected if the facility failed to submit their final revisions. Ultramar did submit a VRRP which staff did not approve. Ultramar submitted another revision on January 17, 2020; however, staff had concerns that the recordkeeping language was not enforceable and lacked specificity. Staff provided feedback to Ultramar and revisions were due by January 31, 2020. Ultramar did not submit the revision by the due date and therefore the VRRP was rejected on February 20, 2020.

In response to the rejection, Ultramar submitted revisions to the VRRP on March 19, 2020, April 16, 2020, and March 3, 2021. On September 17, 2021, staff conditionally approved the March 3, 2021, VRRP. Staff anticipates the submittal of the first progress report on September 17, 2022.

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 reviewed by South Coast AQMD staff and were approved on November 10, 2021. A full ATIR incorporating the source test results was due on January 4, 2022.

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.²⁴ In this chapter, trends in cancer risks based on monitoring data from both CARB and South Coast AQMD monitors are illustrated for sites in or near the South Coast Air Basin. Health risk levels for the most recent three-year period (i.e., 2018 to 2020) are also shown for the toxic air contaminants which are monitored. Diesel particulate matter (DPM) which contributes significantly to cancer risks in the Basin is not directly measured by CARB's and South Coast AQMD's monitoring networks. 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 toxic air contaminant 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 (Riverside). 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. In addition to the CARB monitors at Los Angeles and Riverside, South Coast AQMD also operates monitors at these sites.²⁵ 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. Table B-1 lists the toxic air contaminants that are monitored with the carcinogenic compounds identified with an asterisk.

²⁴ 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>

²⁵ 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.

