

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



2023

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



September 2024

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

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

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

The following summaries highlight key AB 2588 activities in 2023:

AB 2588 and Rule 1402 Implementation Activities	Prioritized 66 facilities based on their quadrennial toxic emission inventory updates
	Initiated 53 audits based on prioritization scores
	Reviewed 3 Air Toxics Inventory Report (ATIR) Initial Information submittals, 9 ATIRs, 8 Health Risk Assessments (HRAs), 3 Early Action Reduction Plans (EARPs), 2 Risk Reduction Plans (RRP), 1 RRP progress report, 2 Voluntary Risk Reduction Plans (VRRPs), 2 VRRP progress reports and approved 5 priority score revisions from 25 total facilities
	Conducted public notification for two facilities
Streamlining and Program Improvement Activities	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.

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

Background

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

Emissions Reporting

Facilities are subject to AB 2588 reporting requirements if they emit any toxic air contaminants listed by CARB in the *Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program* (CARB EICG).¹ Under the AB 2588 Program, larger facilities (core facilities) are subject to individual reporting requirements while facilities that are generally small businesses are grouped into industrywide source categories, which are described later in this chapter. The CARB EICG provides both criteria and direction for facilities to compile and submit emission data of toxic air contaminants. 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 is required to conduct a Health Risk Assessment (HRA) and to determine appropriate program fees. The California Air Pollution Control Officers Association (CAPCOA) *Facility Prioritization Guidelines* (CAPCOA Prioritization Guidelines) provides state-wide guidance to local air districts for prioritizing facilities.²

The CAPCOA Prioritization Guidelines³ presents two procedures for prioritizing facilities. The emission and potency procedure relies on three parameters to prioritize facilities: emissions, potency or toxicity, and the proximity of potential receptors. The dispersion adjustment procedure relies on four parameters: emissions, potency or toxicity, dispersion, and receptor proximity. While there are two procedures, both are similar and involve calculating screening-level scores for separate health effects in order to derive a final score.

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

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

² *Facility Prioritization Guidelines*, August 2016, California Air Pollution Control Officers Association <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/capcoa-prioritization-guidelines-august-2016-final.pdf>

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

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 emissions reports of toxic air contaminants on a quadrennial basis. Facilities ranked with low priority may be eligible to be exempted from the AB 2588 Program altogether.

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

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

Health Risk Assessments

AB 2588 requires that the Office of Environmental Health Hazard Assessment (OEHHA) develop risk assessment guidelines for the program. The most recent version of these guidelines is the February 2015 version of *The Guidance Manual for Preparation of Health Risk Assessments*⁴ (OEHHA HRA Guidelines). The 2015 OEHHA HRA Guidelines incorporated age sensitivity factors which resulted in increased cancer risk estimates by approximately three times. The OEHHA HRA Guidelines 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 with 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 estimate exposures for which potential health effects will be evaluated. Evaluating exposure involves emission quantification, air dispersion modeling, and identifying exposure routes and exposure durations.

Dose Response

Dose-response assessment is the process of characterizing the relationship between exposure to a toxic air contaminant and the incidence of an adverse health effect in exposed populations. For

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

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 that would trigger risk reduction requirements. The requirements of SB 1731 are found in California H&S Code, Sections 44390 through 44394. The requirements are for facilities to audit and identify the source of toxic 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.⁵ These guidelines provide a cost-effective and uniform method for calculating facility emissions and estimating toxic risks for these facilities under each air district’s jurisdiction.

