

BOARD MEETING DATE: April 7, 2023

AGENDA NO. 27

PROPOSAL: Receive and File 2022 Annual Report on AB 2588 Program

SYNOPSIS: The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) requires local air pollution control districts to prepare an annual report and present it at a public hearing. This report provides information regarding South Coast AQMD’s implementation of AB 2588 through Rule 1402. This annual update describes the various activities including quadrennial emissions reporting and prioritization, preparation and review of Air Toxics Inventory Reports, HRAs, Voluntary Risk Reduction Plans, Risk Reduction Plans, and additional South Coast AQMD activities related to air toxics.

COMMITTEE: Stationary Source, March 17, 2023, Reviewed

RECOMMENDED ACTIONS:  
Receive and File.

Wayne Natri  
Executive Officer

SR:IM:EK:VM

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### **Introduction**

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

The AB 2588 Program as implemented under Rule 1402 is only one part of South Coast AQMD’s comprehensive program in regulating air toxics. Other elements include South

Coast AQMD's permitting program and Rule 1401 – New Source Review of Toxic Air Contaminants requirements, rules adopted to address air toxic emissions from certain equipment and processes, enforcement efforts to ensure facilities comply with all applicable air quality requirements, and the MATES which measures the amount of regional toxic air contaminants and their risks throughout the air basin. South Coast AQMD has also performed ambient air monitoring in many neighborhoods. This monitoring has helped to identify facilities with elevated health risks, which have then been required to implement risk reduction measures under Rule 1402. Additional reductions have occurred through voluntary measures, enforcement actions, Orders for Abatement, and rule development.

As required under the California Health and Safety Code Section 44363, staff has prepared the 2022 Annual Report on the AB 2588 Program (2022 Annual Report) which summarizes South Coast AQMD's air toxics program activities in 2022, including AB 2588 activities and other air toxic related programs as explained below. The 2022 Annual Report will be available on South Coast AQMD's website and distributed to county boards of supervisors, city councils, and local health officers.

### **Background**

The AB 2588 Program, combined with implementation of Rule 1402, includes requirements for toxic emissions inventories, categorization and prioritization of facilities, and review and approval of detailed Air Toxic Inventory Reports (ATIRs), HRAs, public notifications, Voluntary Risk Reduction Plans (VRRPs) and Risk Reduction Plans (RRPs). From the beginning of the AB 2588 Program in 1987 through the end of 2022, staff has reviewed and approved 358 HRAs from 343 facilities. Of these, 63 facilities were required to perform public notification activities and 31 facilities were required to implement risk reduction measures.

Rule 1402 includes provisions to designate a facility as a Potentially High Risk Level (PHRL) facility if South Coast AQMD staff has emissions data demonstrating the facility may pose a significant health risk to the community. PHRL facilities must implement Early Action Reduction Plans to immediately reduce the health risk and submit ATIRs, HRAs and RRP's under expedited timelines. Prior to 2022, three facilities in Paramount (Anaplex Corporation, Aerocraft, Inc. and Lubeco, Inc.) and one facility in Garden Grove (Coastline High Performance Coatings) have been designated as PHRL facilities under Rule 1402. Two additional facilities, one facility in Vernon (Sterigenics) and another facility in Ontario (Sterigenics), were designated as PHRL facilities in 2022.

### **2022 Accomplishments**

The 2022 Annual Report summarizes staff activities in 2022 for the AB 2588 Program, implementation of Rule 1402, air toxic monitoring performed in conjunction with the AB 2588 Program and Rule 1402, analysis of toxic program impacts from the addition of new or revised health risk values for air toxics, and future activities.

**Summary of Activities for Specific AB 2588 Program Facilities**

Of the 456 facilities in South Coast AQMD’s core AB 2588 Program (larger facilities), 171 facilities were required to submit quadrennial air toxic emissions reports in 2022 for reporting year 2021. Staff initiated audit activities for 111 facilities with 18 of those facilities resulting with priority scores greater than 10. Additionally, the facilities listed in Table 1 below were subject to AB 2588 review. These include facilities that were notified in prior calendar years and are in various stages of review in 2022. Staff reviewed two Initial Information submittals for ATIRs, 13 ATIRs (9 of those leading to revised priority scores), 7 HRAs, three Early Action Reduction Plans, one RRP, four VRRPs, and three VRRP progress reports. The attached Annual Report provides detailed information regarding the AB 2588 Program activities at each facility.

**Table 1 – AB 2588 Program Facilities in 2022**

Facility Name (Facility ID)	
A&A Ready-Mixed Concrete, Inc. (ID 21665)	Los Angeles By-Products (ID 60384)
A&A Ready-Mixed Concrete, Inc. (ID 38429)	Northrop Grumman Systems Corporation (ID 800409)
Aerocraft Heat Treating Co, Inc (ID 23752)	Pac Rancho, Inc. (ID 140871)
All American Asphalt (ID 114264)	Pacific Clay Products, Inc (ID 17953)
All American Asphalt (ID 148146)	Phillips 66 Co/La Refinery Wilmington Pl (ID 171107)
All American Asphalt, All Amer Aggregates (ID 82207)	Phillips 66 Company/Los Angeles Refinery (ID 171109)
Altair Paramount, LLC (ID 187165)	R J. Noble Company (ID 19167)
Arconic Global Fasteners & Rings, Inc (ID 134943)	Robertson's Ready Mix (ID 134112)
Bowman Plating Co, Inc (ID 18989)	Robertson's Ready Mix (ID 42623)
Carpenter Co (ID 7730)	Schlosser Forge Company (ID 15504)
Demunno-Kerdoon dba World Oil Recycling (ID 800037)	SFPP, L.P. (ID 800129)
Eco Services Operations Corp. (ID 180908)	SFPP, L.P., Unit No.01 (ID 800278)
Elite Comfort Solutions (ID 182610)	Snow Summit, LLC. (ID 185352)
Embee Processing (ID 186519)	Sonoco Products Co (ID 14871)
Flare Group dba Aviation Equip Process (ID 164581)	Sterigenics US, Inc. (ID 126191)
Hixson Metal Finishing (ID 11818)	Sterigenics US, LLC (ID 126060)
Holliday Trucking, Inc (ID 12036)	Tesoro Refining and Marketing Co, LLC (IDs 800436, 174655, 174694, 174703)
Honeywell International, Inc (ID 800003)	Ultramar, Inc (ID 800026)
Light Metals, Inc (ID 83102)	Vista Metals Corporation (ID 14495)
Long Beach City, SERRF Project (ID 44577)	

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

OEHHA develops guidelines for conducting HRAs under the AB 2588 Program. In implementing this requirement, OEHHA develops new, revised, or proposed risk factors for many toxic air pollutants. OEHHA adopted a new cancer potency factor for 1-bromopropane and chronic and acute relative exposure levels for trivalent chromium

in 2022. Both pollutants previously had no published risk factors from OEHHA. Compounds containing 1-bromopropane are used as a specialized solvent, as well as an alternative for dry cleaning machines. Major uses of trivalent chromium are leather tanning and chrome plating operations. Facilities required to submit inventory reports under Rule 1402 will be required to report trivalent chromium and 1-bromopropane beginning with inventory year 2023. Staff continues to monitor OEHHA's progress in adopting new health values as well as tracking other progress in revising health values for new or existing substances that are listed in Appendix A of the Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program (EICG). Staff also continues to closely monitor OEHHA's progress in reevaluating health risk from oxide. Further, permitting impacts will be evaluated in an amendment to Rule 1401 – New Source Review of Toxic Air Contaminants.

### **Air Toxics Screening Assessment (AirToxScreen)**

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

The transition involved a "catch-up" review process of emissions from a three-year period from 2017-2019. As part of this process, South Coast AQMD staff coordinates with U.S. EPA and CARB staff to ensure that AirToxScreen incorporates the best available local emissions data. Data related to facilities within South Coast AQMD jurisdiction for calendar year 2017 was reviewed and corrected by staff in 2021. The 2017 AirToxScreen was finalized and made publicly available in March 2022. Staff continued review of corrections for both 2018 and 2019 data in calendar year 2022. The results of the 2018 AirToxScreen were made final and publicly available in August 2022. The 2019 AirToxScreen was made publicly available in December 2022.

Since emissions review for the three-year period from 2017-2019 is complete, moving forward, staff anticipates a standardized annual review of data for AirToxScreen. Point source emissions data for calendar year 2020 began in 2022 and will continue through the following year.

### **Ethylene Oxide (NESHAP Rulemaking)**

During the 2014 NATA review period, U.S. EPA announced a change in the 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 NESHAPs: Ethylene Oxide Commercial Sterilizers and Miscellaneous Organic Chemical Manufacturing.

In January 2021, U.S. EPA requested South Coast AQMD's 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 AQMD initiated an investigation to assess fugitive releases of ethylene oxide at commercial sterilizers within its jurisdiction and conducted ambient monitoring of ethylene oxide concentrations near three commercial sterilization facilities in Vernon, Ontario, and Carson in 2022. Monitoring results showed highly elevated levels of ethylene oxide at offsite worker locations near these commercial sterilization facilities due to fugitive emissions from these facilities that were previously unknown. Elevated concentrations led to the designation of the Vernon and Ontario facilities and pre-designation of the Carson facility as PHRL facilities under Rule 1402 that are required to take immediate steps to reduce health risks. South Coast AQMD also initiated rulemaking activity for Proposed Amended Rule (PAR) 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions From Sterilization or Fumigation Processes to strengthen requirements and controls to address fugitive emissions. Three working group meetings for PAR 1405 were held in 2022.

### **Future Activities**

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

- Update toxic air contaminants in the Facility Prioritization Procedures for the AB 2588 Program;
- Update policies and clarifications in AB 2588 and Rule 1402 Supplemental Guidelines
- Update South Coast AQMD Public Notification Procedures for Facilities under AB 2588 and Rule 1402 to address alternative notifications;
- Work with CARB to develop guidance and outreach material for implementation of the CARB’s EICG regulation. 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 regulation and South Coast AQMD’s AER program;
- 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’s proposed rulemaking for two NESHAPs for Ethylene Oxide Commercial Sterilizers and Miscellaneous Organic Chemical Manufacturing;
- Track U.S. EPA’s change in the inhalation unit risk estimate for evaluation of potential cancer risk from ethylene oxide and its impact on industrial sources within the Basin;
- Continue tracking the development of the health risk value adoption and revisions by OEHHA, including potential revision to cancer risk from ethylene oxide;
- Continue ambient air monitoring near large sterilization facilities; and
- Rule development activities for 1401, 1401.1, 1405, 1435, 1445, and 1455.

### **Attachments**

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

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



**2022**

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



APRIL 2023

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



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

**April 2023**

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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 (MATES), a study measuring the amount of regional toxic air contaminants and their risks throughout the air basin. Additionally, within the past nine 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 2022:

<b>AB 2588 and Rule 1402 Implementation Activities</b>	Prioritized 171 facilities based on their quadrennial toxic emission inventory updates
	Initiated 111 audits based on prioritization scores
	Reviewed 13 ATIRs, 7 HRAs, 3 EARPs, 1 RRP, and 4 VRRPs, and 4 revised priority scores from 36 facilities
	Conducted one public notification meeting
	Designated two facilities as Potentially High Risk Level Facilities
<b>Streamlining and Program Improvement Activities</b>	Provided support to rulemaking and AB 617 staff



# 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).<sup>1</sup> Under the AB 2588 Program, larger facilities (core facilities) are subject to individual reporting requirements while facilities that are generally small businesses are grouped into industrywide source categories, which are described later in this chapter. CARB 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.<sup>2</sup>

The CAPCOA Prioritization Guidelines<sup>3</sup> 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.

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<sup>1</sup> *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>

<sup>2</sup> *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>

<sup>3</sup> 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 represents TS greater than 10, intermediate priority for less than or equal to 10 but greater than one, and low priority for TS less than or equal to one. Once a facility is designated as high 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*<sup>4</sup> (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 EICG.

#### *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.

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

### ***Dose Response***

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

### ***Risk Characterization***

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

### **Public Notification**

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

### **Risk Reduction Plans**

In 1992, the California legislature added a risk reduction component, the Facility Air Toxic Contaminant Risk Audit and Reduction Plan (SB 1731), which required each air district to specify 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 industrywide source (IWS) categories. Facilities falling into this category are generally small businesses where individual compliance would impose economic hardship. The advantage to IWS categories is that compliance may be handled collectively for each category rather than each individual facility. For each IWS category, a district may prepare an industrywide emission inventory and HRA. The California Air Pollution Control Officers Association (CAPCOA), in cooperation with OEHHA and CARB develop IWS risk assessment guidelines.<sup>5</sup> 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.

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<sup>5</sup> 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 EICG regulation was previously approved by the Office of Administrative Law on August 27, 2007. CARB proposed amendments to the EICG on September 29, 2020 which includes an expanded chemical list required to be reported based on a phased-in schedule and strengthened source testing requirements. South Coast AQMD falls under District Group A which requires expanded reporting starting with the 2022 inventory year. Additional chemicals are required to be reported starting with inventory year 2026. CARB staff was directed to consider additional modifications to the regulation based on public comments received. This included revising criteria pollutant thresholds and adjusting the phase in schedule. CARB also proposed to establish a Sector Phase 3B including wastewater, landfills, composters, and metal recyclers. This group will not be required to report the expanded chemical list until inventory year 2028. CARB staff incorporated these revisions through a 15-day public process. The final 2022 EICG rulemaking package was approved by the Office of Administrative Law and filed with the Secretary of State on March 21, 2022. The revised EICG effective date 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 2022.

## 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 between MATES III and MATES IV, and another 40 percent reduction between MATES IV and MATES V.<sup>6</sup> While these reductions have been primarily attributable to reductions in diesel particulate matter, there have also been 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. Figures 2-1 and 2-2 below demonstrate the reductions in cancer and non-cancer risks that have been achieved despite the substantial number of facilities located within our district. These reductions have taken place even with increases between 30%-40% to human and vehicle populations, vehicle miles traveled, and fuel consumption within the South Coast Air Basin.<sup>7</sup> To ensure consistent representation of health risk estimates over time, MATES V study applies the most current methodologies outlined in the 2015 OEHHA Guidance Manual for estimating health risks from prior MATES models. Additional information about the health studies can be found online at <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v>.

### Residential Air Toxics Cancer Risk (Monitoring Data)



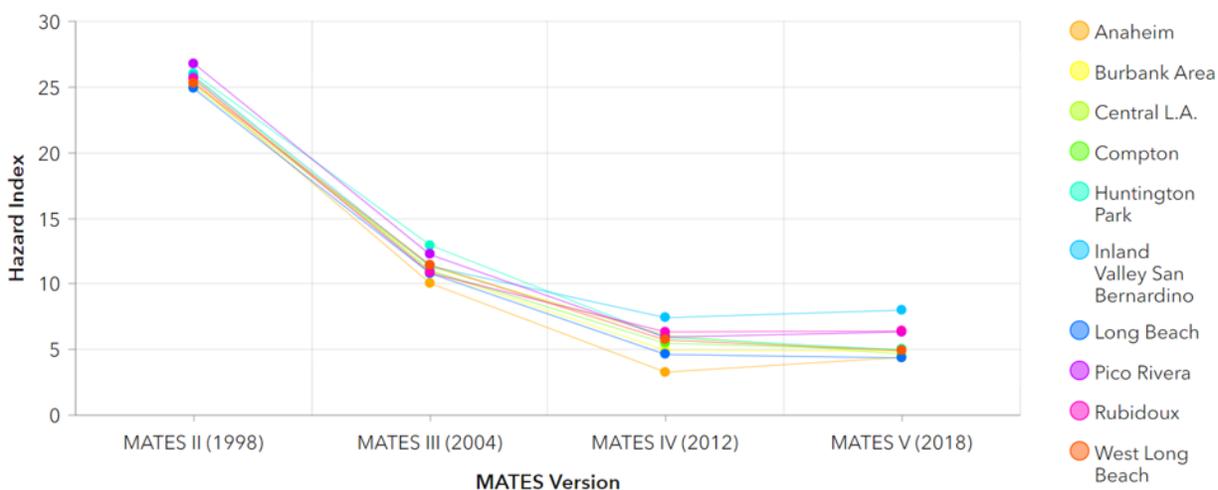
**Figure 2-1: Trends in Residential Cancer Risks<sup>8</sup> in the Basin (1998-2018)**

<sup>6</sup> 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](https://www.aqmd.gov/docs/default-source/default-document-library/mates-v-admin-comm-presentation-060917final_jg.pdf)

<sup>7</sup> [https://www.arb.ca.gov/app/emsinv/trends/ems\\_trends\\_results.php](https://www.arb.ca.gov/app/emsinv/trends/ems_trends_results.php)

<sup>8</sup> Calculated with 2015 OEHHA Risk Assessment Guidelines.

## Non-Cancer Residential Chronic Hazard Index (Monitoring Data)



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

South Coast AQMD *Rule 1402 – Control of Toxic Air Contaminants from Existing Sources* implements various aspects of AB 2588 and SB 1731 including public notification and risk reduction requirements for facilities. Rule 1402 adopts health risk thresholds and implementation schedules that are more stringent than those specified in AB 2588 and SB 1731. Rule 1402 was amended in October 2016. This amendment included a new provision beyond what is required under state law. 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), HRA reports, and for reducing risk. Both the Voluntary Risk Reduction Program and the Potential High Risk Level category result in facilities evaluating and reducing their associated air toxics risks faster than would occur under the state AB 2588 program alone.

### Program Implementation Elements

Under South Coast AQMD's AB 2588 Program, core facilities are categorized into four groups, or phases. Phases are assigned to discrete reporting years with each phase reporting once every four years. Currently, there are over 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. The AER Program was modified to implement CARB's Criteria and Toxics Reporting (CTR) regulation reporting requirements. The CTR regulation identifies several hundred toxic air contaminants, which are also included in the

revised 2022 EICG. For 2022, CTR requires reporting for Sector Phase 1 facilities, which consist of 16 sectors identifying several permitted processes. Consequently, many AB 2588 facilities are also subject to CTR. There are four reporting phases in AB 2588, with each core facility required to submit a more detailed inventory by reporting detailed toxic air contaminants during the quadrennial reporting year. This detailed inventory serves as a foundation for an ATIR, if required.

In 2022, 171 facilities were required to report their quadrennial toxic emission inventory updates. Based on emissions inventory submittals, South Coast AQMD staff calculated priority scores for these facilities.

- **Prioritization** – South Coast AQMD uses a refined method for prioritizing facilities based on CAPCOA Guidelines. The current South Coast AQMD Procedure incorporates 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. Facilities are categorized as High, Intermediate, and Low Priority based on the priority scores. Facilities that were prioritized in 2022 are listed in Table A-1 of Appendix A.
- **Health Risk Assessment** – High priority facilities (those with priority scores greater than ten), including those that qualify for the Voluntary Risk Reduction Program, are required to prepare an ATIR, a complete and detailed inventory of approximately 900 toxic air contaminants, along with detailed information about the processes and release points using the Emissions Inventory Module from the latest CARB Hotspots Analysis and Reporting Program (HARP). For facilities 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)*.<sup>9</sup> 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).<sup>10</sup> 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.

<sup>9</sup> *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.

<sup>10</sup> [http://www.aqmd.gov/docs/default-source/planning/risk-assessment/pn\\_procedures.pdf](http://www.aqmd.gov/docs/default-source/planning/risk-assessment/pn_procedures.pdf)

- 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.<sup>11</sup> 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.

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

Facility Categories	Number of Facilities
Aerospace	40
Airports	2
Amusement Parks	2
Building / Construction / Mineral Products	47
Bulk Plants	17
Chemical Plants	11
Dairy / Poultry Farms	6
Electricity Generation	31
Electronic	5
Entertainment	6
Fermentation and Brewing (Breweries/Distilleries/Wineries)	1
Food flavoring manufacturing	1
Furniture / Household Products	3
Glass Production	1
Harbors	1
Hospitals and Health-Related	29
Hydrogen Production	3

<sup>11</sup> 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.