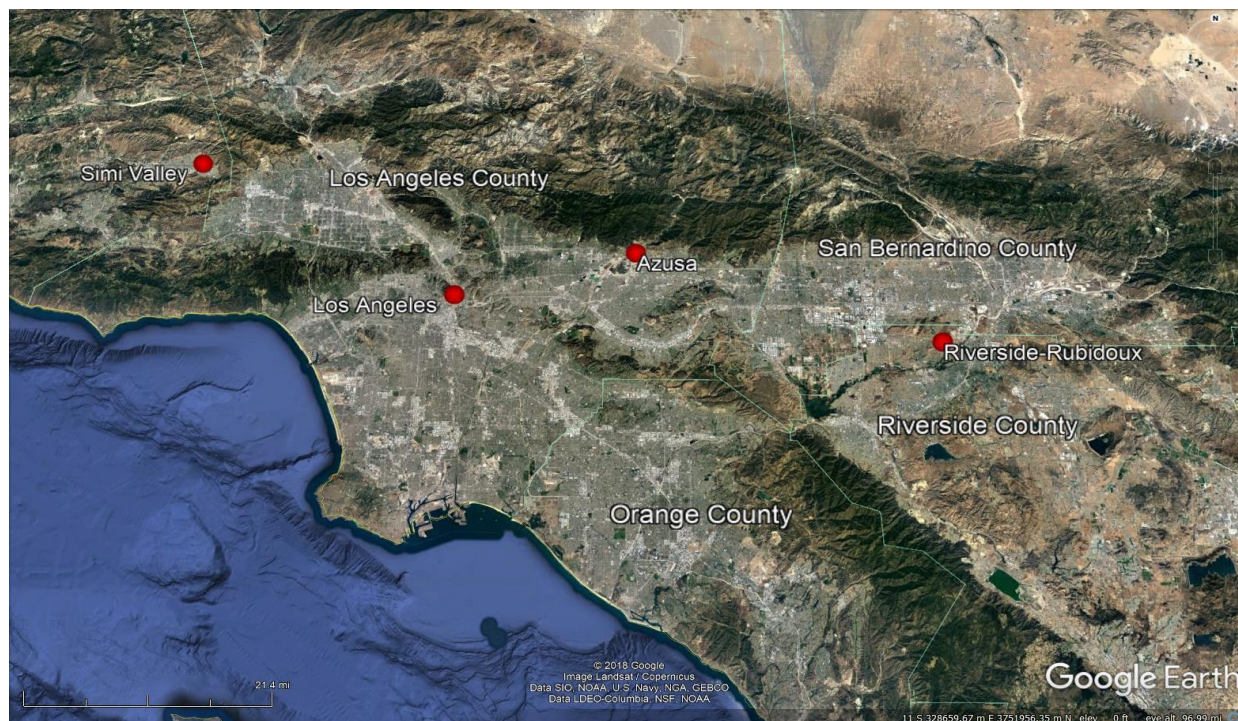


Figure B-1: CARB toxic monitoring sites in the South Coast Air Basin

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 cancer risk trends using the 2015 OEHHA Risk Assessment Guidelines.²⁶ The inhalation cancer risk shown is estimated based on a 30-year exposure. Inhalation cancer health

²⁶ 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 77, 82, and 80 percent at Riverside, Los Angeles, and Simi Valley, respectively.²⁷ Azusa station shows a decrease in cancer risk by 57 percent since 2000.

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.

Staff notes 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.

Due to the Covid-19 pandemic, CARB and South Coast AQMD ceased monitoring and laboratory analysis of toxic air contaminants in March of 2020. While South Coast AQMD restarted sampling efforts around June 2020, CARB did not start until 2021. As a result, the Azusa and Simi Valley graphs only contain data from January through March while the Los Angeles and Riverside-Rubidoux graphs have missing data approximately from March through June. Figure B-2 show slight increases in cancer risks at both Los Angeles and Riverside in 2020. It should be noted that for March, April, and May, data is largely missing for the monitored toxic air contaminants. This is significant due to larger than usual rain events occurring during these months in 2020 and the absence of data during these months could bias annual average concentrations higher. It should be noted that although there is a slight increase in cancer risk at the Los Angeles and Riverside stations in 2020, overall trends have continued downward as shown in Figure B-2.