The requirements for designating individual IWS categories are:

- facilities must emit less than 10 tons per year of criteria pollutants;
- facilities share a common Standard Industrial Classification (SIC) code;

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

- the 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

2. South Coast AQMD Air Toxics “Hot Spots” Program

Background

South Coast AQMD’s Air Toxics “Hot Spots” Program incorporates the requirements of the state AB 2588 Program, as well as additional and/or more stringent requirements. Despite being one of the smoggiest urban areas in the U.S., South Coast AQMD has achieved significant reductions in toxic air contaminants in the South Coast Air Basin (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.⁶ While these reductions have been primarily attributable to reductions in diesel particulate matter, there has also been a significant reduction in risks from stationary source facilities. The AB 2588 Program as implemented by South Coast AQMD has played a significant role in achieving those reductions, by improving public awareness thereby leading many businesses to voluntarily reduce their emissions of toxic air contaminants, and through mandatory risk reductions triggered by facilities exceeding health risk thresholds. Figures 2-1 and 2-2 below demonstrate the reductions in cancer and non-cancer risks that have been achieved despite the substantial number of facilities and industrial activity in the region. These reductions have taken place even with 30-40% increases in human and vehicle populations, vehicle miles traveled, and fuel consumption within the South Coast Air Basin.⁷ To ensure consistent representation of health risk estimates over time, the MATES V report applies the most current methodologies outlined in the 2015 OEHHA Guidance Manual for estimating health risks from prior MATES campaigns. Additional information about the health studies can be found online at <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v>.

Residential Air Toxics Cancer Risk (Monitoring Data)

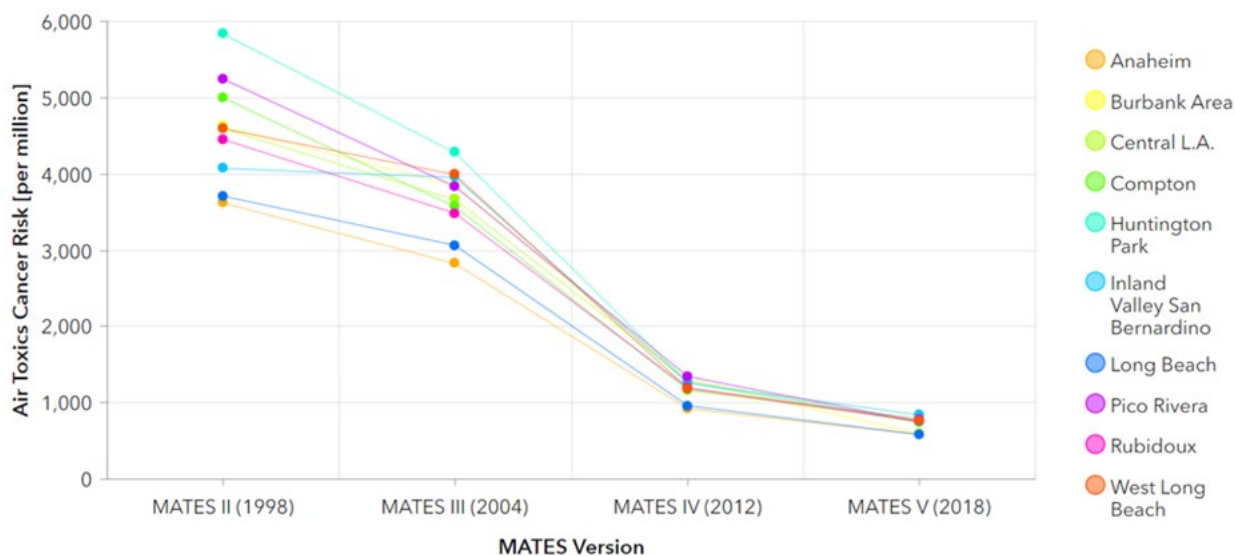


Figure 2-1 Trends in Residential Cancer Risks⁸ in the Basin (1998-2018)

⁶ <https://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf>

⁷ Note that CARB only has data through 2020 currently published. arb.ca.gov/app/emsinv/trends/ems_trends.php

⁸ Calculated with 2015 OEHHA Risk Assessment Guidelines.