<b>Facility Categories</b>	<b>Number of Facilities</b>
Iron and Steel Production	6
Landfill - Industrial Waste	1
Landfill - Municipal Solid Waste	20
Metal and Alloys Products	28
Military Base	3
Office Buildings	1
Other Agricultural Processing	2
Other Food Processing Facility	1
Other Utilities	7
Other Waste Disposal	2
Petroleum Refinery	11
Pharmaceuticals	5
Plastic Manufacturing	7
Pulp and Paper Manufacturing	5
Schools and Educational Institutions	17
Terminal Depots	15
Wastewater Treatment - Municipal	20
Water Supply	9
Oil & Gas Production	33
Other Industrial / Manufacturing	41
Other Service / Commercial	4
Other Institutional / Commercial	12

**Table 2-2: Rule 1402 Risk Reduction Categories**

<b>Rule 1402 Levels</b>	<b>Thresholds</b>	<b>Requirements</b>	<b>RRP Implementation Timeline</b>
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)

Rule 1402 Levels	Thresholds	Requirements	RRP Implementation Timeline
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 2-3 shows the process used by South Coast AQMD to implement AB 2588 under Rule 1402.

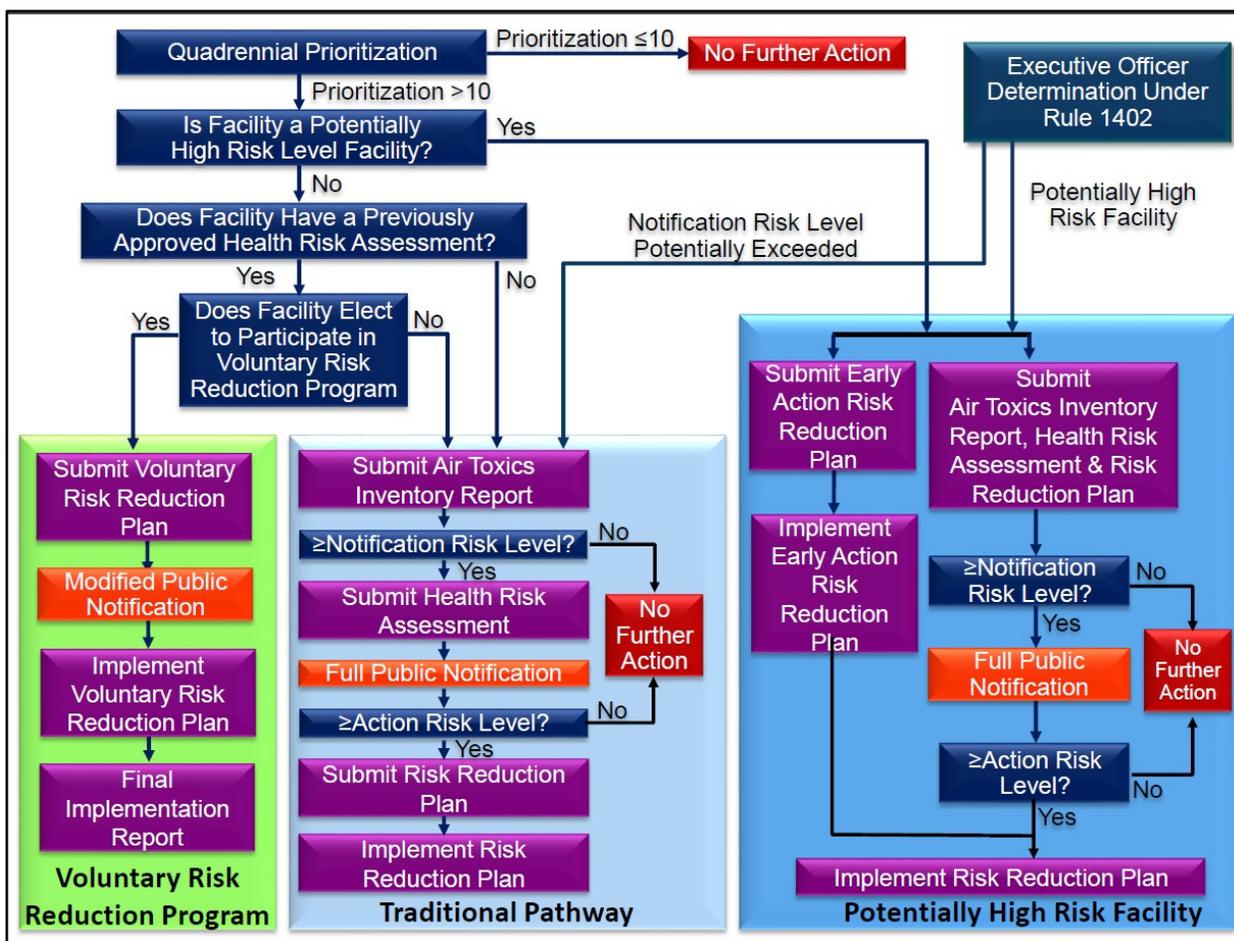
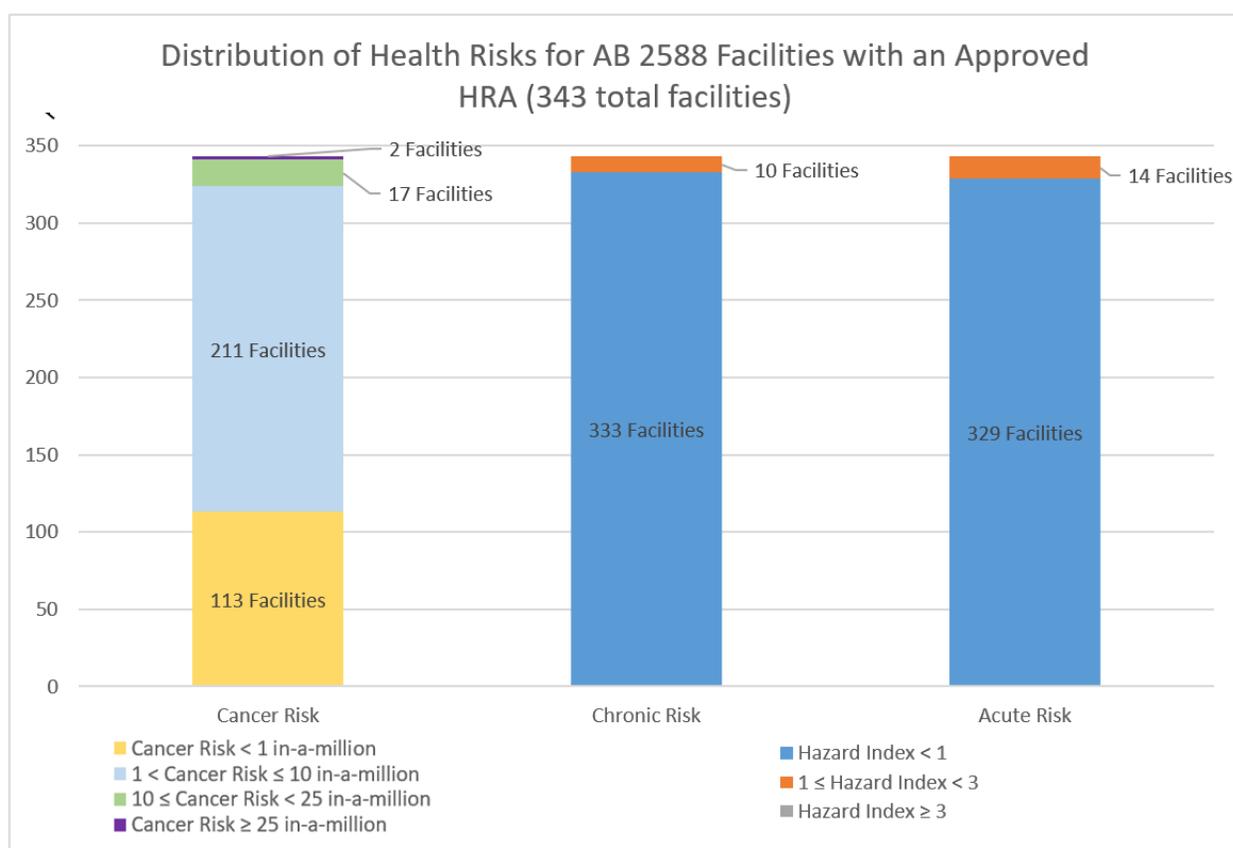


Figure 2-3: Overview of the AB 2588 Program

**Progress in Implementing the AB 2588 Program**

From the beginning of the AB 2588 Program in 1987 through the end of 2022, staff has reviewed and approved 358 HRAs from 343 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 343 facilities, 31 were required to implement risk reduction measures, 63 were required to perform public notification activities, while the remaining facilities were below the public notification threshold. As a result of the

AB 2588 Program, about 95 percent of facilities that have been in the Program historically have HRAs demonstrating cancer risks below ten chances in-one-million and a hazard index (HI) of less than 1.0 for both non-cancer acute and non-cancer chronic, or their emissions have been low enough to not require an HRA. The summary of risks from approved HRAs illustrated in Figure 2-4 is based on the information in Appendix B, which lists the core facilities and the health risks from their approved HRAs. Table B-1 in Appendix B lists the facilities in order of their cancer risks and Table B-2 in Appendix B lists the same facilities ordered by facility ID. Table C-1 in Appendix C lists facilities 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 C-2 in Appendix C lists facilities which have successfully participated in the Voluntary Risk Reduction Program. Appendix D contains a list of acronyms and abbreviations used in this report.



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

**Summary of South Coast AQMD Staff Activities for AB 2588 Facilities in 2022**

In 2022, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on 111 facilities with 18 facilities with priority scores greater than 10. Key activities conducted include review of two Initial Information for ATIRs, 13 ATIRs, with 9 of those leading to revised priority scores, 7 HRAs, three EARPs, one RRP, four Voluntary Risk Reduction Plans (VRRPs), and three 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 30 documents were reviewed in 2022 from 36 facilities, with some facilities having multiple documents submitted for South Coast AQMD staff review.

### **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 to include areas of West Rancho Dominguez.

In March 2022, South Coast AQMD staff began investigating facilities that emit Ethylene Oxide (EtO) following the U.S. EPA reconsideration of the potential toxicity of EtO. U.S. EPA has also been collecting information about emissions from commercial EtO sterilizing facilities throughout the country. Part of the actions taken by South Coast AQMD include air monitoring efforts at facilities and near the surrounding communities that emit EtO starting with special air monitoring efforts in the cities of Vernon, Ontario, and Carson.

### **Paramount**

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.

### ***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.<sup>12</sup> If facilities are identified with high levels of toxic emissions, South Coast AQMD may seek Orders for Abatement from the independent South Coast AQMD Hearing Board to require these facilities to quickly reduce their emissions to a level that does not pose an immediate threat to public health. South Coast AQMD may also designate facilities as Potentially High Risk Level Facilities under Rule 1402.

The goal of this initiative is to eliminate or minimize the release of hexavalent chromium into the environment associated with metal-processing facilities. This program is expected to be a seven-year, labor-intensive effort with the air monitoring portion costing approximately \$6 million to \$7

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

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 at all other sites, monitoring only occurred at Sites 2, 6, 11, and 14 in 2022. South Coast concluded its investigation and ended its special air monitoring efforts in June 2022.



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

More information is online at:

<http://www.aqmd.gov/home/news-events/community-investigations/west-rancho-dominguez-emissions-investigations>

### ***Ethylene Oxide (EtO) Monitoring***

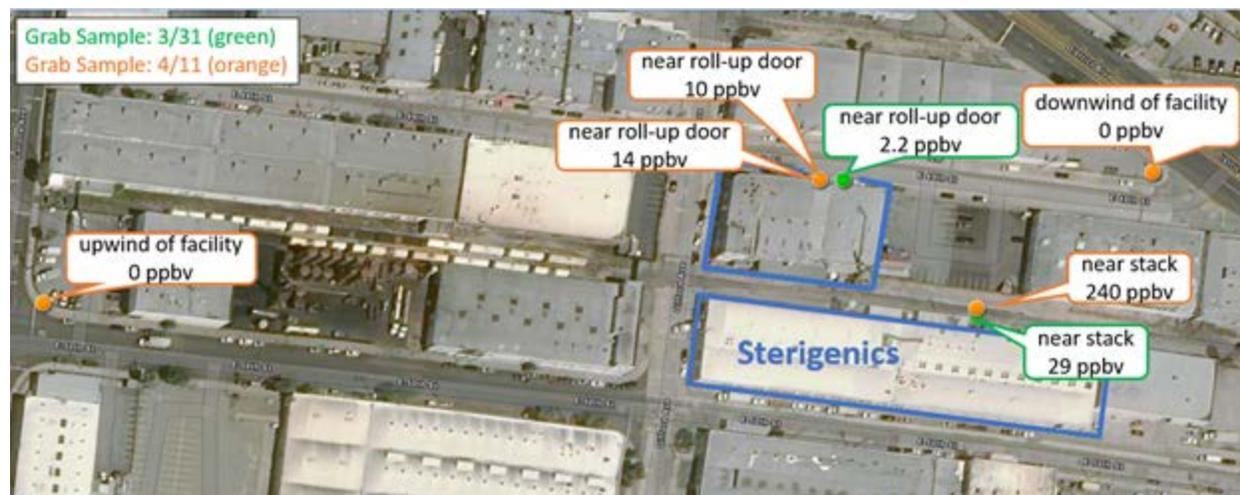
South Coast AQMD began investigating facilities that emit EtO in March 2022. The purpose of the investigation was to identify sources and reduce emissions at the facilities and near the surrounding community. South Coast AQMD started with special air monitoring efforts in the cities of Vernon, Ontario, and Carson. The monitoring in the cities of Vernon and Ontario was aimed to determine levels of EtO in the surrounding community and evaluate potential sources of emissions coming from the Sterigenics facilities, and in the city of Carson to evaluate potential sources of emissions coming from the Parter Medical Products facility.

#### **Vernon**

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

In March 2022, during a site visit, South Coast AQMD detected odors near various equipment. Initial air samples were taken directly outside the facilities, and results showed elevated levels of EtO, prompting more comprehensive air monitoring and further investigation. Individual grab samples (an air sample collected at one location at one point in time) were taken near the two buildings (Figure 2-6) and also near the surrounding community (Figure 2-7). Three monitors were placed nearby on 50<sup>th</sup> Street and 49<sup>th</sup> Street (Figure 2-8) and also in the community to collect 24-hour samples (Figures 2-9). The data collected so far shows levels of EtO in the community to be within background levels (Figure 2-10).

Additionally, mobile monitoring was conducted to collect data on volatile organic compounds (VOCs) around the facilities and the surrounding community. VOC signals associated with EtO were elevated near the facilities; however, levels in the community were within typical background levels.



**Figure 2-6: Map of grab samples**



Figure 2-7: Map of community grab samples



Figure 2-8: Map of 24-hour sampling locations

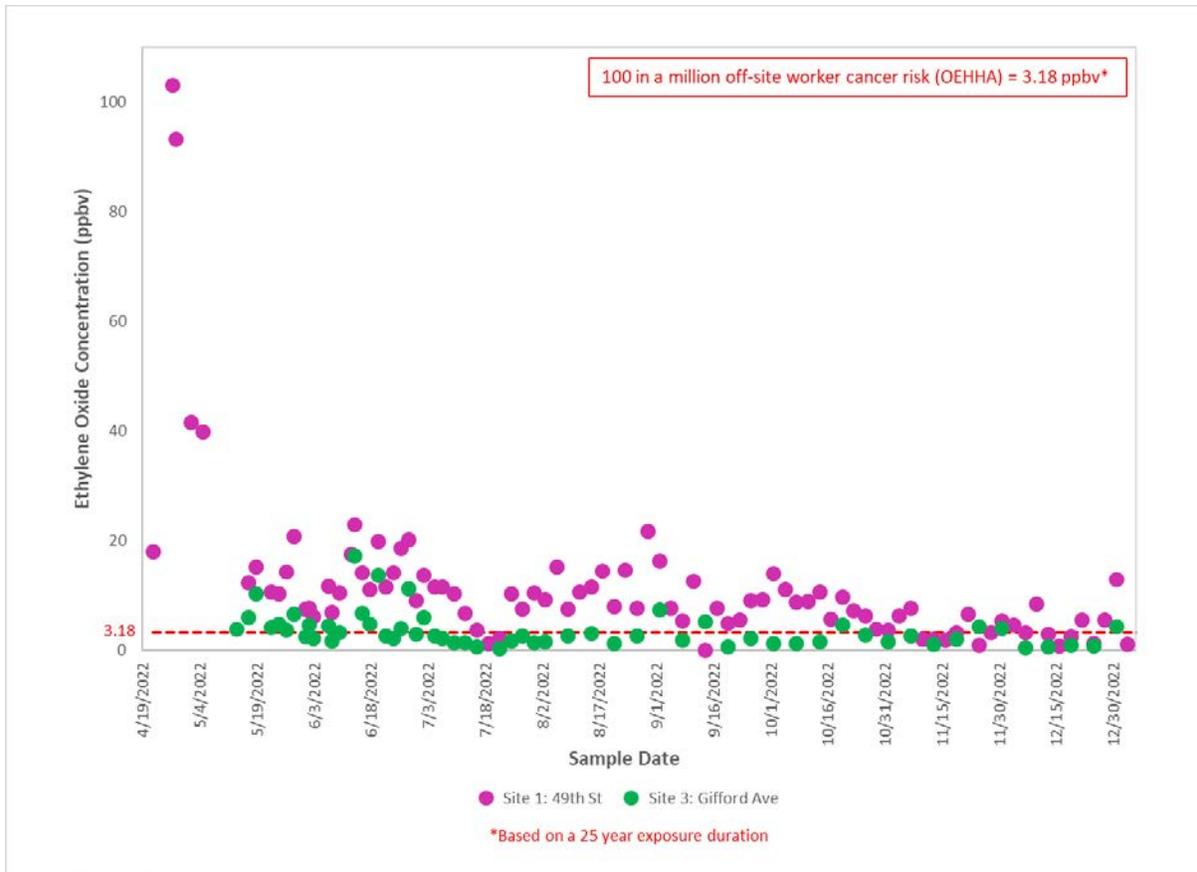
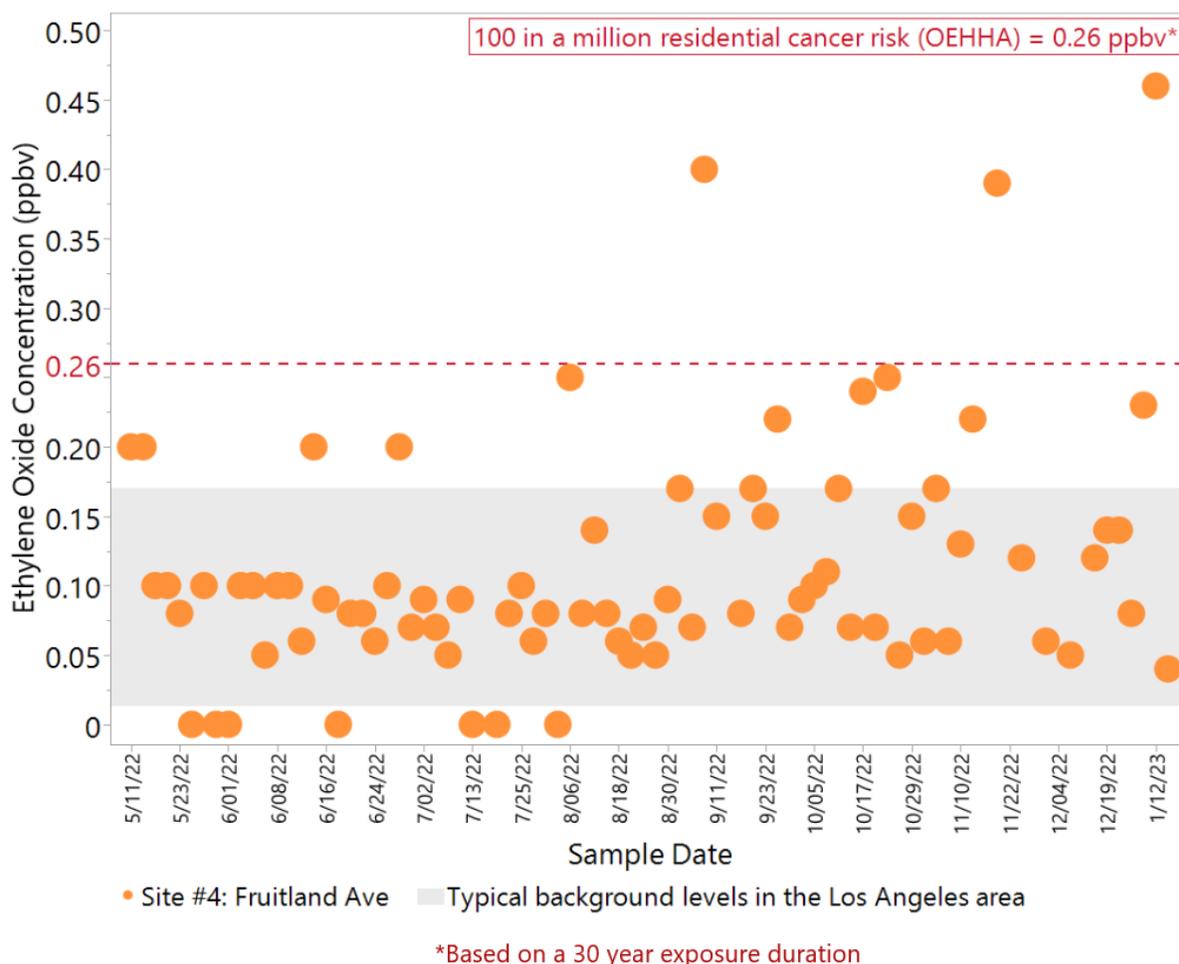