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

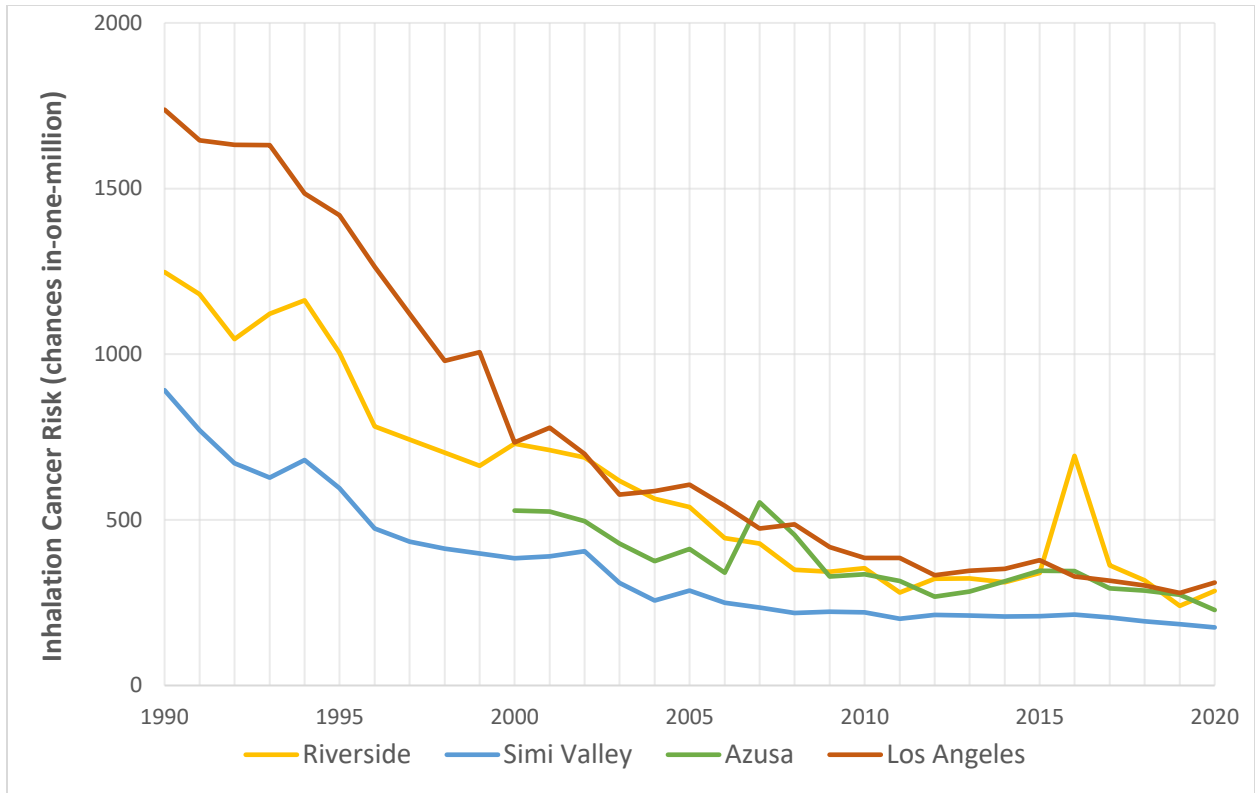


Figure B-2: Trends in Inhalation Cancer Risks in the Basin (1990-2020)

The reduction in cancer risk since 2000 at the Azusa station is primarily from reductions in ambient concentrations of benzene and 1,3-butadiene. Benzene accounts for approximately 34 percent of the cancer risk reduction and 1,3-butadiene accounts for 35 percent of the cancer risk reduction.

Despite a slight increase in cancer risks for two of the four stations in 2020, the overall trend of cancer risk reductions shown in Figure B-2 continue despite significant increases in population and vehicle activity. As shown in Table B-2, the population increased by 43 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 1990²⁸

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 toxic air contaminants at the four monitoring stations is illustrated in Figure B-3 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 (2018 to 2020). As shown in Figure B-3, methylene chloride has the largest range of cancer risks based on the three-year annual average concentrations across all four stations. This large range is driven by a lone outlier (79 chances-in-one million) from the Riverside station in 2018. The median cancer risk across all four stations over the three-year period is 2.8 chances-in-one million.

²⁸ Source: http://www.arb.ca.gov/app/emsinv/trends/ems_trends.php

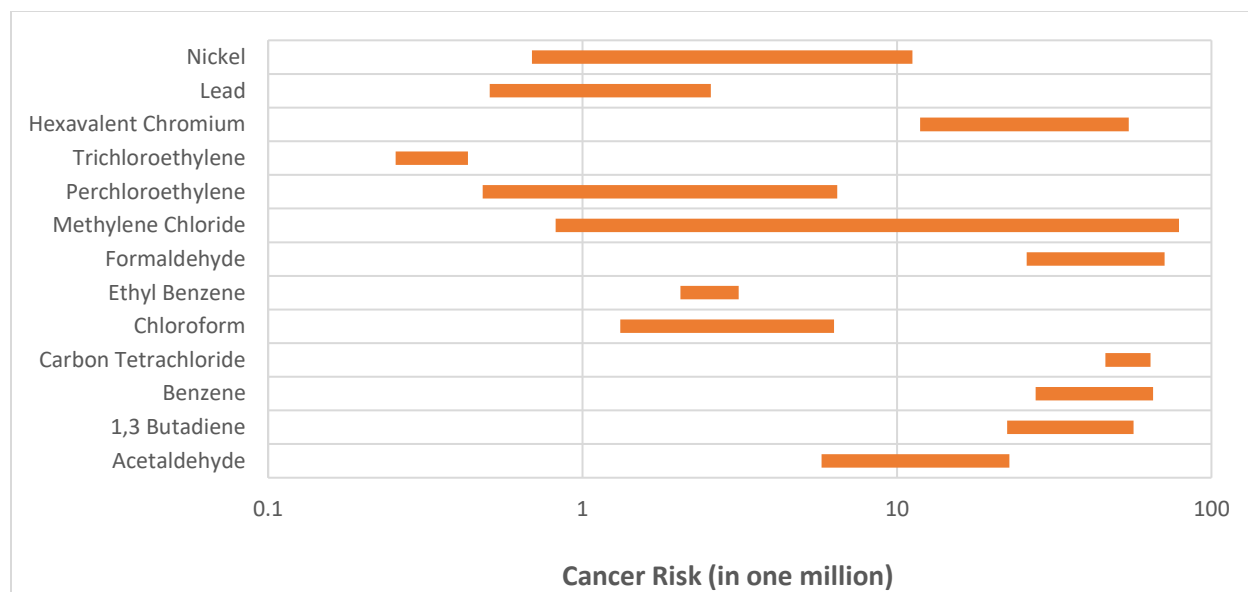


Figure B-3: Inhalation Cancer Risks in the Basin (2018 to 2020)

Benzene, 1,3-butadiene, formaldehyde, carbon tetrachloride, hexavalent chromium, methylene chloride, and acetaldehyde are the largest contributors to the inhalation cancer risks, contributing individually from approximately 0.8 to 79 chances in-one-million. As can be seen by the short bar in Figure B-3, there is little variability in cancer risks attributable to carbon tetrachloride within the Basin. Furthermore, statewide concentrations of carbon tetrachloride indicate that ambient concentrations observed in the Basin are not coming from a local source of emissions but rather represent background conditions. Perchloroethylene, ethyl benzene, chloroform, and nickel each contribute between approximately 0.5 and 11 chances in-one-million and trichloroethylene and lead contribute together 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 cancer risks observed in the Basin. The MATES V study attributed about 50 percent of the inhalation cancer risks to DPM based on emissions from 2016,²⁹ compared to 68 percent in MATES IV based on emissions in 2012.³⁰

The range of non-cancer chronic risks for the four sites analyzed here are shown in Figure B-4 for the most recently available three-year period (2018 to 2020). 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).

²⁹ See page 2-63 of the MATES V Report which is available at: <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf>