Figure 2-9: Plot of 24-hour time integrated sample concentrations



**Figure 2-10: Plot of 24-hour time integrated sample concentrations**

On June 7, 2022, the Sterigenics Vernon facility (49<sup>th</sup> and 50<sup>th</sup> Street buildings) was designated as a Potentially High Risk Level Facility, requiring a reduction of toxic emissions from operations as well reports on potential health risks. The designation was based on sampling results taken from late April through early June 2022 showing an average concentration of 63.9 ppbv at Site #1 that is substantially higher than a concentration of 3.18 ppbv which represents a cancer risk of 100 in-a-million to offsite workers using current OEHHA methodology and risk value for EtO. Although high levels of EtO were seen at Site #1 which represent the closest offsite worker (i.e. places where people work near the facility), most of the monitoring readings at Site #4 which is representative of the nearby community were within typical background levels in the Los Angeles area.

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

Additional information on Vernon special air monitoring is available online at: <https://www.aqmd.gov/home/news-events/community-investigations/sterigenics>

## Ontario

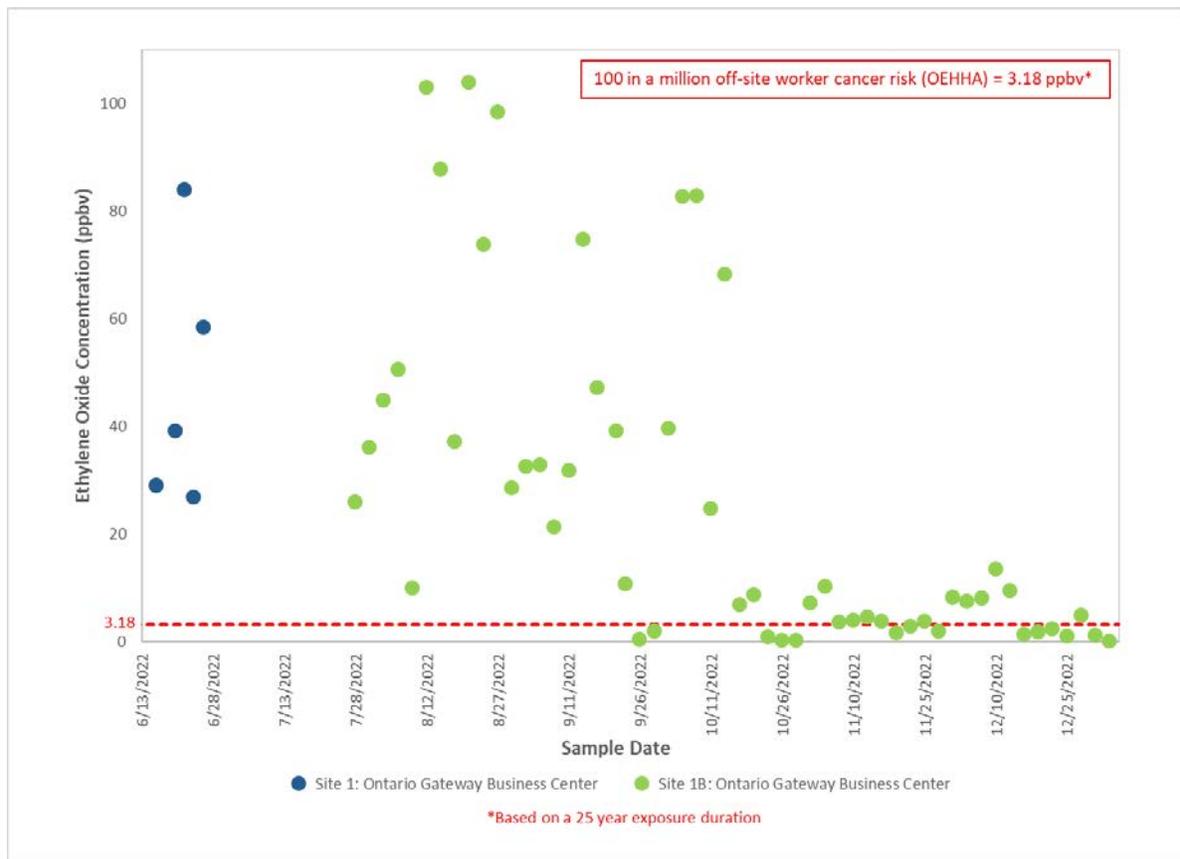
The Sterigenics Ontario facility located in an industrial part of Ontario conducts sterilization of medical equipment using EtO. South Coast AQMD is conducting local air sampling to determine levels of EtO near the facility and in the surrounding area. Mobile monitoring was also conducted to collect data on volatile organic compounds (VOCs) around the facility and the surrounding area. VOC signals associated with EtO were elevated near the facility; concentrations decreased to near background levels approximately 1,000 ft downwind. Individual grab samples were taken to confirm EtO levels (Figure 2-11), and monitors were placed nearby to collect 24-hour samples (Figure 2-12). Monitor readings from these locations are shown in Figure 2-13.



**Figure 2-11: Map of grab samples**



Figure 2-12: Map of 24-hour sampling locations



On September 29, 2022, the Sterigenics Ontario facility was designated as a Potentially High Risk Level Facility, requiring a reduction of toxic emissions from operations as well reports on potential health risks. The designation was based on sampling results taken from mid-June through September 2022 showing average concentration of ethylene oxide of 65.6 ppbv which is substantially higher than a concentration of 3.18 ppbv which represents a cancer risk of 100 chances in a million to offsite workers using current OEHHA methodology and risk value for EtO.

South Coast AQMD will continue to work with Sterigenics Ontario to identify the source(s) of EtO and measures to reduce EtO emissions.

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

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

### Carson

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

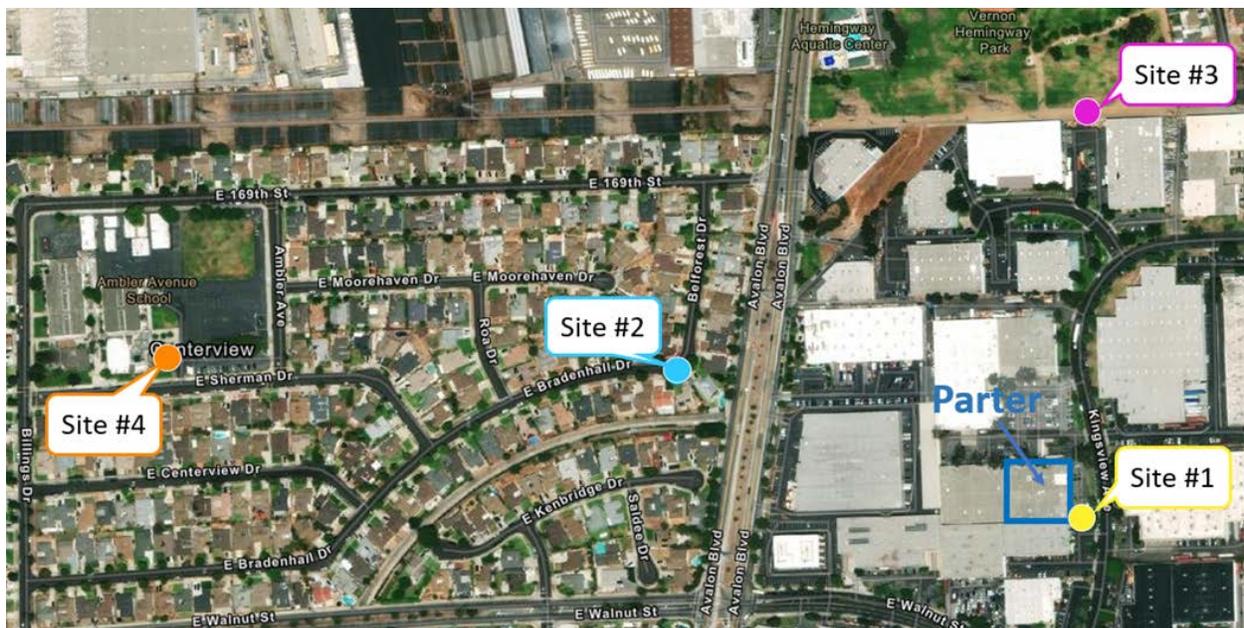


Figure 2-14: Map of 24-Hour Integrated Sample Locations

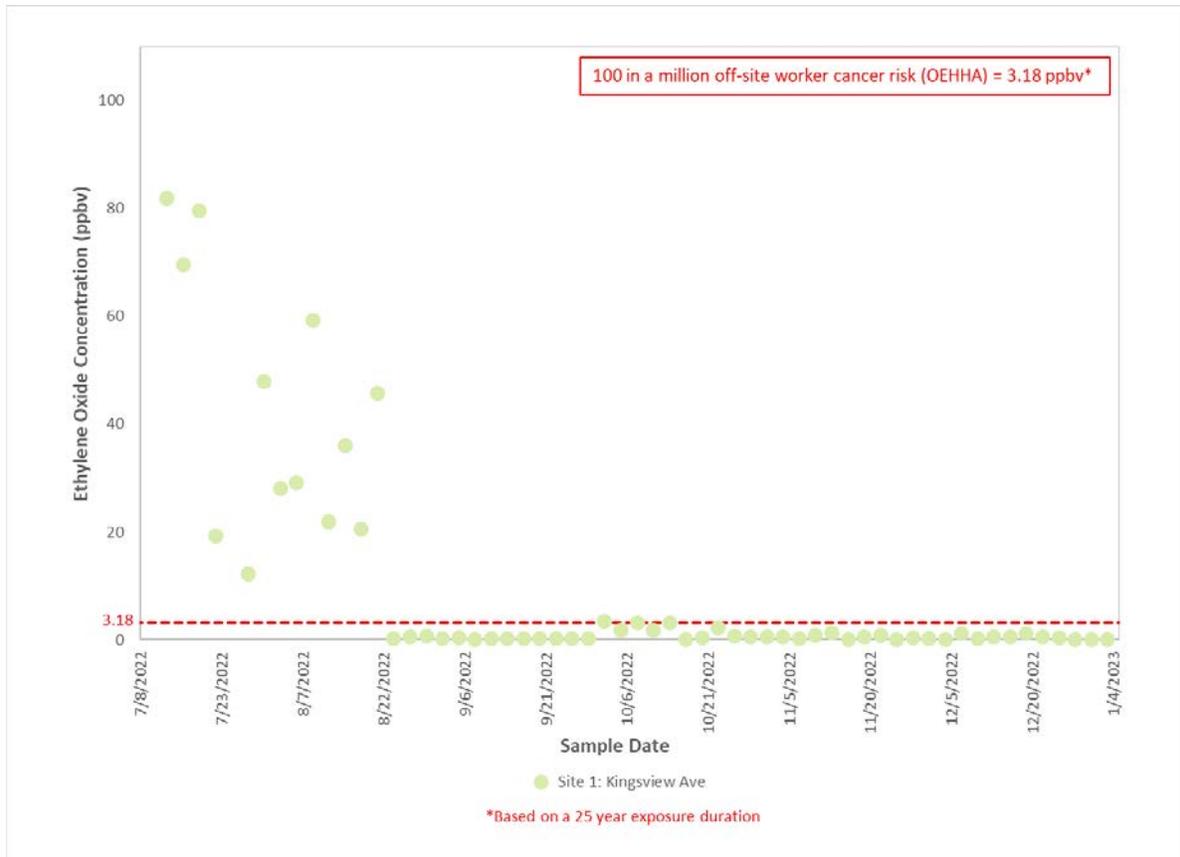
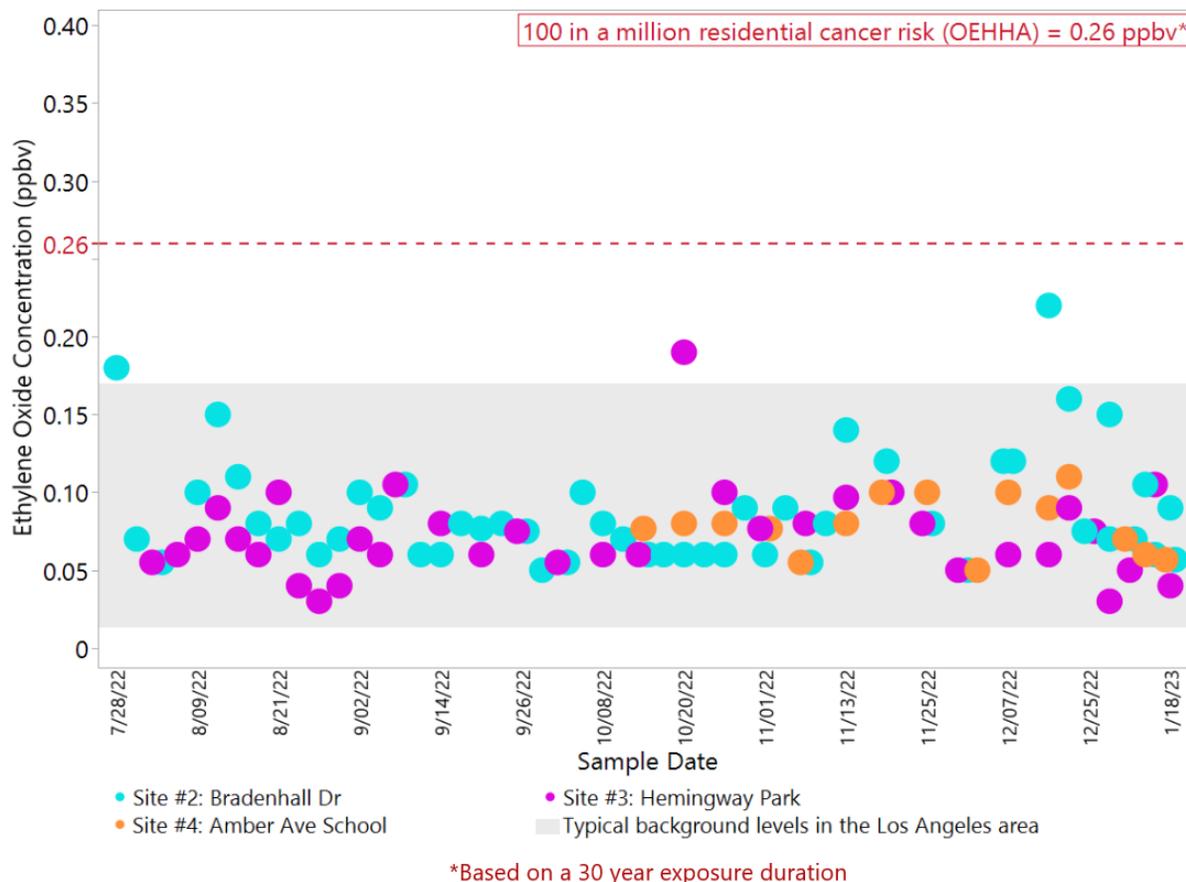


Figure 2-15: Plot of 24-Hour Near-Source Samples



**Figure 2-16: Plot of 24-Hour Community Samples**

South Coast AQMD placed a monitor near the facility and worked with the City of Carson to identify locations to collect 24-hour samples in the nearest communities and school (Figure 2-14). Monitoring readings from these locations are shown in Figures 2-15 and 2-16, and show that almost all the readings from monitors in the nearby community (i.e. Sites #2, 3, and 4) are within expected background levels in the Los Angeles area. South Coast AQMD worked with Parter to identify the source(s) of EtO from their operations and identified actions to reduce emissions. The facility has implemented various measures including installing additional air pollution control equipment to reduce emissions of ethylene oxide.<sup>13</sup>

***Assembly Bill 617 (AB617)***

AB 617, passed by the California legislature in 2017, focuses on reducing air pollution in environmental justice (EJ) communities. The California Air Resources Board (CARB) designates communities for the AB 617 Program. The following are communities CARB has designated for the AB 617 Program in the South Coast Air Basin:

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

<sup>13</sup> <http://www.aqmd.gov/home/news-events/community-investigations/parter>

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

South Coast AQMD works with each community's Community Steering Committee, consisting of residents, community-based organizations, government agencies, local businesses, and other relevant community stakeholders, to identify their top air quality priorities and develop and implement plans for community air monitoring and emissions reductions. Additional information about the South Coast AQMD AB 617 program is available online at [www.aqmd.gov/ab617](http://www.aqmd.gov/ab617).

# Chapter 3

## South Coast AQMD AB 2588 Implementation Tools



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

## South Coast AQMD AB 2588 Implementation Tools

### Background

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

### South Coast AQMD Guidelines and Procedures for AB 2588

#### *Consolidated Emissions Reporting*

As described earlier, core AB 2588 facilities are required to provide an update of their toxics emissions inventory to South Coast AQMD on a quadrennial basis. Beginning with the fiscal year 2000-01 reporting cycle, toxics emission reporting was incorporated into South Coast AQMD's Annual Emissions Reporting (AER) Program. This was the first step towards streamlining emissions reporting between criteria pollutants and toxics. In 2008, South Coast AQMD created a web-based reporting system for facilities. The reporting tool 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 EICG 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.<sup>14</sup> 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.

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<sup>14</sup> <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.<sup>15</sup>

## **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

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<sup>15</sup> *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.<sup>16</sup> 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 Procedures<sup>17</sup> 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

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<sup>16</sup> South Coast AQMD modeling guidance is available at:

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

<sup>17</sup> *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.<sup>18</sup>

### ***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](mailto: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, West Rancho Dominguez, Carson, Vernon and Ontario.

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.<sup>19</sup> These services help to maintain good working relationships with facilities and to protect air quality and public health.

### ***Rules Adopted or Amended in 2022***

#### ***Adopted Amended Rule 1480 – Ambient Monitoring and Sampling of Metal Toxic Air Contaminants***

On May 6, 2022, Rule 1480 was amended to clarify rule language. Additionally, the fee table was removed from the rule as it now referenced in Regulation III – Fees.