³⁰ See page ES-3 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>

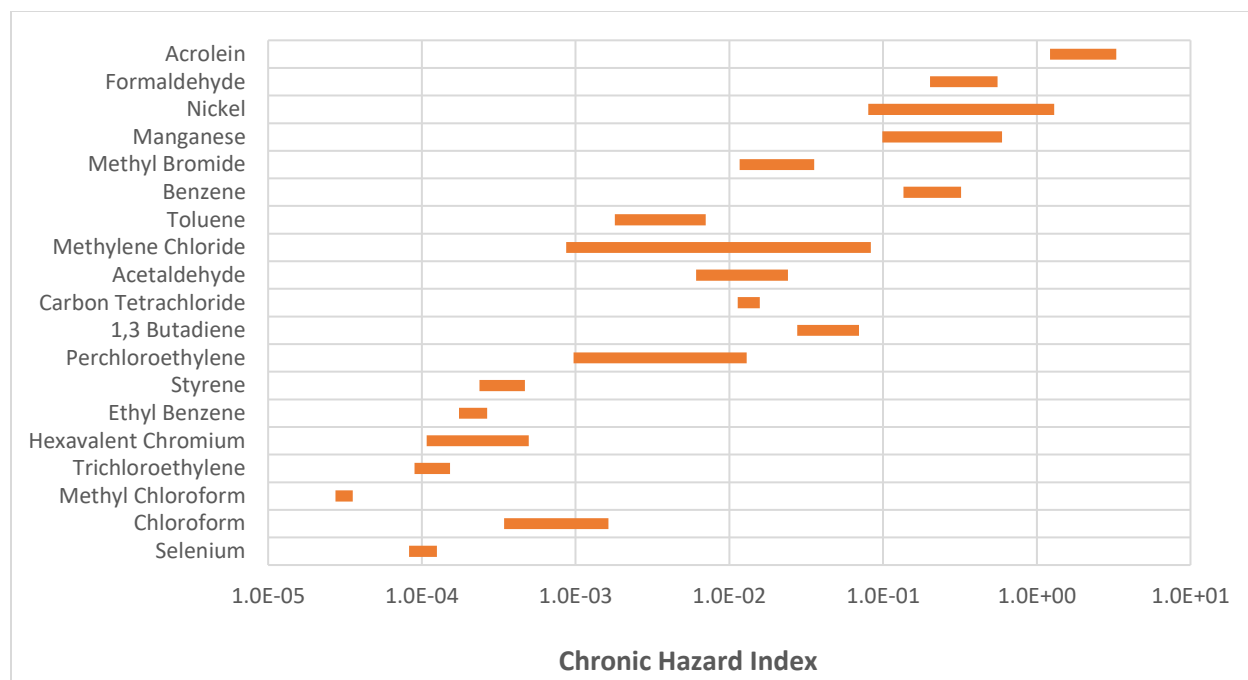


Figure B-4: Non-cancer Chronic Risks in the Basin (2018 to 2020)

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.³¹ 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. The upper range of nickel also exceeds an HI of one, however when analyzing the mean and median of the three-year annual averages across all four monitoring locations, both toxic air contaminants fall below an HI of one.

³¹ 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.