#### ***Adopted Proposed Rule 1460 – Control of Particulate Emissions from Metal Recycling and Shredding Operations***

Rule 1460 was adopted on November 4, 2022. This rule aims to reduce fugitive dust from metal recycling and metal shredding facilities by requiring housekeeping and best management provisions such as storing metal shredder residue within a three-sided enclosure, storing waste material in covered containers, and applying water when unloading, loading, handling, and processing metal scraps. Facilities located near sensitive receptors will also be required to install and operate a stationary anemometer to monitor wind speeds.

<sup>18</sup> <http://www.aqmd.gov/nav/FIND/facility-information-detail>

<sup>19</sup> <http://www3.aqmd.gov/webappl/complaintsystemonline/NewComplaint.aspx>

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

### ***Adopted Amended Rule 1168 – Adhesive and Sealant Applications***

On November 4, 2022, Rule 1168 was amended and included language that prohibits the sale and use of paraChlorobenzotrifluoride (PCBTF) and tertiary-Butyl Acetate (TBAC) which have been identified by OEHHA as carcinogens. The rule includes a tiered implementation schedule for use-through and sell-through periods. There are also new reporting requirements for any product containing more than 0.01 weight percent of TBAC and PCBTF.

### **State Level Air Toxics Related Activities**

#### ***OEHHA Updates***

#### ***Toxic Program Impacts with New or Proposed Toxic Air Contaminants***

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

#### ***Toxic Air Contaminants with New or Proposed Health Values***

OEHHA adopted risk values for trivalent chromium and 1-bromopropane in 2022. Chronic RELs, 8-hour chronic RELs, and acute RELs were adopted for trivalent chromium and cancer potency factors were adopted for 1-bromopropane. Trivalent chromium compounds are used for decorative plating, manufacture of dye pigments, and leather tanning. 1-bromopropane compounds are used in solvents for adhesives in laminates and foam products, as well as degreaser or cleaning agent for metal, plastic and glass components, and as an alternative for dry cleaning machines. The adopted and revised RELs are summarized in Table 3-1, and the adopted cancer potency factors are summarized in Table 3-2.

**Table 3-1: New and Revised RELs Health Values in 2022 from OEHHA**

CAS #	Name	Chronic REL $\mu\text{g}/\text{m}^3$	8-Hour Chronic REL $\mu\text{g}/\text{m}^3$	Acute REL $\mu\text{g}/\text{m}^3$
16065-83-1	Trivalent Chromium	0.06	0.12	0.48

**Table 3-2: New Cancer Potency Values in 2022 from OEHHA**

CAS #	Name	Inhalation Cancer Potency Factor ( $\text{mg}/\text{kg}\text{-day}$ ) <sup>-1</sup>
106-94-5	1-Bromopropane	$1.3 \times 10^{-2}$

### *Assessment of Impacts to Existing Facilities*

Trivalent chromium and 1-bromopropane are newly added pollutants with no prior reporting requirements and are not currently required to be reported by AB 2588 facilities. However, facilities required to submit inventory reports under Rule 1402 will be required to report trivalent chromium and 1-bromopropane beginning with inventory year 2023. Staff looked at facilities that reported emissions of hexavalent chromium in inventory year 2021 as a surrogate of potential facilities that would be required to report trivalent chromium. A breakdown of the types of facilities and the number of those types of facilities that reported toluene emissions are presented in Table 3-3.

**Table 3-3: 2021 Summary of Hexavalent Emitting Facilities  
(Excluding Combustion Only Sources)**

<b>Facility Description</b>	<b>Number of Facilities</b>
Aerospace	37
Amusement Parks	1
Building / Construction / Mineral Products	41
Bulk Plants	3
Chemical Plants	1
Electricity Generation	2
Glass Production	1
Hydrogen Production	1
Iron and Steel Production	2
Metal and Alloys Products	12
Other Food Processing Facility	2
Other Industrial/ Manufacturing	19
Other Institutional/Commercial	2
Other Service /Commercial	1
Petroleum Refinery	3
Printing / Publishing	1
Pulp and Paper Manufacturing	2
Rail Yard	1
Terminal Depots	1
<b>Total:</b>	<b>133</b>

Forty-seven of the 133 facilities have previously approved HRAs. The HRAs for these facilities were approved between 1995 and 2022. 14 of the facilities currently have either a noncancer acute or chronic index greater than 0.5 and could potentially have to do public notification if trivalent chromium is included in their inventory. Of those 14 facilities, there are three facilities with either a noncancer acute or chronic index greater than 2.5 and would potentially need to do risk reduction if trivalent chromium is included in their inventory.

In addition, OEHHA added specific compounds in the Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values<sup>20</sup> under TAC families that were previously required to be reported. For instance, arsenic acid, arsenic pentoxide, arsenic trioxide, calcium arsenate, and gallium arsenide were added under the TAC class of “arsenic and compounds (inorganic).” The added compounds do not have an impact on facilities, since they would have been captured under the TAC families that were already required to be reported.

These changes from OEHHA could potentially have an impact on permitting. Impacts to permitting include, but are not limited to, applications for equipment that was previously exempt per Rule 219 but now may have a risk that exceeds Rule 1401 thresholds and add-on controls new and/or existing equipment to minimize risks from usage of materials containing newly added TACs. However, the impacts will be analyzed when Rule 1401 is open for amendment.

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**

### ***Air Toxics Screening Assessment AirToxScreen***

AirToxScreen is U.S. EPA’s screening tool to provide state, local and tribal air agencies information and to help identify which pollutants, emission sources and places that may require further analysis to better understand any possible risks to public health from toxic air contaminants. AirToxScreen can also provide communities with information regarding health risks from toxic air contaminants. U.S. EPA previously conducted reviews every three years as part of the National Air Toxics Assessment (NATA) but transitioned to an annual review for AirToxScreen.

The transition to annual review began in 2021 and involved a “catch-up” review process of emissions from a three-year period from 2017-2019. As part of this process, South Coast AQMD staff coordinates with U.S. EPA and CARB staff to ensure that AirToxScreen incorporates the best available local emissions data. Data related to facilities within South Coast AQMD jurisdiction for calendar year 2017 was reviewed and corrected by staff in 2021. The 2017 AirToxScreen was finalized and made publicly available in March 2022. Staff continued review of corrections for both 2018 and 2019 data in calendar year 2022. The results of the 2018 AirToxScreen were made final and publicly available in August 2022. The 2019 AirToxScreen made publicly available in December 2022.

Since emissions review for the three-year period from 2017-2019 is complete, moving forward, staff anticipates a standardized annual review of data for AirToxScreen. Point source emissions data for calendar year 2020 began in 2022 and will continue through the following year.

### ***Ethylene Oxide (NESHAP Rulemaking)***

Ethylene oxide is classified as one of the 188 hazardous air pollutants in the Clean Air Act. In December 2016, U.S. EPA published an updated evaluation of the inhalation carcinogenicity for EtO. This IRIS assessment determined the full lifetime unit risk estimate for EtO to be  $5.0 \times 10^{-3}$  per  $\mu\text{g}/\text{m}^3$ , which results in an equivalent cancer risk many times higher than estimated by

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<sup>20</sup> <https://ww2.arb.ca.gov/sites/default/files/classic/toxics/healthval/contable12092022.pdf>

OEHHA. Using the OEHHA cancer potency factor for EtO, a concentration of 0.26 ppbv is approximately equivalent to a residential lifetime cancer risk of 100 in-one-million, whereas the updated U.S. EPA IRIS carcinogenicity factor is equivalent to over 2,300 in-one-million lifetime cancer risk. OEHHA has since initiated a new evaluation of health effects of EtO, which may result in an updated cancer potency factor much closer to the current IRIS unit risk estimate.

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

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

Amendments to the NESHAP for Ethylene Oxide Commercial Sterilizers has not yet been finalized. U.S. EPA provided advanced notice of proposed rulemaking for this NESHAP in December 2019. In January 2021, U.S. EPA requested South Coast AQMD assistance in reviewing data from an information collection request sent to commercial sterilizers. This process continued through 2021 and overlapped with the review of the data for the 2017 AirToxScreen. During the review process, South Coast initiated an investigation to assess fugitive releases of ethylene oxide at commercial sterilizers within our jurisdiction, as described earlier.

South Coast AQMD is closely tracking OEHHA's progress in evaluating EtO health effects. Once OEHHA finalizes new health values for EtO, staff will reevaluate potential risk posed by commercial sterilizers in South Coast AQMD jurisdiction.

## **South Coast AQMD EtO Activities**

### ***Ethylene Oxide (EtO) Emissions Investigation***

In March 2022, South Coast AQMD began investigating all facilities in the South Coast Air Basin that emit EtO, following U.S. EPA's reconsideration of the potential toxicity of EtO. The goal of the investigation is to identify sources and reduce emissions. These actions include:

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

- Begin rulemaking that will result in more stringent requirements for EtO emissions from sterilization facilities.

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

### ***Initial Inspections***

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

### ***Air Monitoring***

On April 22, 2022, South Coast AQMD deployed air monitors near the Sterigenics Vernon facility and collected multiple 24-hour samples to verify the EtO levels identified in the initial air sampling effort. The monitoring data collected to date has confirmed that the initial elevated readings of EtO surrounding the Sterigenics Vernon facility pose an elevated cancer risk for nearby off-site workers. Initial monitoring data at the nearest residents, which are approximately 500 feet from Sterigenics Vernon, are at or near background levels.

South Coast AQMD began air monitoring efforts near the Sterigenics Ontario facility on June 16, 2022. The monitoring data collected to date has found elevated readings of EtO surrounding the Sterigenics Ontario facility, at a level which also poses an elevated cancer risk for nearby off-site workers. The nearest residents are approximately 1.4 miles from Sterigenics Ontario, and the nearest school is about 1.2 miles from the facility.

The most recent EtO air monitoring effort is in Carson near the Parter facility. This effort began on July 10, 2022. Initial 24-hour samples confirmed elevated levels of EtO for off-site worker receptors near the fence line of the facility. Monitors were also placed further from the facility within the residential community which showed that EtO levels were mostly within typical background levels of the Los Angeles area. Due to the high levels of EtO near the fence line, the Parter facility voluntarily shut down their EtO operations on August 21, 2022, during which time facility went through the permitting process to install new controls. After the implementation of these controls in October 2022, EtO concentrations have dropped significantly.

### ***Enforcement Action***

Starting May 5, 2022, South Coast AQMD inspectors have issued several Notices of Violation (NOV) to the Sterigenics Vernon facility. Similarly, South Coast AQMD inspectors have issued several NOVs to the Sterigenics Ontario facility beginning June 6, 2022. These NOVs were issued for failing to maintain control equipment in good working condition and for public nuisance, in violation of South Coast AQMD's Rule 203, Rule 402, and California Health & Safety Code § 41700. This is an ongoing investigation, and South Coast AQMD continues to take air samples and evaluate all equipment to ensure that Sterigenic facilities are following permit conditions and using proper emissions control equipment.

South Coast AQMD has also conducted multiple on-site inspections at Parter and conducted field operations in the surrounding area. On July 29, 2022, an NOV was issued to Parter for Public Nuisance in violation of South Coast AQMD's Rule 402 and California Health & Safety Code § 41700. This violation was based on elevated EtO emissions detected through air monitoring efforts outside of the facility.

### ***Proposition 65 Notice and Community Notification***

On May 6, 2022, South Coast AQMD issued a Proposition 65 Notification to the Los Angeles County Board of Supervisors, the Los Angeles County Health Officer, and the City of Vernon Director of Health of the discharge of EtO from Sterigenics Vernon that was likely to impact public health or safety. South Coast AQMD has also notified the California Division of Occupational Safety and Health of the potential EtO exposure to employees at this facility.

On July 1, 2022, South Coast AQMD issued a Proposition 65 Notification to the San Bernardino County Board of Supervisors and the Health Officer for the San Bernardino Department of Public Health of the illegal discharge of EtO from Sterigenics Ontario that was likely to impact public health or safety.

On July 28, 2022, South Coast AQMD issued a Proposition 65 Notification to the City of Carson, the Los Angeles County Health Officer, and Los Angeles County Board of Supervisors of the discharge of EtO from Parter that would likely have public health and safety impacts. Additionally, South Coast AQMD notified the California Division of Occupational Safety and Health Administration of potential exposure to employees at Parter. South Coast AQMD continues to work closely with the Los Angeles Department of Public Health and is providing data to public health officials for additional health risk assessments.

Additionally, South Coast AQMD has reached out to federal, state, and local elected officials, as well as other government agencies to provide information regarding these facilities. Press Releases have been issued in English and Spanish providing updates on the status of these facilities. South Coast AQMD also has a dedicated webpage that provides background information, enforcement information, and monitoring data, with a link to sign up for updates related to South Coast AQMD's ongoing investigation of EtO commercial sterilization facilities. South Coast AQMD continues to work closely with the Los Angeles Department of Public Health and is providing data to public health officials for additional health risk assessments.

### ***AB 2588 Air Toxics Hot Spots Program Efforts***

The AB 2588 Air Toxics Hot Spots Program requires that facilities associated with health risks to residents or off-site workers above certain thresholds take action to reduce those risks.

On June 7, 2022, South Coast AQMD designated Sterigenics Vernon as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers and required them to implement measures to reduce risks from the facility and provide detailed information on its toxic air emissions and potential health risks. The early actions taken by Sterigenics Vernon include sealing of the building to prevent fugitive releases of EtO into the atmosphere and installing additional control equipment.

On September 22, 2022, South Coast AQMD designated Sterigenics Ontario as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers and required them to implement measures to reduce risks from the

facility and provide detailed information on its toxic air emissions and potential health risks. Thus far, the only early actions taken by Sterigenics Ontario was to adjust the blower for the scrubber and combine exhaust streams to increase dispersion of EtO emissions. South Coast AQMD is working with Sterigenics Ontario on more immediate and near-term actions to further reduce EtO emissions.

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

### ***Engineering and Permitting Activity***

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

Between May 25, 2022 and September 28, 2022, Sterigenics Vernon submitted permit applications to add a filtration system and dry beds at each building. The facility will also optimize the exhaust of current control equipment and enclose each building to meet the standards of a PTE. These changes are designed to capture any potential fugitive emissions and increase the control of all emissions of EtO from the facility.

Additionally, on October 21, 2022, applications were submitted by Sterigenics Ontario to combine the exhaust streams of two existing control devices with the goal of achieving greater dispersion. Additional control measures, including installation of a PTE, are also being evaluated by the facility.

Similarly, Parter submitted an application on August 25, 2022 to enclose the areas containing the sterilization chambers, aeration rooms, post aeration room, process area, and staging area to meet the requirements of a PTE. The PTE operates under negative pressure with five dry bed scrubbers that are required to meet a control efficiency of 95%. The Permit to Construct was issued on September 21, 2022. Parter commenced operation of the new air pollution control equipment on October 2, 2022 and completed the source test on the system on November 15, 2022.

### ***Rule 1405 Development***

During South Coast AQMD's monitoring efforts at these commercial EtO sterilization facilities, South Coast AQMD became aware of fugitive emissions from sources that were not previously known. Additionally, the investigation has identified that existing pollution controls will need to be upgraded and measures will be needed to reduce fugitive emissions. Staff is working on amending Rule 1405 to strengthen requirements to address fugitive emissions, as well as provisions to further reduce EtO emissions from operations at these facilities. For more details on Proposed Amended Rule 1405, see Chapter 4: Future Activities, Rulemaking.

*Next Steps*

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

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

# 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 2023, staff will prioritize approximately 66 facilities and notify those with high priority scores to prepare ATIRs or VRRPs, if eligible, and HRAs and RRP, if necessary. Public notification, and public meetings if needed, is expected to occur for four facilities including Pac Rancho (140871), Bowman (18989), Sterigenics Vernon (126191 and 126197), and Sterigenics Ontario (126060). Staff will also review and, if necessary, update AB 2588 guidance documents to provide additional clarification on the process and requirements of the AB 2588 program including the following:

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

### Other 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;
- Work with CARB and through the CAPCOA Toxics and Risk Managers Committee (TARMAC) to update CARB AB 2588 Guidelines and develop uniform reporting guidance for various industries;
- Work with CARB to develop guidance and outreach material for implementation of the CARB EICG. This work will also include ensuring that reporting requirements under South Coast AQMD's AB 2588 Program and CARB's EICG are as streamlined as possible with other reporting requirements under CARB's CTR regulation and South Coast AQMD's AER program;
- Continue to work with CARB and through CAPCOA-TARMAC to develop HRA guidelines for the industry-wide categories of diesel internal combustion engines and 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, including potential revision to cancer risk from ethylene oxide;
- 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.

### **Rulemaking**

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

- Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes. The rule amendment process began in August 2022 following South Coast AQMD monitoring efforts at several commercial EtO sterilization facilities, which detected high concentrations of EtO. Further investigation concluded that fugitive emissions were a probable contributor and that upgrades to existing pollution controls and additional measures will be needed. Staff held the first working group in August 2022 to identify more stringent and effective control measures for Rule 1405. The first working group was followed by a survey of existing EtO sterilizers located in South Coast AQMD jurisdiction. Staff subsequently held two additional working groups in 2022 and another two thus far in 2023. In total, five working group meetings have taken place. Staff proposed initial amended rule language in February 2023. Initial rule concepts include requiring continuous emissions monitoring of stack emissions from control equipment (e.g., catalytic oxidizers, scrubbers). Other concepts include more stringent emission limits from controlled sources and requirements for potential fugitive sources of ethylene oxide to be operated within a permanent total enclosure (PTE) that is vented to air pollution control equipment. The proposed amendment would categorize commercial sterilizers into large, medium, and small facilities, with more stringent requirements being adopted for large facilities. Existing Rule 1405 requires annual source tests only on certain control equipment, whereas the proposed amended rule includes more stringent source testing requirements overall. Unlike existing Rule 1405, Proposed Amended Rule 1405 includes requirements for warehouses where EtO-sterilized product are stored. Since only the first initial rule concepts have been proposed, rulemaking will continue in 2023 and additional working group meetings will take place.

South Coast AQMD staff are also expected to conduct rulemaking for the following rules in 2023:

- Rule 1401 – New Source Review of Toxic Air Contaminants
- Rule 1401.1 – Requirements for New and Relocated Facilities near Schools
- Rule 1435 – Control of Emissions from Metal Heat Treating Processes
- Rule 1445 – Control of Toxic Emissions from Laser Cutting
- Rule 1455 – Control of Hexavalent Chromium Emissions from Torch Cutting and Welding

## Appendix A — Description of Active AB 2588 Related Projects

This section includes tables that includes details on active AB 2588 projects. Table A-1 lists the facilities that were prioritized in 2022 based on inventory year 2021. Note that the priority category of the facilities is subject to change and is considered “preliminary” until staff completes the auditing process. Tables A-2 and A-3 list facilities with ATIRs and/or HRAs, respectively, that are currently in progress or were approved in 2022. Tables A-4 and A-5 list facilities with VRRPs or RRP.

**Table A-1: Facilities Prioritized in 2022**

Facility ID	Facility Name	City	Draft Priority Category
56	UNIVERSITY SO CALIFORNIA,HEALTH SCIENCES	Los Angeles	Low
511	WHITTIER FERTILIZER CO	Pico Rivera	Intermediate
1703	EASTERN MUNICIPAL WATER DISTRICT	Temecula	Intermediate
1865	CALMAT COMPANY	Irwindale	Low
2212	LA CITY, LA-GLENDALE WATER RECLAMATION	Los Angeles	Intermediate
2479	CALIFORNIA ARMY NATIONAL GUARD	Los Alamitos	Low
2619	MARTIN LUTHER KING JR MEDICAL CAMPUS	Los Angeles	Intermediate
2638	OCCIDENTAL COLLEGE	Los Angeles	Intermediate
3417	AIR PROD & CHEM INC	Carson	Intermediate
3704	ALL AMERICAN ASPHALT, UNIT NO.01	Corona	High
3991	ACORN ENGINEERING CO	City Of Industry	Low
4242	SAN DIEGO GAS & ELECTRIC	Moreno Valley	Low
4565	CAL ST UNIV NORTHRIDGE	Northridge	Low
4988	SULLY MILLER CONTRACTING CO.	South Gate	High
5023	CAL ST UNIV LONG BEACH EH&S	Long Beach	Intermediate
5679	US GOVT, VETERANS ADMINISTRATION MED CTR	North Hills	Low
5973	SOCAL GAS CO	Valencia	Low
5998	ALL AMERICAN ASPHALT	Westminster	Intermediate
6306	CALMAT COMPANY	Sun Valley	Low
6324	ST. BERNARDINE MEDICAL CENTER	San Bernardino	Intermediate
6886	MARVIN ENGINEERING CO INC	Inglewood	Low
6979	RIV CO., WASTE MGMT, BADLANDS LANDFILL	Moreno Valley	Low
7371	SAN BER CNTY SOLID WASTE MGMT- MILLIKEN	Ontario	Low
7417	EASTERN MUNICIPAL WATER DIST	Perris	Low

**Table A-1: Facilities Prioritized in 2022 (cont'd)**

<b>Facility ID</b>	<b>Facility Name</b>	<b>City</b>	<b>Draft Priority Category</b>
7796	TECHNI-CAST CORP	South Gate	Low
8574	SPECTROLAB, INC	Sylmar	Low
9163	INLAND EMPIRE UTLAGEN, A MUN WATER DIS	Ontario	Intermediate
11119	THE GAS CO./ SEMPRA ENERGY	Pico Rivera	High
11298	PACIFIC ALLOY CASTINGS INC	South Gate	Intermediate
11508	PRESBYTERIAN INTERCOMMUNITY HOSP	Whittier	Intermediate
11818	HIXSON METAL FINISHING	Newport Beach	Intermediate
11887	NASA JET PROPULSION LAB	Pasadena	Low
12332	GATX CORPORATION	Colton	Intermediate
12900	ELLIS PAINTS CO/PACIFIC COAST LACQUER	Los Angeles	Low
13613	WHITE MEMORIAL MEDICAL CENTER	Los Angeles	Intermediate
14437	SAN ANTONIO REGIONAL HOSPITAL	Upland	Intermediate
14502	VERNON PUBLIC UTILITIES	Vernon	Intermediate
14898	PALM SPRINGS CITY, WASTE WATER TREATMENT	Palm Springs	Low
15507	CALIFORNIA STATE UNIVERSITY, FULLERTON	Fullerton	Intermediate
15748	CERRITOS CITY, WATER DIV	Cerritos	Low
15793	RIV CO, WASTE RESOURCES MGMT DIST, LAMB	Beaumont	Low
16211	MOTION PICTURE & TELEVISION FUND	Woodland Hills	Intermediate
16389	CEDARS-SINAI MEDICAL CTR	Los Angeles	Intermediate
16639	SHULTZ STEEL CO	South Gate	Low
17104	SO CAL EDISON CO	Norwalk	Intermediate
17953	PACIFIC CLAY PRODUCTS INC	Lake Elsinore	Intermediate
18188	PLASMA TECHNOLOGY INCORPORATED	Torrance	Low
19167	R J. NOBLE COMPANY	Orange	High
20000	BELL FOUNDRY CO	South Gate	Low
20421	BLUE DIAMOND INGLEWOOD ASPHALT CORP	Inglewood	Intermediate
20445	BIOLA UNIVERSITY	La Mirada	Intermediate
20492	ALHAMBRA FOUNDRY CO LTD	Alhambra	Intermediate
20774	HANSON AGGREGATES WEST INC/IRWINDALE ROC	Irwindale	Low
21104	HUNTINGTON BEACH CITY, WATER DEPT	Huntington Beach	High
23194	CITY OF HOPE MEDICAL CENTER	Duarte	Low

**Table A-1: Facilities Prioritized in 2022 (cont'd)**

Facility ID	Facility Name	City	Draft Priority Category
23752	AEROCRAFT HEAT TREATING CO INC	Paramount	High
24006	CAL ST UNIV LA	Los Angeles	Low
24427	HUNTINGTON BEACH CITY, WATER DEPT	Huntington Beach	Intermediate
24546	ST JUDE MEDICAL CENTER	Fullerton	Intermediate
25196	LA CITY, STREET MAINT BUREAU DEPT PUB WK	North Hollywood	Low
34281	CALMAT CO	San Bernardino	Low
35103	UCI MEDICAL CENTER	Orange	Intermediate
35144	LA CITY , PUB WORKS DEPT	Van Nuys	Low
35189	NEWPORT BEACH CITY - UTILITIES DEPT	Newport Beach	Intermediate
41229	LUBECO INC	Long Beach	Low
41580	HOLLIDAY ROCK CO., INC.	Rialto	Low
42623	ROBERTSON'S READY MIX	Redlands	Low
49572	KAISER FOUNDATION HOSPITAL	Woodland Hills	Low
49805	LA CITY, BUREAU OF SANIT(LOPEZ CANYON)	Lake View Terrace	High
51475	SO CAL EDISON CO	Stanton	Intermediate
52743	OC WASTE & RECYCLING, SANTIAGO	Orange	Intermediate
52753	OC WASTE & RECYCLING, PRIMA DESHECHA	San Juan Capistrano	Intermediate
53733	HUNTINGTON BEACH CITY, WATER DEPT	Huntington Beach	High
58044	SAN BER CNTY SOLID WASTEMGMT - COLTON	Colton	Low
60384	LOS ANGELES BY-PRODUCTS	Sun Valley	Low
61962	LA CITY, HARBOR DEPT	Wilmington	Intermediate
62862	IMPERIAL IRRIGATION DISTRICT/ COACHELLA	Coachella	Intermediate
66849	PERVAN TOOLING CO., INC	Compton	Low
69646	OC WASTE & RECYCLING, FRB	Irvine	Low
70300	EASTERN MUNICIPAL WATER DISTRICT	Moreno Valley	Low
83102	LIGHT METALS INC	City Of Industry	Intermediate
83509	THE TERMO CO	Castaic	Low
84162	GARDEN GROVE CITY, LAMPSON PUMPING STN.	Garden Grove	Low
94677	YORBA LINDA WATER DISTRICT	Yorba Linda	Intermediate
98158	PACIFIC COAST ENERGY COMPANY LP	Los Angeles	Intermediate
103070	GARDEN GROVE CITY, WATER SERVICES DIV	Garden Grove	Intermediate

**Table A-1: Facilities Prioritized in 2022 (cont'd)**

<b>Facility ID</b>	<b>Facility Name</b>	<b>City</b>	<b>Draft Priority Category</b>
103673	MITCHELL RUBBER PRODUCTS INC	Mira Loma	Low
105277	SULLY MILLER CONTRACTING CO	Irwindale	Intermediate
107149	MARKLAND MANUFACTURING INC	Santa Ana	High
107654	CALMAT CO	Irwindale	Low
108489	BEAR MOUNTAIN SKI RESORT	Big Bear Lake	Low
108527	CALMAT CO	Corona	Intermediate
109471	DURA COAT PRODUCTS INC	Riverside	Low
111238	RIBOST TERMINAL, LLC.	Long Beach	Low
112525	MOUNTAIN VIEW LAND COMPANY	Upland	Intermediate
112909	DESERT HOSPITAL	Palm Springs	Intermediate
113170	SANTA MONICA - UCLA MEDICAL CENTER	Santa Monica	Intermediate
113518	BREA PARENT 2007,LLC	Brea	Low
113902	CYTEC ENGINEERED MATERIALS INC	Orange	Low
114264	ALL AMERICAN ASPHALT	Irwindale	High
115394	AES ALAMITOS, LLC	Long Beach	High
115476	ELITE MANUFACTURING CORPORATION	Santa Fe Springs	Intermediate
115536	AES REDONDO BEACH, LLC	Redondo Beach	Intermediate
115663	EL SEGUNDO ENERGY CENTER LLC	El Segundo	Intermediate
116813	THE CLAREMONT CLUB	Claremont	Intermediate
116931	EQUILON ENT LLC, SHELL OIL PROD. U S	Signal Hill	Low
117290	B BRAUN MEDICAL, INC	Irvine	Intermediate
118124	CEDAR FAIR LP, KNOTT'S BERRY FARM DBA	Buena Park	Intermediate
119219	CHIQUITA CANYON LLC	Castaic	Intermediate
121727	PACIFIC PIPELINE SYSTEM LLC	Long Beach	Intermediate
123774	HERAEUS PRECIOUS METALS NO. AMERICA, LLC	Santa Fe Springs	Low
126964	EDWARDS LIFESCIENCES LLC	Irvine	Intermediate
127592	TOYOTA RACING DEVELOPMENT	Costa Mesa	Intermediate
127721	F S T SAND & GRAVEL INC	Corona	Intermediate
128243	BURBANK CITY,BURBANK WATER & POWER,SCPPA	Burbank	High
131425	MATRIX OIL CORPORATION - RIDEOUT HEIGHTS	Whittier	Low
135216	CHINO BASIN DESALTER AUTHORITY	Chino	Low

**Table A-1: Facilities Prioritized in 2022 (cont'd)**

<b>Facility ID</b>	<b>Facility Name</b>	<b>City</b>	<b>Draft Priority Category</b>
139938	SUNSHINE GAS PRODUCERS LLC	Sylmar	Low
142517	CRIMSON RESOURCE MANAGEMENT	Castaic	Intermediate
143220	HOLLIDAY TRUCKING CO, INC	Irwindale	Intermediate
144293	FORGED METALS INC	Fontana	Intermediate
144681	WARREN E&P, INC	Wilmington	Intermediate
146536	WALNUT CREEK ENERGY, LLC	City Of Industry	Intermediate
148146	ALL AMERICAN ASPHALT	Perris	High
152707	SENTINEL ENERGY CENTER LLC	North Palm Springs	High
152952	SA RECYCLING	Terminal Island	Low
153992	CANYON POWER PLANT	Anaheim	Intermediate
154034	CENTINELA HOSPITAL MEDICAL CENTER	Inglewood	Low
157451	BENDER CCP INC	Vernon	Low
171320	PHILLIPS 66 COLTON TERMINAL - WEST	Bloomington	Low
171326	PHILLIPS 66 PIPELINE LLC	Los Angeles	Intermediate
171329	PHILLIPS 66 COLTON TERMINAL - EAST	Rialto	Low
171960	TIN, INC. DBA INTERNATIONAL PAPER	Ontario	Low
172005	NEW- INDY ONTARIO, LLC	Ontario	Intermediate
172138	SPECIALITY EQUIPMENT	Santa Ana	Low
172895	EC VAPOR CONTROL SYSTEMS	Wilmington	Low
173381	SO. CALIFORNIA HOSPITAL AT CULVER CITY	Culver City	Low
174406	ARLON GRAPHICS LLC	Placentia	Intermediate
174704	TESORO LOGISTICS, EAST HYNES TERMINAL	Long Beach	Intermediate
175222	COASTLINE METAL FINISHING INC	Garden Grove	Low
175422	GI TC ONE WILSHIRE	Los Angeles	Intermediate
176023	NASCO PETROLEUM, LLC	Los Angeles	Low
176339	BECKER SPECIALTY CORP.	Fontana	Intermediate
176730	ENVENT CORPORATION	Wilmington	Intermediate
177120	PROVIDENCE SAINT JOHN'S HEALTH CENTER	Santa Monica	Low
178534	GRANITE CONSTRUCTION COMPANY	Indio	Intermediate
180908	ECO SERVICES OPERATIONS CORP.	Carson	Intermediate
182735	TORRANCE LOGISTICS COMPANY LLC	Torrance	Low

**Table A-1: Facilities Prioritized in 2022 (cont'd)**

<b>Facility ID</b>	<b>Facility Name</b>	<b>City</b>	<b>Draft Priority Category</b>
182884	DE PARK AVENUE 10960, LLC	Los Angeles	Low
182980	SIGNAL HILL PETROLEUM, INC	Long Beach	Low
182983	SIGNAL HILL PETROLEUM, INC	Signal Hill	Low
183016	SIGNAL HILL PETROLEUM, INC.	Signal Hill	Low
185352	SNOW SUMMIT, LLC.	Big Bear Lake	High
186899	ENERY HOLDINGS LLC/LGHTHP_6_ICEGEN	Carson	Low
187885	SMITHFIELD PACKAGED MEATS CORP	Vernon	High
189639	NORTHRIDGE HOSPITAL MEDICAL CENTER	Northridge	Low
191658	ATHENS SERVICES	Sun Valley	Low
191865	BLINN PROPERTIES, LLC	Wilmington	Intermediate
193314	ZENITH ENERGY WEST COAST TERMINALS LLC	Compton	Intermediate
195458	WG HOLDINGS SPV, LLC	Brea	Intermediate
195459	WG HOLDINGS SPV, LLC	Los Angeles	Low
195464	WG HOLDINGS SPV, LLC	Fullerton	Low
195778	J AND J OPERATORS LLC	Huntington Beach	Low
800074	LA CITY, DWP HAYNES GENERATING STATION	Long Beach	Intermediate
800075	LA CITY, DWP SCATTERGOOD GENERATING STN	Playa Del Rey	Intermediate
800128	SO CAL GAS CO	Northridge	Low
800236	LA CO. SANITATION DIST	Carson	High
800263	U.S. GOVT, DEPT OF NAVY	San Clemente	High
800289	ALLERGAN INC	Irvine	Low
800312	LA CO HARBOR-UCLA MEDICAL CENTER	Torrance	Intermediate
800380	CERTIFIED ENAMELING INC	Los Angeles	Low

**Table A-2: Active ATIR Projects**

Facility ID	Facility Name	City	Inventory Year	Status
7730	CARPENTER CO	Riverside	2019	In Progress
12036	HOLLIDAY TRUCKING, INC	Rialto	2019	Approved, HRA required
14495	VISTA METALS CORPORATION	Rancho Cucamonga	2018	In Progress
14871	SONOCO PRODUCTS CO	City of Industry	2020	Approved*
15504	SCHLOSSER FORGE COMPANY	Rancho Cucamonga	2018	In Progress
17953	PACIFIC CLAY PRODUCTS INC	Lake Elsinore	2017	Approved, HRA required
18989	BOWMAN PLATING CO INC	Compton	2019	Approved, HRA required
19167	R J. NOBLE COMPANY	Orange	2017	In Progress
21665	A&A READY-MIXED CONCRETE, INC.	Gardena	2020	Approved, HRA required
38429	A&A READY-MIXED CONCRETE, INC.	Gardena	2020	Approved*
42623	ROBERTSON'S READY MIX	Redlands	2017	In Progress
44577	LONG BEACH CITY, SERRF PROJECT	Long Beach	2017	In Progress
60384	LOS ANGELES BY-PRODUCTS	Sun Valley	2017	In Progress
114264	ALL AMERICAN ASPHALT	Irwindale	2017	In Progress
126060	STERIGENICS US, LLC.	Ontario	2021	In Progress
126191	STERIGENICS US, INC.	Vernon	2021	In Progress
134112	ROBERTSON'S READY MIX	Gardena	2016	In Progress
134943	ARCONIC GLOBAL FASTENERS & RINGS INC	Torrance	2018	In Progress
148146	ALL AMERICAN ASPHALT	Perris	2017	In Progress
164581	FLARE GROUP DBA AVIATION EQUIP PROCESS	Costa Mesa	2018	In Progress
185352	SNOW SUMMIT, LLC.	Big Bear Lake	2021	In Progress
186519	EMBEE PROCESSING	Santa Ana	2019	Approved*
187165	ALTAIR PARAMOUNT, LLC	Paramount	2019	In Progress
800003	HONEYWELL INTERNATIONAL INC	Torrance	2019	Approved*
800037	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	Compton	2019	In Progress
800129	SFPP, L.P.	Bloomington	2019	In Progress
800278	SFPP, L.P., UNIT NO.01	Carson	2016	Approved*
800409	NORTHROP GRUMMAN SYSTEMS CORPORATION	Redondo Beach	2019	Approved*

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

**Table A-3: Active HRA Projects**

Facility ID	Facility Name	City	Inventory Year	Status
7730	CARPENTER CO	Riverside	2019	In Progress
17953	PACIFIC CLAY PRODUCTS INC	Lake Elsinore	2017	In Progress
18989	BOWMAN PLATING CO INC	Compton	2019	In Progress
82207	ALL AMERICAN ASPHALT, ALL AMER AGGREGATES	Irvine	2016	Complete
83102	LIGHT METALS INC	City of Industry	2017	Complete
126060	STERIGENICS US, LLC	Ontario	2021	In Progress
126191	STERIGENICS US, INC	Vernon	2021	In Progress
140871	PAC RANCHO, INC.	Rancho Cucamonga	2018	In Progress
180908	ECO SERVICES OPERATIONS CORP.	Carson	2017	In Progress

**Table A-4: Active VRRP Projects**

Facility ID	Facility Name	City	Inventory Year	Plan Status	Implementation Progress
182610	ELITE COMFORT SOLUTIONS	Commerce	2015	Approved	In Progress
800026	ULTRAMAR INC	Wilmington	2015	Approved	In Progress
800436	TESORO REFINING AND MARKETING CO, LLC	Wilmington	2015	In Progress	N/A

**Table A-5: Active RRP Projects**

Facility ID	Facility Name	City	Inventory Year	Plan Status	Implementation Progress
11818	HIXSON METAL FINISHING	Newport Beach	2013	Approved	In Progress
23752	AEROCRAFT HEAT TREATING CO INC	Paramount	2016	Approved	In Progress
126060	STERIGENICS US, LLC.	Ontario	2021	Under Review	N/A
126191, 126107	STERIGENICS US, INC.	Vernon	2021	Under Review	N/A
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	Wilmington	2017	Approved	Complete

#### *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. The ATIR was reviewed and then rejected on February 23, 2022. A revised ATIR was submitted on March 30, 2022, it was then reviewed and approved. Using the revised ATIR which included the revised emissions factors, staff calculated a revised priority score that was less than 10. On June 15, 2022, South Coast AQMD sent the facility a letter notifying them of the revised priority score with no further action required.

### *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. The ATIR was reviewed and then rejected on February 23, 2022. A revised ATIR was submitted on March 30, 2022, it was then reviewed and approved. Using the revised ATIR which included revised emissions factor, staff calculated a revised priority score that was less than 10. On June 15, 2022, South Coast AQMD staff sent the facility a letter notifying them of the revised priority score with no further action required.

### *A.3. All American Asphalt, All American Aggregates (ID 82207) – Irvine<sup>21</sup>*

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.

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

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 on December 12, 2022. In the ATIR approval letter, an HRA was required by February 3, 2022.

The facility submitted its HRA on February 1, 2022. Due to the HRA not conforming to South Coast AQMD guidelines, South Coast AQMD rejected AAA's HRA on February 23, 2022, and requested a revised HRA to be submitted by April 26, 2022. The facility submitted the revised HRA on April 25, 2022. The HRA was submitted to OEHHA for review on May 19, 2022, and OEHHA provided their review on June 14, 2022. South Coast AQMD conditionally approved the HRA on August 19, 2022.

The conditionally approved HRA representing the 2016 year inventory indicated that AAA exceeded the public notification threshold with an acute hazard index of 2.41. The main driver of acute risk was nickel emissions from welding and overall asphalt operations. On September 15, 2022, AAA notified all affected parties subject to an acute risk above Rule 1402 thresholds. On September 28, 2022, South Coast AQMD held a public meeting to discuss results of the HRA and other AQMD related activities for AAA. AAA has now satisfied all its requirements under the AB 2588 program for the 2016 inventory year.