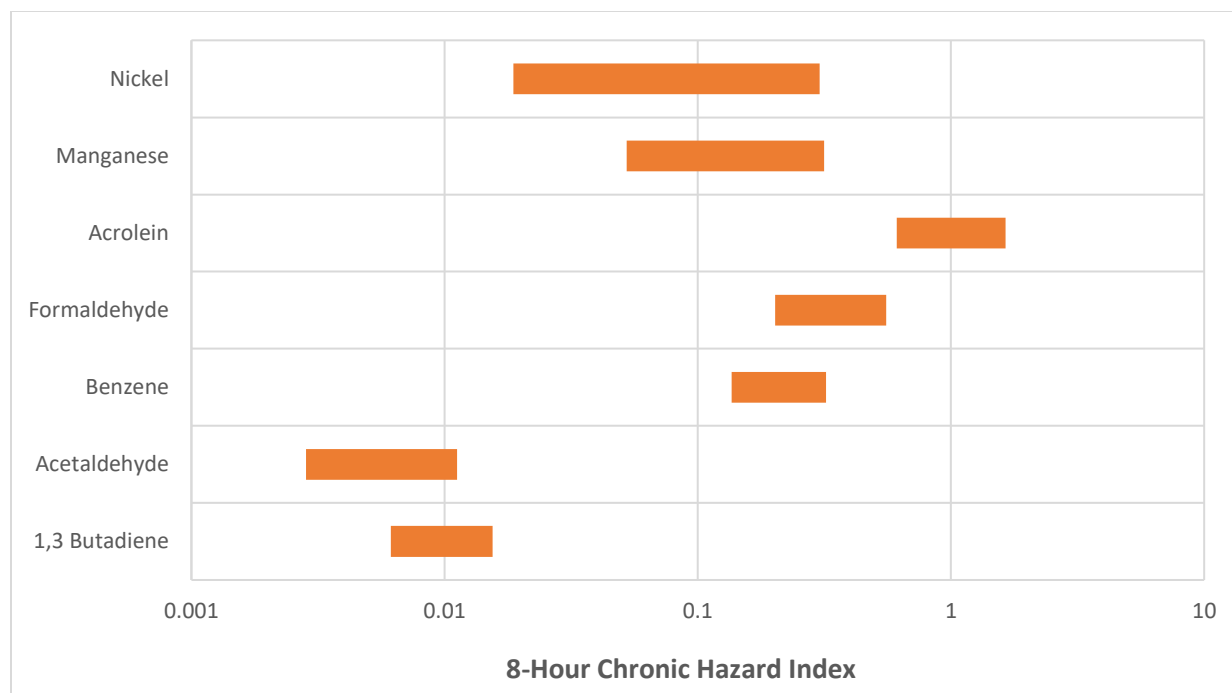


Figure B-5: Non-cancer 8-Hour Chronic Risks in the Basin (2018 to 2020)

The 2015 OEHHA Risk Assessment Guidelines includes a 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-5 for the most recently available three-year period (2018 to 2020).

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	HIXSON METAL FINISHING	NEWPORT BEACH	1502.0	1.09	0.20	0.10	2015
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	179.5	4.97	0.80	1.69	2019
41229	A	LUBECO INC	LONG BEACH	128.6	0.08	0.18	0.45	2019
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	KIRKHILL INC	BREA	18.8	0.07	0.06	0.11	2019
11142	A	KEYSOR-CENTURY CORP	SAUGUS	17.0	ND	0.50	0.10	2000
18989	A	BOWMAN PLATING CO INC	COMPTON	17.0	0.00	0.01	0.01	2015
22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
35302	A	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	14.0	0.02	0.10	0.10	2000
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
23907	A	JOHNS MANVILLE CORP	CORONA	13.0	ND	0.40	2.70	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12.0	ND	0.40	0.10	2000
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

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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

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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

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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

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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
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0.00	0.01	0.02	2021
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

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106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.20	0.20	2000
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
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

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48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0.00	0.40	1997
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.10	0.00	1999
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

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800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0.00	0.00	1997
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0.00	0.10	1996
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

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)
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0.00	0.00	1996
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.90	0.10	1998
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

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)
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.10	0.00	2000
24756	A	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0.00	0.10	1997
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

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)
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0.00	0.00	0.00	2010
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0.00	0.20	1996
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

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)
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0.0	ND	0.00	0.00	1999
6163	A	OHLINE	GARDENA	0.0	ND	0.30	0.70	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0.0	ND	0.00	0.60	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0.0	ND	0.00	0.00	1995
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

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)
124016	O	CHEMETALL U.S., INC.	LA MIRADA	0.0	ND	0.10	0.10	2000
124838	A	EXIDE TECHNOLOGIES	VERNON	0.0	ND	0.00	0.00	2013
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0.0	ND	0.20	0.70	1997
149241	A	REGAL CULTURED MARBLE	POMONA	0.0	ND	0.00	0.20	1995
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

Table C-2 (cont'd)
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)
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0.00	0.10	1999
5887	A	NEXGEN PHARMA INC	IRVINE	2.7	ND	0.00	0.00	1997
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

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10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0.00	0.00	2000
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	HIXSON 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

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18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0.00	0.70	0.00	2012
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.60	0.20	1998
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0.00	0.10	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12.0	ND	0.40	0.10	2000
18931	A	TAMCO	RANCHO CUCAMONGA	52.7	3.08	3.04	3.19	2015
18989	A	BOWMAN PLATING CO INC	COMPTON	17.0	0.00	0.01	0.01	2015
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0.00	0.00	2001
19953	A	RISTON KELLER INC	IRVINE	0.0	ND	0.00	0.00	1996
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0.00	0.00	1999
20144	A	CANON BUSINESS MACHINES INC	COSTA MESA	0.0	ND	0.00	0.10	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.70	0.40	2007
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0.00	0.90	0.30	2011
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1.0	ND	0.00	0.10	1997
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0.00	0.00	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.20	0.10	1998
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0.00	0.00	2003
22092	A	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0.0	ND	0.00	0.60	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0.0	ND	0.00	0.00	2002
22373	A	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0.00	0.00	1996
22410	O	PALACE PLATING	LOS ANGELES	5.6	ND	0.73	0.38	2004
22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.70	0.20	2000
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.20	0.10	1996
22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0.00	0.10	2001
23752	A	AEROCRAFT HEAT TREATING CO INC	PARAMOUNT	1900.0	11.00	2.90	0.15	2018
23907	A	JOHNS MANVILLE CORP	CORONA	13.0	ND	0.40	2.70	1999
24060	A	AQUATIC COMPANY	ANAHEIM	0.7	ND	0.00	0.00	1996