#### *A.4. Coastline High Performance Coatings, Ltd. (ID 112684) – Garden Grove*

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

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

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

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

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

Coastline HPC submitted the HRA on July 14, 2021, and the RRP on July 29, 2021, in accordance with the required deadlines. A revised RRP was later received on September 30, 2021. South Coast AQMD staff reviewed the HRA and found a discrepancy in the methodology used to calculate the cancer burden. On November 18, 2021, staff updated the cancer burden calculation which did not result in any significant increase. The 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. The HRA and RRP were conditionally approved by South Coast AQMD on June 7, 2022. The approved RRP required Coastline HPC to install HEPA filters on two paint spray booths once modification applications had been approved, as well as replacing the contaminated ductwork for this equipment. On July 26, 2022, the contaminated ductwork was removed, disposed of as hazardous waste, and replaced with new ductwork.

Since the HRA results were above the Significant Risk Level in Rule 1402, Coastline HPC was required to notify the public about the health risk. Notices of the public notification meeting were sent out to over 1,000 people in the area of impact. South Coast AQMD staff held a virtual public notification meeting on August 4, 2022, to explain the impact of Coastline HPC's emissions on public health and to discuss next steps.

#### ***A.5. 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. Source testing of the furnace took place in January 2022 and after submittal of the report, the source test report was ultimately approved on December 28, 2022. Pac Rancho may utilize the results of the source test in the inventory for the RRP, if deemed necessary, consistent with South Coast AQMD policy.

On November 15, 2021, Pac Rancho submitted the revised HRA. South Coast AQMD reviewed the submittal and provided comments on December 17, 2021. After review of the revised HRA, South Coast AQMD submitted the HRA to OEHHA for review on February 24, 2022. Upon receiving comments from OEHHA, South Coast AQMD determined that certain modeling assumptions used for the HRA were not consistent with OEHHA guidelines. As a result, South Coast AQMD staff notified the facility that an internal modification and approval of the HRA would take place in accordance with Rule 1402. Staff anticipates approval of the modified HRA in early 2023.

#### ***A.6. Parter Medical Products, Inc. (ID 77129) – Carson***

Parter Medical Products, Inc. (Parter) conducts sterilization of medical equipment using EtO. The facility operates sterilization chambers, aeration rooms, a wet scrubber, and dry bed scrubbers. On August 19, 2022, staff sent a letter informing Parter that they may be designated as a Potentially High Risk Level facility based on monitoring data collected near the facility. On August 21, 2022, Parter voluntarily shut down its operations. On September 21, 2022, South Coast AQMD approved a permit for the upgrades which includes installation of additional dry bed scrubbers and a Permanent Total Enclosure (PTE). Further, all EtO emissions from the sterilization chambers will be directed to two layers of air pollution controls. South Coast AQMD continues to monitor EtO concentrations near Parter and will take further action if necessary.

#### ***A.7. 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. The RRP was conditionally approved on September 13, 2022, including a limit on DPM which will be incorporated through enforceable conditions.

#### *A.8. Sterigenics US, LLC (ID 126060) – Ontario*

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

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

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

prepare the ATIR.

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

#### *A.9. Sterigenics US, Inc. (ID 126191 and 126197) – Vernon*

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

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

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

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

The ATIR was received on November 4, 2022, and after a review by staff was rejected on December 2, 2022, requiring resubmittal by January 3, 2023. The main reason for the ATIR rejection was due to the fact that the methodology used to estimate fugitive emissions did not meet Rule 1402 requirements.

The HRA and RRP were received on December 6, 2022, and are currently under review by staff.

## Appendix B — Health Risks from Facilities with an Approved HRA

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

Table B-1 lists the facilities in order of their cancer risks and Table B-2 lists the facilities ordered by facility ID. The listed health risks are from an approved HRA, unless an approved RRP has been fully implemented. In those instances, the listed health risks reflect the health risks after the implementation of the RRP. Appendix C lists the status of the facility’s RRP and is presented by facility ID. 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
<b>Significant Risk Level</b>	≥ 100	≥ 5.0	N/A
<b>Action Risk Level</b>	≥ 25	≥ 3.0	≥ 0.5
<b>Notification Risk Level</b>	≥ 10	≥ 1.0	N/A
<b>Voluntary Risk Threshold</b>	≥ 10	≥ 1.0	N/A
<b>Exemption Level</b>	< 1	< 0.1	N/A

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
11818	A	HIXSON METAL FINISHING (d)	NEWPORT BEACH	1502	1.09	0.2	0.1	2015
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	24.5	0.43	0.44	0.15	2020
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	22	0.26	1.3	0.07	2020
122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21	ND	0.1	0.4	2000
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.6	0.3	2009
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0	0.3	2008
165192	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	ND	0.5	0.1	2000
18989	A	BOWMAN PLATING CO INC	COMPTON	17	0	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	0.02	0.1	0.1	2000
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
113873	A	MM WEST COVINA	WEST COVINA	13.3	0.31	1.7	0.98	2020
23907	A	JOHNS MANVILLE CORP	CORONA	13	ND	0.4	2.7	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12	ND	0.4	0.1	2000
4477	A	SO CAL EDISON CO	AVALON	11.8	0.05	0.44	0.02	2020
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.3	0.4	2013
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0	0.1	2000
101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0	0.1	2000
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.1	0.2	1999
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.3	0.1	2000
187165	A	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0	0	2002
511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0	2020
15504	A	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	9.5	0.07	1.59	1.11	2002
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0	0	2000

**Table B-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)
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.1	0	2001
10510	A	GREGG INDUSTRIES INC	EL MONTE	9.4	ND	0.6	0.6	2008
62897	A	NORTHROP GRUMMAN CORP, MASD	PICO RIVERA	9.4	ND	1	0.5	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	0.46	0.02	2019
42922	A	CMC PRINTED BAG INC	WHITTIER	9	ND	0	0	1995
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9	ND	0	0	1994
169990	A	SPS TECHNOLOGIES, LLC	GARDENA	8.9	ND	0.1	0.1	1999
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.2	0.1	1997
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0	0	1995
2680	A	LA CO., SANITATION DISTRICT	WHITTIER	8.6	ND	0	0	1999
7203	A	HESSCO IND INC	LA HABRA	8.6	ND	0	0	1995
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0	0	0.2	2002
194431	A	GC HUNTINGTON PARK, LLC	HUNTINGTON PARK	8.5	ND	0	0	2000
800057	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	8.5	ND	0	0.1	1999
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0	0.2	1998
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.1	0	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.2	0.1	1998
7730	A	CARPENTER CO	RIVERSIDE	8	ND	0.03	1.34	2003
800054	A	GATX RAIL CORP	SAN PEDRO	8	ND	0.3	0.5	1997
3609	A	AL'S PLATING CO INC	LOS ANGELES	7.8	ND	0.3	0.2	1999
37603	A	SGL TECHNIC LLC	VALENCIA	7.8	ND	0	0.4	1998
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.1	0.1	2001
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0	0.8	0.3	2008
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.2	0.5	2013
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

**Table B-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)
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.2	0	1997
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.1	0	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.7	0.4	2007
800032	A	CHEVRON USA INC	MONTEBELLO	7.5	0.14	0	0.2	1999
800150	A	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	7.4	0.02	0.3	0	2008
108701	A	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.1	0.1	2000
174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.3	0.1	2000
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0	0.1	1998
800026	A	ULTRAMAR INC	WILMINGTON	7.2	0.18	0.7	0.2	2012
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.9	0	2007
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.2	0.1	2007
8547	A	QUEMETCO INC	CITY OF INDUSTRY	7.1	0.45	0.09	0.69	2016
27343	O	CON AGRA INC, GILROY FOODS DBA	SANTA ANA	7.1	ND	0.2	0.1	1995
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	7.1	ND	0	0	2018
166587	A	THE BOEING COMPANY	HUNTINGTON BEACH	7	ND	0	0	1995
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0	0.1	2000
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0	0.9	0.3	2011
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0	0.1	1999
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0	0.2	1997
171109	A	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	6.6	0.11	0	0.3	2011
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
6643	A	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0	0.1	2007
11726	A	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.1	0.6	1999
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0	0.1	2002
168088	A	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.1	1.6	1995
1073	A	BORAL ROOFING LLC	CORONA	6.4	0	0.51	2.72	2018
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0	0	1997

**Table B-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)
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	0.3	0	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	0.1	1996
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0	0.1	1998
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0	0.1	2000
800180	A	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.5	0.8	1999
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6	ND	0	0.5	1996
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0	0.1	1999
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0	0	1998
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0	0.1	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0	0.2	1999
8578	A	ASSOCIATED CONCRETE PROD. INC	SANTA ANA	5.8	ND	0.1	0.6	1999
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.3	0.6	1998
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0	0	1996
164864	A	ARROWHEAD BRASS & PLUMBING	LOS ANGELES	5.7	ND	0.3	0	1995
22410	O	PALACE PLATING	LOS ANGELES	5.6	ND	0.73	0.38	2004
38971	A	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0	0.4	1995
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0	0.1	1996
14146	A	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0	0.1	1998
54424	A	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.2	0.2	2001
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.2	0	2007
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.5	0.2	1998
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.1	0	1997
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.6	0.2	2000
109198	A	TORCH OPERATING COMPANY	BREA	5	ND	0	0	2001

**Table B-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)
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.2	0	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	0	2008
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0	0	0	2002
190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.2	0.1	1999
101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.6	1	1998
3950	A	CROWN CORK & SEAL CO INC	LA MIRADA	4.6	ND	0	0.1	1997
82207	A	ALL AMERICAN ASPHALT,ALL AMER AGGREGATES	IRVINE	4.5	0	0.61	0.07	2022
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0	0.01	0.02	2021
157451	A	BENDER CCP INC	VERNON	4.4	0	1	0	2002
800041	A	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.1	0	2000
93346	A	WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY	SOUTH EL MONTE	4.3	ND	0.1	0.2	1997
174591	A	TESORO REF & MKTG CO LLC,CALCINER	LONG BEACH	4.3	ND	0.1	0.2	1995
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.3	0	2001
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.5	0.1	1995
6459	O	HONEYWELL INTERNATIONAL INC	VERNON	4.1	ND	0	0	1999
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.6	0.2	1998
151183	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.3	0.1	2003
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.3	0	2002
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0	0	0	2007
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	CITY OF INDUSTRY	3.7	ND	0	0	1996
9114	O	SOMITEX PRINTS OF CAL INC	CITY OF INDUSTRY	3.7	ND	0.1	0	1996
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0	0	2002
106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1	0.5	2001
126197	A	STERIGENICS US, INC.	LOS ANGELES	3.6	ND	0	0	1996

**Table B-1 (cont'd)**  
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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)
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0	0.5	2000
8015	A	ANADITE INC	SOUTH GATE	3.5	ND	0.63	0.78	1998
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.1	0.5	2000
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0	0	2002
151899	A	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0	0.2	2000
16951	A	ANAPLEX CORP	PARAMOUNT	3.4	ND	2.89	ND	2018
9163	A	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	ONTARIO	3.4	ND	0.3	0	2007
57329	O	KWIKSET CORP	ANAHEIM	3.4	ND	0	0.1	2000
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0	0	1999
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0	0	1996
126191	A	STERIGENICS US, INC.	LOS ANGELES	3.3	ND	0	0	1996
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0	0	1999
800063	A	GROVER PROD. CO (EIS USE)	LOS ANGELES	3.3	0.04	0.88	0.07	2001
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0	0.7	0	2012
6384	A	LA CO., RANCHO LOS AMIGOS NAT. REHAB CTR	DOWNEY	3.1	ND	0	0.1	1999
10005	A	ELECTRONIC CHROME GRINDING CO, INC	SANTA FE SPRINGS	3	0.01	0.2	0.1	2001
11435	A	PQ CORPORATION	SOUTH GATE	3	ND	0	0	1998
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	3	0	0.27	0.13	2022
113676	A	VICKERS	LOS ANGELES	3	ND	0	0	1995
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3	ND	0	0	1994
2613	A	U.S.GVT,NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.1	0	2002
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0	0.1	1999
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.7	0.1	2009
116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0	0	1999
48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0	0.4	1997
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.1	0	1999

**Table B-1 (cont'd)**  
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167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0	0	2000
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0	0.1	1995
5887	A	NEXGEN PHARMA INC	IRVINE	2.7	ND	0	0	1997
16642	A	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	2.7	ND	0	0.1	1999
25440	A	INVENSYS CLIMATE CONTROLS	LONG BEACH	2.7	ND	0	1	1998
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0	0.1	2002
46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.2	0	1995
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0	0.1	1997
800030	A	CHEVRON PRODUCTS CO.	EL SEGUNDO	2.7	0.28	0.3	0.1	2001
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0	0.2	2000
41229	A	LUBECO INC	LONG BEACH	2.6	ND	ND	ND	2019
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.1	0.3	1997
37507	A	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	2.6	0	1.1	1.3	2012
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.6	0	2008
185059	A	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0	0	1995
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1	0	0.2	1998
133405	A	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0	0.2	1999
172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0	0	1999
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.1	0.8	1999
800039	O	DOUGLAS PRODUCTS DIVISION	TORRANCE	2.4	ND	0	0	1996
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0	0	1996
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0	0.1	1999
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.1	0	2007
1208	A	MICROSEMI CORP	SANTA ANA	2.3	ND	0	0	2001
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0	0	1996
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0	0	0	2013
800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0	0	1997

**Table B-1 (cont'd)**  
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800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0	0.1	1996
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0	0	0.2	2000
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.6	0	2004
9668	A	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0	0	2000
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0	0	0.1	2009
2605	A	3M DRUG DELIVERY SYSTEMS	NORTHRIDGE	2	ND	0.4	0.4	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2	ND	0.1	0.2	2001
155474	A	BICENT (CALIFORNIA) MALBURG LLC	VERNON	2	0	0	0	2007
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2	ND	0	0.5	1998
800181	A	CALIFORNIA PORTLAND CEMENT CO	COLTON	2	ND	0	0.4	1996
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.1	0.6	1999
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0	0	2000
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0	0.1	2001
800003	A	HONEYWELL INTERNATIONAL INC	TORRANCE	1.8	ND	0	0	1999
8309	A	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	1.7	ND	0	0.1	2000
22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.7	0.2	2000
82512	A	BREA CANON OIL CO	WILMINGTON	1.7	ND	0	0	1996
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.3	0.3	1996
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0	0.4	0.3	2017
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.8	0.4	1998
185801	A	BERRY PETROLEUM COMPANY, LLC	SANTA CLARITA	1.6	ND	0.2	0.7	1999
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.1	0	2007
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0	0.3	0.1	2009
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0	0	2001
126536	A	CPP - POMONA	POMONA	1.5	ND	0	0	1999
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.1	0.2	1999
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0	0	1996

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800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.9	0.1	1998
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0	0	1996
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0	0.5	1997
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.6	0.1	1996
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0	0	1999
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0	0	1996
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0	0	2005
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0	0	2000
42514	A	LA COUNTY SANITATION DIST (CALABASAS)	AGOURA	1.1	0	0.1	0	2010
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0	0.1	1996
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	1	0	0.0	0.0	2019
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1	ND	0	0.1	1997
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1	ND	0	0	1999
800127	A	SO CAL GAS CO	MONTEBELLO	1	0	0	0	2009
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.2	0.1	1996
47056	A	MYERS CONTAINER CORP, IMACC CORP DIV	HUNTINGTON PARK	0.9	ND	0.2	2	2002
800301	A	ITT GILFILLAN	VAN NUYS	0.9	ND	0.1	0.2	1998
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0	0.4	1999
18378	A	GRUBER SYS INC	VALENCIA	0.8	ND	0.1	0.1	2004
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0	0.1	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0	0	1995
150201	A	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0	0	1998
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.2	0	2007
22373	A	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0	0	1996
24060	A	AQUATIC COMPANY	ANAHEIM	0.7	ND	0	0	1996
174340	A	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0	0	1995
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0	0	1999

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15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.1	0	2000
24756	A	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0	0.1	1997
115394	A	AES ALAMITOS, LLC	LONG BEACH	0.6	ND	0	0	1999
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.9	0.02	1997
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0	0	1995
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	SYLMAR	0.5	ND	0	0	1999
6281	A	US GOVT,MARINE CORPS AIR STATION,EL TORO	SANTA ANA	0.5	ND	0	0	1996
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0	0	2003
61160	A	GE ENGINE SERVICES, LLC	ONTARIO	0.5	ND	0.7	0.01	2003
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.4	0.2	2001
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0	0.1	0.4	2012
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0	0	1994
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0	0	2001
43436	A	TST, INC.	FONTANA	0.4	0.11	0	0.4	1997
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0	0	0.1	2011
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0	0	1998
122295	A	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0	0	1999
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0	0	2008
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0	0	1999
24520	A	LA CNTY SANITATION DISTRICT-PALOS VERDES	ROLLING HILLS ESTATES	0.3	ND	0	0	1998
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.3	0	1996
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.1	0.3	1999
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.1	0.1	2007
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0	0	1997
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0	0	2000
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.6	0	2002
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0	0	2000

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161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0	0	0	2010
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0	0.2	1996
112684	A	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	GARDEN GROVE	0.3	ND	ND	0.01	2022
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0	0	1999
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0	0	2002
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0	0	2000
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.7	0	1996
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.3	0	1999
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0	0	1997
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0	0	2001
16044	A	SPECIALTY ORGANICS, INC.	IRWINDALE	0.1	ND	0	0.2	1997
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0	0	1995
24118	A	DEVOE COATINGS CO	RIVERSIDE	0.1	ND	0.3	0.1	1999
24812	A	FARMER BROS CO	TORRANCE	0.1	ND	0	0	1999
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0	0	2002
37336	A	COMMERCE REFUSE TO ENERGY FACILITY	COMMERCE	0.1	0	0	0	2010
42676	A	CES PLACERITA INC	NEWHALL	0.1	ND	0.1	0	2003
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.4	0.4	2002
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0	0	1999
156741	A	HARBOR COGENERATION CO, LLC	WILMINGTON	0.1	ND	0	0	2002
180908	A	ECO SERVICES OPERATIONS CORP.	CARSON	0.1	ND	0	0.1	2006
23752	A	AEROCRAFT HEAT TREATING CO INC (d)	PARAMOUNT	0	ND	2.9	0.15	2018
809	O	GARNER GLASS CO	CLAREMONT	0	ND	0	0	1996
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0	ND	0	0	1996
1746	A	UNITED ALLOYS INC	LOS ANGELES	0	ND	0	0	1998
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0	ND	0	0	1996
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0	ND	0	0	1995

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4616	O	SUPERIOR IND INTL INC	VAN NUYS	0	ND	0	0.4	1997
5125	A	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0	ND	0	0.3	1996
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0	ND	0	0	1999
6163	A	OHLINE	GARDENA	0	ND	0.3	0.7	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0	ND	0	0.6	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0	ND	0	0	1995
6670	O	TRU CUT INC	LOS ANGELES	0	ND	0	0	2002
7010	A	PRUDENTIAL OVERALL SUPPLY	IRVINE	0	ND	0	0	1995
8560	A	PRUDENTIAL OVERALL SUPPLY CO	COMMERCE	0	ND	0.2	0.4	1995
8935	A	TRAIL RITE INC	SANTA ANA	0	ND	0	0.3	1996
10656	A	NEWPORT LAMINATES	SANTA ANA	0	ND	0	0	1996
12493	O	REMO INC	NORTH HOLLYWOOD	0	ND	0	0	1997
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0	ND	0	0	1994
14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0	ND	0	0	2002
14217	A	MODERN FAUCET MFG COMPANY	LOS ANGELES	0	ND	0	0.5	1996
19953	A	RISTON KELLER INC	IRVINE	0	ND	0	0	1996
20144	A	CANON BUSINESS MACHINES INC	COSTA MESA	0	ND	0	0.1	1999
22092	A	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0	ND	0	0.6	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0	ND	0	0	2002
24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0	ND	0	0.2	1999
40806	A	NEW BASIS	RIVERSIDE	0	ND	0.7	0.2	1997
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0	ND	0	0	1999
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0	ND	0	0	1995
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0	ND	0	0	1996
70021	A	XERXES CORP ( A DELAWARE CORP)	ANAHEIM	0	ND	0	0	1996

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115586	A	SUNDANCE SPAS, INC	CHINO	0	ND	0	0.4	1996
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0	ND	0	0	2000
124016	O	CHEMETALL U.S., INC,	LA MIRADA	0	ND	0.1	0.1	2000
124838	A	EXIDE TECHNOLOGIES	VERNON	0	ND	0	0	2013
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0	ND	0.2	0.7	1997
149241	A	REGAL CULTURED MARBLE	POMONA	0	ND	0	0.2	1995
160916	A	FXI, INC.	ORANGE	0	ND	0.4	0.4	1994
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0	ND	0	0	1996
189043	A	REVLIN DBA ELIMINATOR BOATS	MIRA LOMA	0	ND	0	0	1995
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0	ND	0.3	0	1999
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0	ND	0.2	0.2	2000
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0	ND	0	0.4	1994
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0	ND	0	0	2000
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0	ND	0	0	1997
800109	A	REYNOLDS METALS CO	TORRANCE	0	ND	0.2	0.9	2001
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0	ND	0	0	2000
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0	ND	0	0	1996
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0	ND	0	0	2000
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0	ND	0.1	0.3	2004
800337	A	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0	ND	0	0	1996

Notes:

- (a) "A" – Active (note that facilities with this status may not be in operation currently); O = Out of Business or Inactive
- (b) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
- (c) ND = Not Determined
- (d) RRP in progress, see Table C-1.

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511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0	2020
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0	0	2008
809	O	GARNER GLASS CO	CLAREMONT	0	ND	0	0	1996
1073	A	BORAL ROOFING LLC	CORONA	6.4	0	0.51	2.72	2018
1208	A	MICROSEMI CORP	SANTA ANA	2.3	ND	0	0	2001
1226	A	HYATT DIE CAST & ENGINEERING CORP	CYPRESS	6.2	ND	0	0.1	1996
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0	0	1995
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0	ND	0	0	1996
1746	A	UNITED ALLOYS INC	LOS ANGELES	0	ND	0	0	1998
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0	0	1997
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0	0	1996
2605	A	3M DRUG DELIVERY SYSTEMS	NORTHBRIDGE	2	ND	0.4	0.4	1996
2613	A	U.S.GVT.NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.1	0	2002
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.1	0	2007
2680	A	LA CO., SANITATION DISTRICT	WHITTIER	8.6	ND	0	0	1999
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0	0	1997
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0	ND	0	0	1996
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	SYLMAR	0.5	ND	0	0	1999
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0	ND	0	0	1995
3609	A	AL'S PLATING CO INC	LOS ANGELES	7.8	ND	0.3	0.2	1999
3950	A	CROWN CORK & SEAL CO INC	LA MIRADA	4.6	ND	0	0.1	1997
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.1	0.2	1999
4477	A	SO CAL EDISON CO	AVALON	11.8	0.05	0.44	0.02	2020
4616	O	SUPERIOR IND INTL INC	VAN NUYS	0	ND	0	0.4	1997
5125	A	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0	ND	0	0.3	1996
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0	ND	0	0	1999
5723	A	DUCOMMUN AEROSTRUCTURES INC	ORANGE	6.7	ND	0	0.1	1999

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5887	A	NEXGEN PHARMA INC	IRVINE	2.7	ND	0	0	1997
6163	A	OHLINE	GARDENA	0	ND	0.3	0.7	1996
6281	A	US GOVT,MARINE CORPS AIR STATION,EL TORO	SANTA ANA	0.5	ND	0	0	1996
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0	ND	0	0.6	1999
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0	ND	0	0	1995
6384	A	LA CO., RANCHO LOS AMIGOS NAT. REHAB CTR	DOWNEY	3.1	ND	0	0.1	1999
6459	O	HONEYWELL INTERNATIONAL INC	VERNON	4.1	ND	0	0	1999
6643	A	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0	0.1	2007
6670	O	TRU CUT INC	LOS ANGELES	0	ND	0	0	2002
7010	A	PRUDENTIAL OVERALL SUPPLY	IRVINE	0	ND	0	0	1995
7203	A	HESSCO IND INC	LA HABRA	8.6	ND	0	0	1995
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0	0	2001
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999
7730	A	CARPENTER CO	RIVERSIDE	8	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	0.1	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	ND	0.2	0.4	1995
8578	A	ASSOCIATED CONCRETE PROD. INC	SANTA ANA	5.8	ND	0.1	0.6	1999
8582	A	SO CAL GAS CO/PLAYA DEL REY STORAGE FAC	PLAYA DEL REY	9.2	0	0.46	0.02	2019
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	CITY OF INDUSTRY	3.7	ND	0	0	1996
8935	A	TRAIL RITE INC	SANTA ANA	0	ND	0	0.3	1996
9114	O	SOMITEX PRINTS OF CAL INC	CITY OF INDUSTRY	3.7	ND	0.1	0	1996
9163	A	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	ONTARIO	3.4	ND	0.3	0	2007
9668	A	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0	0	2000
10005	A	ELECTRONIC CHROME GRINDING CO, INC	SANTA FE SPRINGS	3	0.01	0.2	0.1	2001
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0	0	2000

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10510	A	GREGG INDUSTRIES INC	EL MONTE	9.4	ND	0.6	0.6	2008
10656	A	NEWPORT LAMINATES	SANTA ANA	0	ND	0	0	1996
11142	A	KEYSOR-CENTURY CORP	SAUGUS	17	ND	0.5	0.1	2000
11192	A	HI-SHEAR CORPORATION	TORRANCE	4.8	ND	0	0	2008
11435	A	PQ CORPORATION	SOUTH GATE	3	ND	0	0	1998
11726	A	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.1	0.6	1999
11818	A	HIXSON METAL FINISHING (d)	NEWPORT BEACH	1502	1.09	0.2	0.1	2015
12493	O	REMO INC	NORTH HOLLYWOOD	0	ND	0	0	1997
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0	0	1994
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0	ND	0	0	1994
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0	0.8	0.3	2008
14146	A	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0	0.1	1998
14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0	ND	0	0	2002
14217	A	MODERN FAUCET MFG COMPANY	LOS ANGELES	0	ND	0	0.5	1996
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0	0.3	2008
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0	0.4	1999
15504	A	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	9.5	0.07	1.59	1.11	2002
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.1	0	2000
16044	A	SPECIALTY ORGANICS, INC.	IRWINDALE	0.1	ND	0	0.2	1997
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0	0	1999
16642	A	ANHEUSER-BUSCH LLC., (LA BREWERY)	VAN NUYS	2.7	ND	0	0.1	1999
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	6.4	0.02	0.01	0.08	2015
16951	A	ANAPLEX CORP	PARAMOUNT	3.4	ND	2.89	ND	2018
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0	0	2002
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	0.1	0.1	2004
18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0	0.7	0	2012

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18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.6	0.2	1998
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0	0.1	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12	ND	0.4	0.1	2000
18989	A	BOWMAN PLATING CO INC	COMPTON	17	0	0.01	0.01	2015
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0	0	2001
19953	A	RISTON KELLER INC	IRVINE	0	ND	0	0	1996
19989	O	PARKER HANNIFIN AEROSPACE CORP	IRVINE	0.3	ND	0	0	1999
20144	A	CANON BUSINESS MACHINES INC	COSTA MESA	0	ND	0	0.1	1999
20197	A	LAC/USC MEDICAL CENTER	LOS ANGELES	7.5	ND	0.7	0.4	2007
20280	A	METAL SURFACES INTERNATIONAL, LLC	BELL GARDENS	6.8	0	0.9	0.3	2011
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1	ND	0	0.1	1997
20528	A	BRISTOL FIBERLITE IND	SANTA ANA	0.1	ND	0	0	1995
21615	O	PERKINELMER OPTOELECTRONICS SC, INC	AZUSA	8.1	ND	0.2	0.1	1998
21895	A	AC PRODUCTS INC	PLACENTIA	0.5	ND	0	0	2003
22092	A	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0	ND	0	0.6	1997
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0	ND	0	0	2002
22373	A	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0	0	1996
22410	O	PALACE PLATING	LOS ANGELES	5.6	ND	0.73	0.38	2004
22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.7	0.2	2000
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.2	0.1	1996
22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0	0.1	2001
23752	A	AEROCRAFT HEAT TREATING CO INC	PARAMOUNT	0	ND	2.9	0.15	2018
23907	A	JOHNS MANVILLE CORP	CORONA	13	ND	0.4	2.7	1999
24060	A	AQUATIC COMPANY	ANAHEIM	0.7	ND	0	0	1996
24118	A	DEVOE COATINGS CO	RIVERSIDE	0.1	ND	0.3	0.1	1999
24520	A	LA CNTY SANITATION DISTRICT-PALOS VERDES	ROLLING ESTATES HILLS	0.3	ND	0	0	1998

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24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0	ND	0	0.2	1999
24756	A	CRANE CO, HYDRO-AIRE DIV	BURBANK	0.6	ND	0	0.1	1997
24812	A	FARMER BROS CO	TORRANCE	0.1	ND	0	0	1999
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0	0	2002
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0	0.3	0.1	2009
25440	A	INVENSYS CLIMATE CONTROLS	LONG BEACH	2.7	ND	0	1	1998
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.3	0	1996
27343	O	CON AGRA INC, GILROY FOODS DBA	SANTA ANA	7.1	ND	0.2	0.1	1995
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0	0.1	2002
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0	0.1	2002
35302	A	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	14	0.02	0.1	0.1	2000
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.1	0.3	1997
37336	A	COMMERCE REFUSE TO ENERGY FACILITY	COMMERCE	0.1	0	0	0	2010
37507	A	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	2.6	0	1.1	1.3	2012
37603	A	SGL TECHNIC LLC	VALENCIA	7.8	ND	0	0.4	1998
38971	A	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0	0.4	1995
40806	A	NEW BASIS	RIVERSIDE	0	ND	0.7	0.2	1997
41229	A	LUBECO INC	LONG BEACH	2.6	ND	ND	ND	2019
42514	A	LA COUNTY SANITATION DIST (CALABASAS)	AGOURA	1.1	0	0.1	0	2010
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0	0	1996
42676	A	CES PLACERITA INC	NEWHALL	0.1	ND	0.1	0	2003
42922	A	CMC PRINTED BAG INC	WHITTIER	9	ND	0	0	1995
43436	A	TST, INC.	FONTANA	0.4	0.11	0	0.4	1997
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0	0	0.1	2011
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0	0.1	1998
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.3	0	2002
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0	ND	0	0	1999

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46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.2	0	1995
47056	A	MYERS CONTAINER CORP, IMACC CORP DIV	HUNTINGTON PARK	0.9	ND	0.2	2	2002
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0	ND	0	0	1995
48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0	0.4	1997
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0	0	2002
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	7.1	ND	0	0	2018
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.7	0.1	2009
54424	A	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.2	0.2	2001
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
57329	O	KWIKSET CORP	ANAHEIM	3.4	ND	0	0.1	2000
61160	A	GE ENGINE SERVICES, LLC	ONTARIO	0.5	ND	0.7	0.01	2003
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0	ND	0	0	1996
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0	0.5	1997
62897	A	NORTHROP GRUMMAN CORP, MASD	PICO RIVERA	9.4	ND	1	0.5	2000
70021	A	XERXES CORP ( A DELAWARE CORP)	ANAHEIM	0	ND	0	0	1996
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1	0	0.2	1998
82207	A	ALL AMERICAN ASPHALT,ALL AMER AGGREGATES	IRVINE	4.5	0	0.61	0.07	2022
82512	A	BREA CANON OIL CO	WILMINGTON	1.7	ND	0	0	1996
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0	0	1996
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	3	0	0.27	0.13	2022
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0	0	1996
93346	A	WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY	SOUTH EL MONTE	4.3	ND	0.1	0.2	1997
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.4	0.4	2002
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.1	0.3	1999
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0	0	0.2	2000
101380	O	GENERAL DYNAMICS OTS (DOWNEY) INC	DOWNEY	9.8	ND	0	0.1	2000

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101977	A	SIGNAL HILL PETROLEUM INC	SIGNAL HILL	4.7	ND	0.6	1	1998
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.6	0	2004
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.2	0	1999
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1	0.5	2001
106797	A	SAINT-GOBAIN CONTAINERS, INC.	LOS ANGELES	9.9	ND	0	0.1	2000
106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.1	0.1	2007
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0	0	2001
108701	A	SAINT-GOBAIN CONTAINERS, INC.	EL MONTE	7.3	ND	0.1	0.1	2000
109198	A	TORCH OPERATING COMPANY	BREA	5	ND	0	0	2001
111415	O	VAN CAN COMPANY	FONTANA	0.8	ND	0	0.1	1996
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0	0	1997
112684	A	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	GARDEN GROVE	0.3	ND	ND	0.01	2022
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.2	0	1997
113676	A	VICKERS	LOS ANGELES	3	ND	0	0	1995
113873	A	MM WEST COVINA	WEST COVINA	13.3	0.31	1.7	0.98	2020
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0	0	1999
115394	A	AES ALAMITOS, LLC	LONG BEACH	0.6	ND	0	0	1999
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0	0	1998
115586	A	SUNDANCE SPAS, INC	CHINO	0	ND	0	0.4	1996
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0	0	2000
116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0	0	1999
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0	0.2	1997
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0	ND	0	0	2000
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.3	0.3	1996
122295	A	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0	0	1999
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.6	0	2002

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122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21	ND	0.1	0.4	2000
124016	O	CHEMETALL U.S., INC,	LA MIRADA	0	ND	0.1	0.1	2000
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.5	0.1	1995
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0	0	2000
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1	ND	0	0	1999
124838	A	EXIDE TECHNOLOGIES	VERNON	0	ND	0	0	2013
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.1	0	1995
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0	0	0	2007
126191	A	STERIGENICS US, INC.	LOS ANGELES	3.3	ND	0	0	1996
126197	A	STERIGENICS US, INC.	LOS ANGELES	3.6	ND	0	0	1996
126536	A	CPP - POMONA	POMONA	1.5	ND	0	0	1999
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.6	0.1	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0	0	1995
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.1	0.5	2000
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0	ND	0.2	0.7	1997
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0	0.4	0.3	2017
133405	A	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0	0.2	1999
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.8	0.4	1998
134018	A	INDUSTRIAL CONTAINER SERVICES-CA LLC	MONTEBELLO	5.2	ND	0.6	0.2	2000
134931	A	ARCONIC GLOBAL FASTENERS & RINGS, INC.	FULLERTON	0.6	ND	1.9	0.02	1997
134943	A	ARCONIC GLOBAL FASTENERS & RINGS INC	TORRANCE	2.6	ND	0.6	0	2008
136148	A	E/M COATING SERVICES	NORTH HOLLYWOOD	5.8	ND	0.3	0.6	1998
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0	0	2002
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6	ND	0	0.5	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2	ND	0.1	0.2	2001
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0	0.01	0.02	2021
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.1	0.2	1999

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Year (b)
149241	A	REGAL CULTURED MARBLE	POMONA	0	ND	0	0.2	1995
150201	A	BREITBURN OPERATING LP	SANTA FE SPRINGS	0.8	ND	0	0	1998
151183	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.3	0.1	2003
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.1	0	1999
151899	A	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0	0.2	2000
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0	0.1	1996
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.4	0.2	2001
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0	0	1999
155474	A	BICENT (CALIFORNIA) MALBURG LLC	VERNON	2	0	0	0	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	0	2002
157451	A	BENDER CCP INC	VERNON	4.4	0	1	0	2002
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0	0	0	2013
160916	A	FXI, INC.	ORANGE	0	ND	0.4	0.4	1994
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0	0	0	2010
164864	A	ARROWHEAD BRASS & PLUMBING	LOS ANGELES	5.7	ND	0.3	0	1995
165192	A	TRIUMPH AEROSTRUCTURES, LLC	HAWTHORNE	19.7	ND	0.64	0.24	1999
166587	A	THE BOEING COMPANY	HUNTINGTON BEACH	7	ND	0	0	1995
167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0	0	2000
168088	A	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.1	1.6	1995
169754	A	SO CAL HOLDING, LLC	HUNTINGTON BEACH	7.6	0.02	0.02	0.04	2019
169990	A	SPS TECHNOLOGIES, LLC	GARDENA	8.9	ND	0.1	0.1	1999
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	24.5	0.43	0.44	0.15	2020
171109	A	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY	CARSON	6.6	0.11	0	0.3	2011
172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0	0	1999
174340	A	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0	0	1995
174591	A	TESORO REF & MKTG CO LLC,CALCINER	LONG BEACH	4.3	ND	0.1	0.2	1995

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million)	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	0.3	0.1	2000
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3	ND	0	0	1994
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9	ND	0	0	1994
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0	0	1995
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0	ND	0	0	1996
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.3	0	2001
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
180908	A	ECO SERVICES OPERATIONS CORP.	CARSON	0.1	ND	0	0.1	2006
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.6	0.3	2009
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.2	0.5	2013
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2	ND	0	0.5	1998
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.1	0	1997
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0	0	1999
183567	A	GS II, INC.	WILMINGTON	6.3	0.04	1.82	0.19	2018
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.1	0.8	1999
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0	0.1	1997
185059	A	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0	0	1995
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0	0	2005
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.2	0	2007
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0	0	1999
185801	A	BERRY PETROLEUM COMPANY, LLC	SANTA CLARITA	1.6	ND	0.2	0.7	1999
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.2	0	2007
187165	A	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0	0	2002
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0	0	1999
187823	A	KIRK HILL INC	BREA	18.8	0.07	0.06	0.11	2019
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0	0.1	0.4	2012

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million)	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	ND	0	0	1995
190051	A	BRIDGE POINT LONG BEACH LLC	LONG BEACH	4.8	0	0	0	2002
190377	A	GCC LONG BEACH C/O GOODMAN	LONG BEACH	4.8	ND	0.2	0.1	1999
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0	ND	0.3	0	1999
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0	0	0.2	2002
194431	A	GC HUNTINGTON PARK, LLC	HUNTINGTON PARK	8.5	ND	0	0	2000
800003	A	HONEYWELL INTERNATIONAL INC	TORRANCE	1.8	ND	0	0	1999
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0	0.5	2000
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0	ND	0.2	0.2	2000
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0	ND	0	0.4	1994
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0	0.1	1999
800026	A	ULTRAMAR INC	WILMINGTON	7.2	0.18	0.7	0.2	2012
800030	A	CHEVRON PRODUCTS CO.	EL SEGUNDO	2.7	0.28	0.3	0.1	2001
800032	A	CHEVRON USA INC	MONTEBELLO	7.5	0.14	0	0.2	1999
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0	0.1	1995
800037	A	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	COMPTON	4.9	0.01	0.01	0.02	2009
800039	O	DOUGLAS PRODUCTS DIVISION	TORRANCE	2.4	ND	0	0	1996
800041	A	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.1	0	2000
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0	0	1998
800054	A	GATX RAIL CORP	SAN PEDRO	8	ND	0.3	0.5	1997
800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0	0	1997
800057	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	CARSON	8.5	ND	0	0.1	1999
800063	A	GROVER PROD. CO (EIS USE)	LOS ANGELES	3.3	0.04	0.88	0.07	2001
800066	A	HITCO CARBON COMPOSITES INC	GARDENA	6.4	ND	0.3	0	1995
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0	0.1	2000
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0	0	2000
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0	ND	0	0	2000