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

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

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101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0.00	0.10	2000
101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.60	1.00	1998
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.60	0.00	2004
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.20	0.00	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1.00	0.50	2001
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0.00	0.10	2000
106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.20	0.20	2000
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.10	0.10	2007
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0.00	0.00	2001
108701	A	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.10	0.10	2000
109198	A	TORCH OPERATING COMPANY	BREA	5.0	ND	0.00	0.00	2001
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0.00	0.10	1996
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0.00	0.00	1997
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.20	0.00	1997
113676	A	VICKERS	LOS ANGELES	3.0	ND	0.00	0.00	1995
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

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122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21.0	ND	0.10	0.40	2000
124016	O	CHEMETALL U.S., INC,	LA MIRADA	0.0	ND	0.10	0.10	2000
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.50	0.10	1995
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0.00	0.00	2000
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1.0	ND	0.00	0.00	1999
124838	A	EXIDE TECHNOLOGIES	VERNON	0.0	ND	0.00	0.00	2013
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.10	0.00	1995
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0.00	0.00	0.00	2007
126191	A	STERIGENICS US, INC.	LOS ANGELES	3.3	ND	0.00	0.00	1996
126197	A	STERIGENICS US, INC.	LOS ANGELES	3.6	ND	0.00	0.00	1996
126536	A	CPP - POMONA	POMONA	1.5	ND	0.00	0.00	1999
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.60	0.10	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0.00	0.00	1995
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.10	0.50	2000
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0.0	ND	0.20	0.70	1997
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0.00	0.40	0.30	2017
133405	A	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0.00	0.20	1999
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.80	0.40	1998
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.60	0.20	2000
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.90	0.02	1997
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.60	0.00	2008
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.30	0.60	1998
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0.00	0.00	2002
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6.0	ND	0.00	0.50	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2.0	ND	0.10	0.20	2001
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0.00	0.01	0.02	2021
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.10	0.20	1999

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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
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

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 (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)
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
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	KIRK HILL 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

Table C-2 (cont'd)
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)
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
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

Table C-2 (cont'd)
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)
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0.00	0.20	1998
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0.0	ND	0.00	0.00	1997
800109	A	REYNOLDS METALS CO	TORRANCE	0.0	ND	0.20	0.90	2001
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0.00	0.10	1996
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

Table C-2 (cont'd)
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)
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0.0	ND	0.00	0.00	2000
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0.00	0.10	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0.00	0.20	1999
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0.00	0.10	1996
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	Yes	9.0	0.02	0.46	0.00
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	Yes	Yes	3.4	TBD	2.89	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 (c)	Yes	Yes	(See Note)	0.0	0.00	0.00	0.00
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	Yes	Yes	1.0	0.00	0.00	0.00

Notes:

(a) Facility has shut down, resulting risks are zero.

- (b) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated.
- (c) Facility shut down prior to implementation of RRP.
- (d) 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
800026	A	ULTRAMAR INC	2402 E ANAHEIM ST	WILMINGTON	2021
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
CEQA	California Environmental Quality Act
DPM	Diesel Particulate Matter
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
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
TS	Total Facility Score
U.S. EPA	United States Environmental Protection Agency
VRRP	Voluntary Risk Reduction Plan