**Table B-2**  
**Health Risks from Facilities with an Approved HRA**  
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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	0.2	1998
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0	ND	0	0	1997
800109	A	REYNOLDS METALS CO	TORRANCE	0	ND	0.2	0.9	2001
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0	0.1	1996
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.9	0	2007
800117	A	SHELL OIL CO (EIS USE)	WILMINGTON	7.3	ND	0	0.1	1998
800127	A	SO CAL GAS CO	MONTEBELLO	1	0	0	0	2009
800129	A	SFPP, L.P.	BLOOMINGTON	5.8	ND	0	0	1996
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0	0	2000
800150	A	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	RIVERSIDE	7.4	0.02	0.3	0	2008
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0	ND	0	0	2000
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.7	0	1996
800180	A	UNOCAL CORP, UNOCAL CHEM DIV (EIS USE)	LA MIRADA	6.2	ND	0.5	0.8	1999
800181	A	CALIFORNIA PORTLAND CEMENT CO	COLTON	2	ND	0	0.4	1996
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.1	0.1	2001
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.2	0.1	1997
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.3	0	1999
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0	0.1	1999
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0	0	1996
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0	0	1996
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0	ND	0	0	1996
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0	0.1	2000
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.1	0	1999
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0	0.2	2000
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.2	0.1	2007

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million)	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	ND	0	0	2000
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0	0.1	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0	0.2	1999
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0	0.1	1996
800301	A	ITT GILFILLAN	VAN NUYS	0.9	ND	0.1	0.2	1998
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.1	0	2001
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0	ND	0.1	0.3	2004
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.1	0.6	1999
800327	A	GLENDALE CITY, GLENDALE WATER & POWER	GLENDALE	1	0	0.0	0.0	2019
800330	A	THUMS LONG BEACH	LONG BEACH	1.2	ND	0	0	2000
800337	A	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0	ND	0	0	1996
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0	0.2	1996
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	22	0.26	1.3	0.07	2020
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.3	0.1	2000
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.1	0	2007
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.9	0.1	1998
800409	A	NORTHROP GRUMMAN SYSTEMS CORPORATION	REDONDO BEACH	5.5	ND	0.5	0.2	1998
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0	0	0.1	2009
800436	A	TESORO REFINING AND MARKETING CO, LLC	WILMINGTON	10.7	0.37	0.3	0.4	2013

Notes:

- (a) A = Active (note that facilities with “Active” status within South Coast AQMD’s database may not currently be in operation); I = Inactive; 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 C — Approved Risk Reduction Plans and Voluntary Risk Reduction Plans

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

**Table C-1: Status of Risk Reduction Plans**

Facility ID	Facility Name	Submitted	Approved	Implemented	Residual Risk (e)			
					Cancer Risk	Chronic HI	Acute HI	Cancer Burden
7427	OWENS-BROCKWAY GLASS CONTAINER INC	Yes	Yes	Yes	3.6	0.01	0.06	0.00
7730	CARPENTER CO	Yes	Yes	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	NIKOR CHEMICAL COMPANY INC (a)	Yes	Yes	Yes	N/A	N/A	N/A	N/A
15504	SCHLOSSER FORGE COMPANY	Yes	Yes	Yes	9.5	1.59	1.11	0.07
16951	ANAPLEX CORP	Yes	Yes	Yes	3.4	ND	2.89	ND
18294	NORTHROP GRUMMAN SYSTEMS CORP	Yes	Yes	Yes	7.6	0.13	0.05	N/A
18931	GERDAU/TAMCO (c)	Yes	Yes	(See Note)	0.0	0.00	0.00	0.00
18989	BOWMAN PLATING CO INC	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	Yes	0.0	0.15	0.61	ND
25012	AMADA AMERICA, INC.	Yes	Yes	Yes	0.0	0.00	0.00	0.00
41229	LUBECO INC	Yes	Yes	Yes	2.6	ND	ND	ND
45938	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	Yes	Yes	Yes	0.0	0.00	0.00	0.00
61160	GE ENGINE SERVICES, LLC	Yes	Yes	Yes	0.5	0.70	0.01	0.00
113873	MM WEST COVINA LLC	Yes	Yes	Yes	13.3	0.98	1.7	0.31
112684	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	Yes	Yes	Yes	0.3	0.01	ND	ND
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	Yes	Yes	Yes	24.5	0.15	0.44	0.43
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.
- (e) ND = Not Determined

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

South Coast AQMD’s Rule 1402 — Control of Toxic Air Contaminants from Existing Sources includes a Voluntary Risk Reduction Program. 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 C-2 below lists the facilities with an approved Voluntary Risk Reduction Plan.

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

Facility ID	Facility Status (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 <sup>TH</sup> 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 D — List of Acronyms and Abbreviations

<b>Acronym</b>	<b>Description</b>
AB 2588	Air Toxics “Hot Spots” Information and Assessment Act
AB 617	Assembly Bill 617
AirToxScreen	Air Toxics Screening Assessment
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
EARP	Early Action Reduction Plan
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
NATA	National Air Toxics Assessment
NESHAP	National Emission Standard for Hazardous Air Pollutant
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

# AB 2588 Toxic Hot Spots 2022 Annual Report

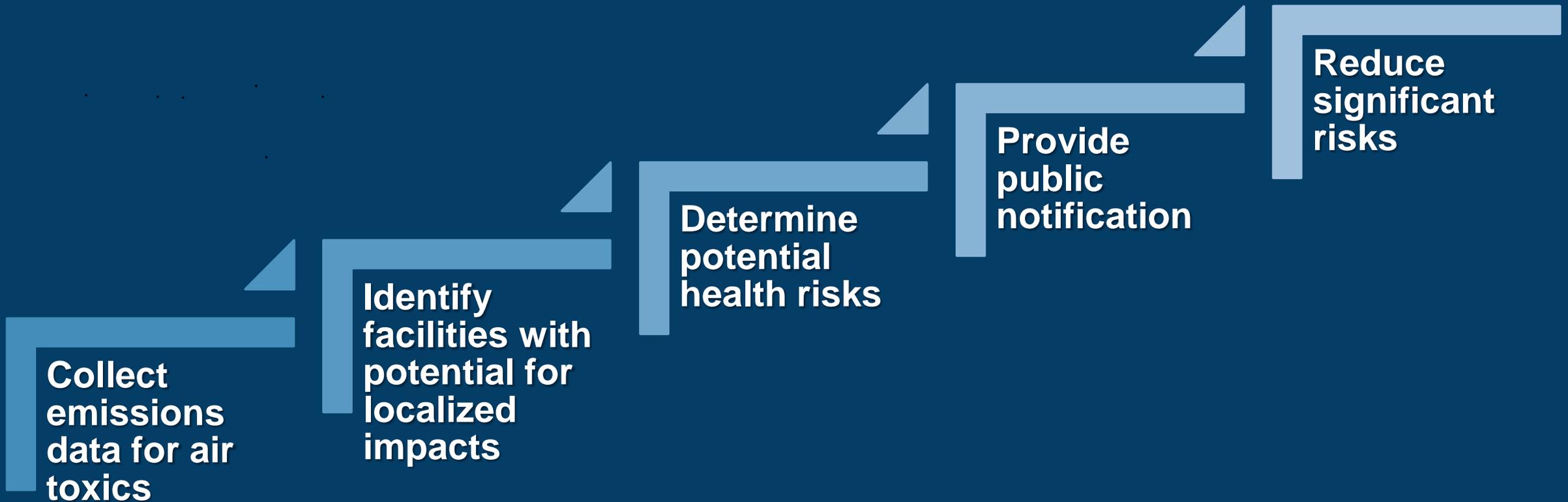
**Board Meeting  
April 7, 2023**



# INTRODUCTION

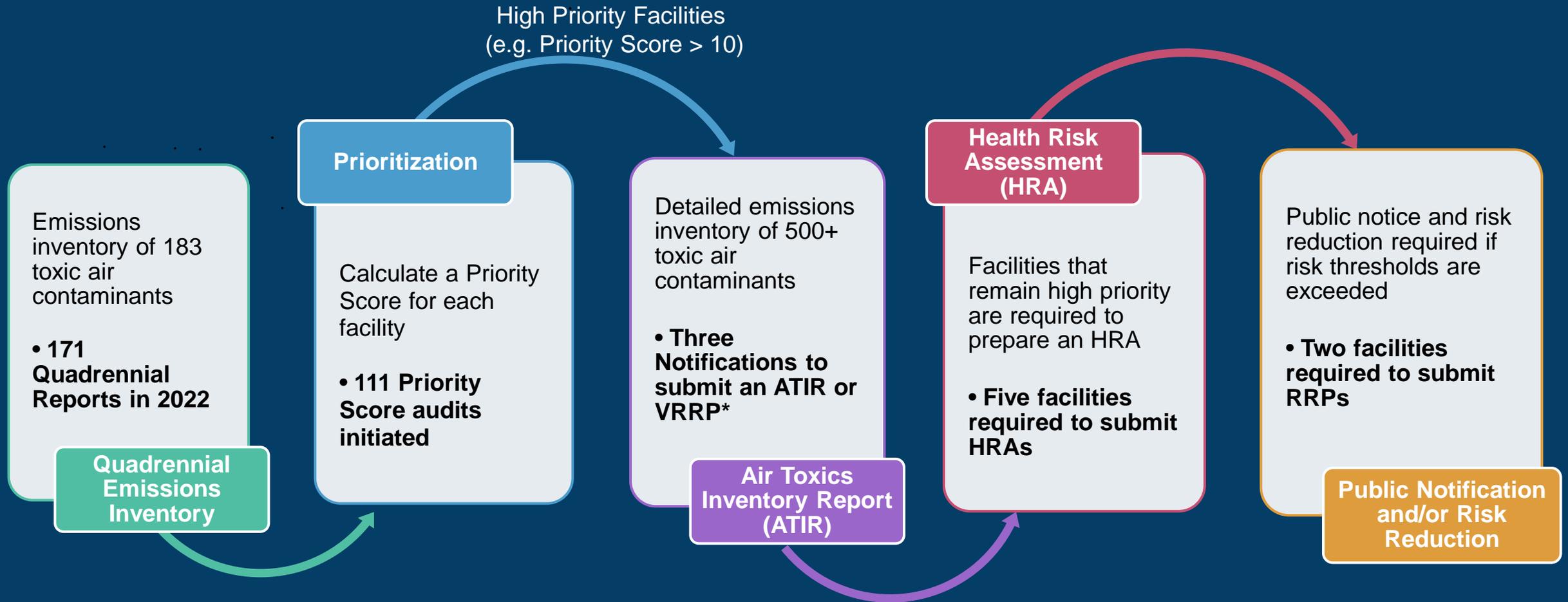
- AB 2588 Program Annual Report for 2022 summarizes
  - Activities implemented under AB 2588 “Hot Spots Act” and South Coast AQMD Rule 1402
  - South Coast AQMD activities to reduce toxic air contaminants
  - Anticipated future activities relating to AB 2588
- H&S Code §44363 requires a public hearing to present results of Annual Report

# GOALS AND OBJECTIVES OF AB 2588



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

# AB 2588 TRADITIONAL PROCESS FOR 'CORE' FACILITIES

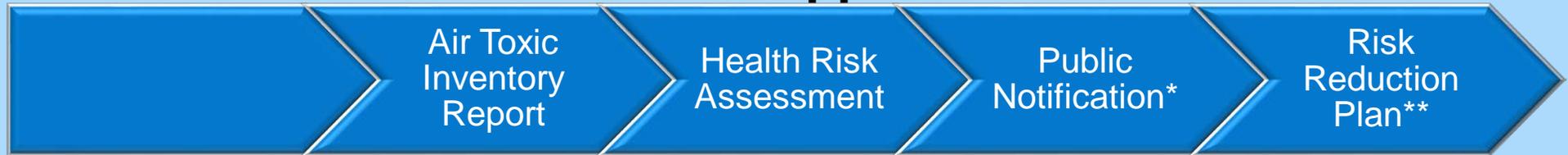


\*VRRP = Voluntary Risk Reduction Plan

# PATHWAYS FOR FACILITIES IN RULE 1402

## Traditional Approach

Facilities with Priority Score >10



Facilities with cancer risks <100 in-one-million that commit to reducing cancer risk <10 in-one-million

## Voluntary Risk Reduction Program\*\*\*



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

## Potentially High Risk Level Facility



\* Required if cancer risks ≥ 10 chances in-one-million

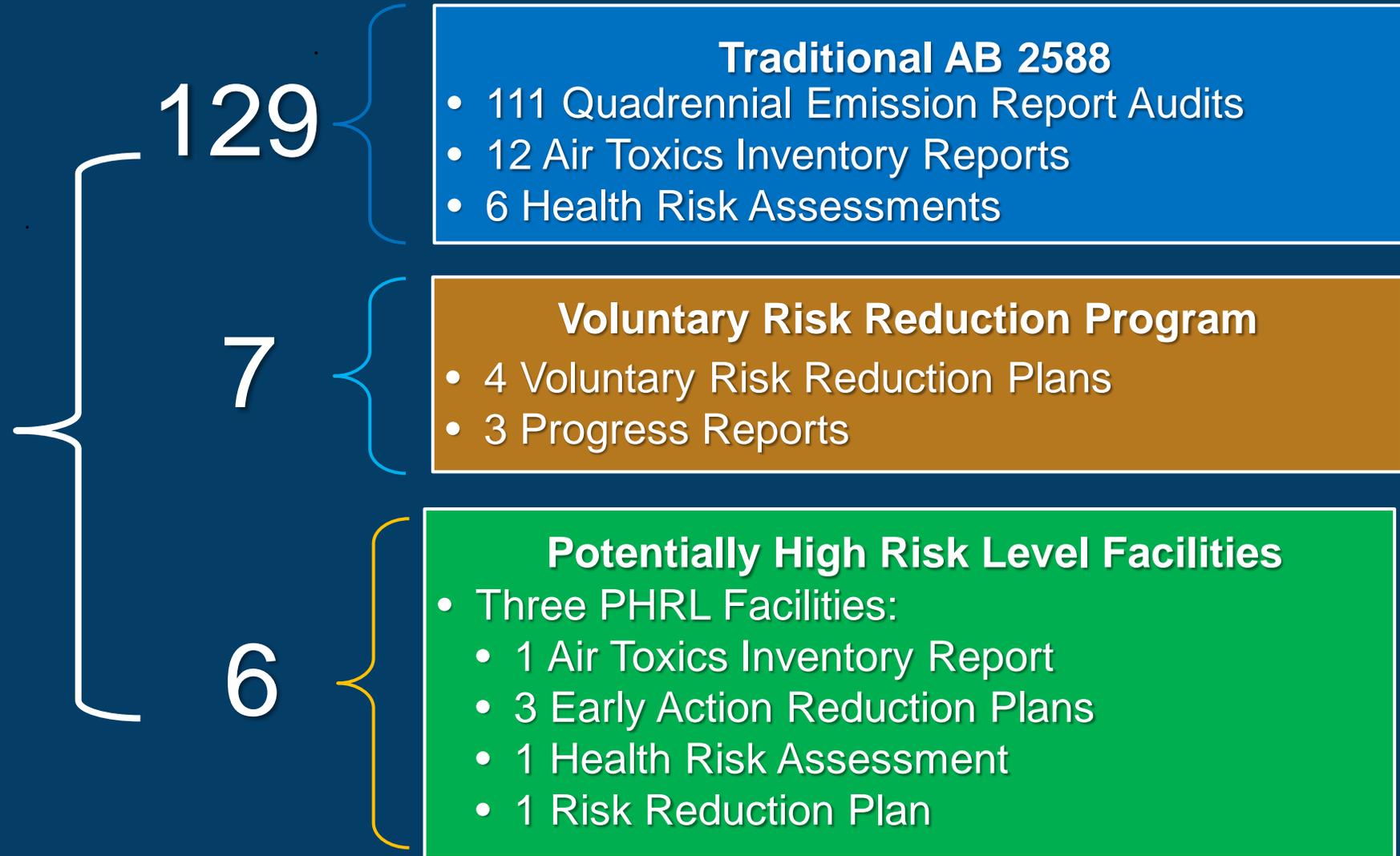
\*\* Required if cancer risks ≥ 25 chances in-one-million

\*\*\* Program requires previously approved HRA demonstrating risk <100 in-one-million

\*\*\*\* Cancer risks must be less than 10 chances in-one-million

# DOCUMENTS REVIEWED IN 2022

**142**  
Reviews



# ETHYLENE OXIDE STERILIZATION FACILITIES

- Mobile monitoring conducted near facilities using Ethylene Oxide for sterilization identified three facilities with elevated levels
  - Sterigenics in Vernon
  - Sterigenics in Ontario
  - Parter in Carson
- Ambient monitoring confirmed elevated levels of Ethylene Oxide for offsite workers near three facilities
  - Ethylene oxide levels in residential areas were at background levels for three facilities
- Both Sterigenics facilities designated as Potentially High Risk Level (PHRL) facilities
- Parter notified of potential designation in August 2022 (no final designation)
  - Parter shutdown operations to install additional controls – Ethylene Oxide level are at background levels
- All three facilities implemented measures to reduce Ethylene Oxide and both Sterigenics facilities are continuing to install additional pollution controls, including permanent total enclosures
- Health Risk Assessments and Risk Reduction Plans for PHRL facilities anticipated in the coming months

# OTHER KEY TOXICS-RELATED ACTIVITIES IN 2022

## Rulemaking



- Amended Rule 1168 to prohibit the sale and use of PCBTF and ter-Butyl Acetate (TBAC)
- Adopted Rule 1460 to minimize fugitive dust emissions from metal recycling and metal shredding facilities

## Special Monitoring\*



- Began EtO special monitoring
- Continued mobile monitoring campaign in the greater Los Angeles Area
- Concluded air monitoring in West Rancho Dominguez Area
- Continued air monitoring in AB 617 communities

## Other



- Completed review of 2018 and 2019 emissions inventory data
  - EPA finalized both 2018 and 2019 AirToxScreen in 2022

\*Details on additional AB 617 activities are reported in Community Emission Reduction Plan annual progress reports

# OEHHA UPDATES

- California Office of Environmental Health Hazard Assessment (OEHHA) adopted new noncancer acute and chronic RELs for trivalent chromium and inhalation cancer potency factor for 1-bromopropane
  - Both compounds are newly added TACs with no prior reporting requirements
- Facilities required to submit inventory reports under Rule 1402 will be required to report these compounds beginning with inventory year 2023
- Permitting impacts for the new toxics will be analyzed in an amendment to Rule 1401 – New Source Review of Toxics
- Potential update to ethylene oxide cancer risk value in 2023

Name	Chronic REL µg/m <sup>3</sup>	8-Hour Chronic REL µg/m <sup>3</sup>	Acute REL µg/m <sup>3</sup>
Trivalent Chromium	0.06	0.12	0.48

Name	Inhalation Cancer Potency Factor (mg/kg-day) <sup>-1</sup>
1-Bromopropane	1.3 x 10 <sup>-2</sup>

# KEY PROJECTED 2023 TOXICS-RELATED ACTIVITIES

- Update South Coast AQMD AB 2588 Guidance Documents for consistency with CARB's *Emission Inventory Criteria and Guidelines* (EICG)
- Work with CARB and CAPCOA Toxics and Risk Managers Committee (TARMAC) on amendments to EICG and CTR guidelines
- Coordinate with U.S. EPA and CARB to incorporate best available local emissions data to AirToxScreen
- Track development of U.S. EPA proposed rulemaking for two National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for Ethylene Oxide Commercial Sterilizers and Miscellaneous Organic Chemical Manufacturing
- Continue tracking development of potential OEHHA revision to cancer risk from ethylene oxide
- Continue ambient air monitoring near large sterilization facilities
- Various toxic rule developments:
  - Rule 1401.1 (Requirements for toxics near schools)
  - Rule 1405 (Ethylene oxide)
  - Rule 1455 (Hexavalent chromium from torch cutting and welding)

# RECOMMENDED ACTION

- Receive and File the 2022 AB 2588 Annual Report