Non-Cancer Residential Chronic Hazard Index (Monitoring Data)

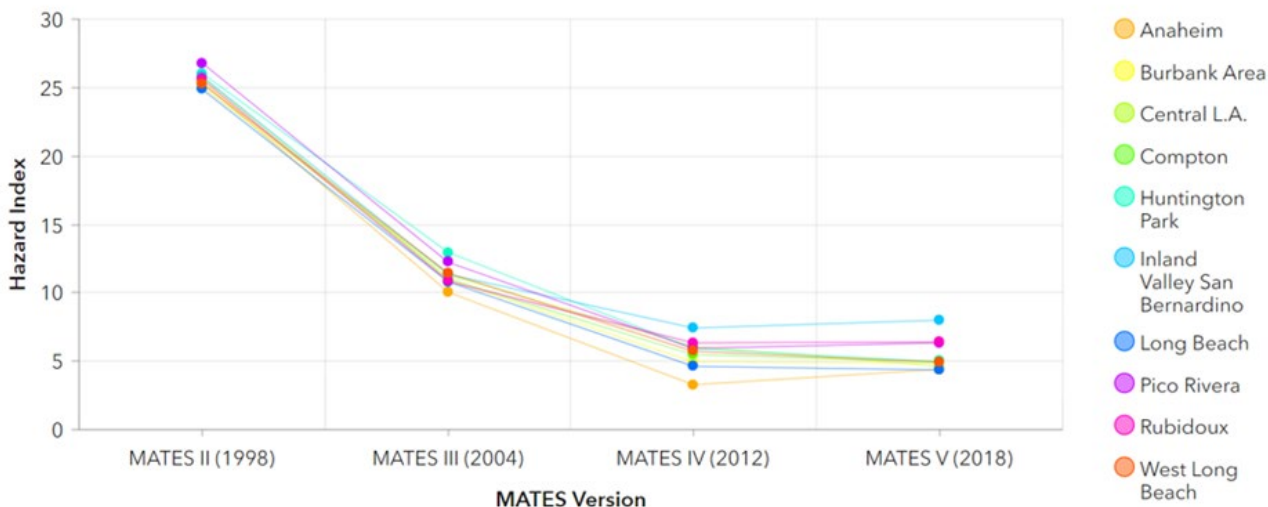


Figure 2-2 Trends in Residential Chronic Hazard Index in the Basin (1998-2018)

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—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 South Coast AQMD's AB 2588 Program:

- Emissions Reporting** – Since the fiscal year 2000-01 reporting cycle, toxic air contaminant emissions reporting for the AB 2588 Program was incorporated into South Coast AQMD's Annual Emissions Reporting (AER) Program. Core facilities must report emissions of any toxic air contaminants or ozone depleting compounds (ODC) specified in South Coast AQMD's Rule 301 (e) through the AER Program. The AER Program was modified to implement CARB's Criteria and Toxics Reporting (CTR) regulation reporting

requirements. The CTR regulation identifies several hundred toxic air contaminants, which are also included in the revised 2022 EICG. Consequently, many AB 2588 facilities are also subject to CTR. There are four reporting phases in AB 2588, with each core facility required to submit a more detailed inventory by reporting detailed toxic air contaminants during the quadrennial reporting year. This detailed inventory serves as a foundation for an ATIR, if required. For 2022, CTR required reporting for Sector Phase 1 facilities, which consists of 16 sectors identifying several permitted processes. CTR reporting for Sector Phase 2 will begin with the 2024 data year.

In 2023, 66 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 consistent with Table 1-1. Facilities that were prioritized in 2023 are listed in Table A-1 of Appendix A.
- **Health Risk Assessment** – High priority facilities (those with priority scores greater than ten), including those that qualify for the Voluntary Risk Reduction Program, are required to prepare an ATIR, a complete and detailed inventory of approximately 900 toxic air contaminants, along with detailed information about the processes and release points using the Emissions Inventory Module from the latest CARB Hotspots Analysis and Reporting Program (HARP). For facilities required to assess risk via an HRA or VRRP, the facility must prepare an HRA that conforms to the OEHHA HRA Guidelines. Specific instructions for South Coast AQMD are also available in the *AB 2588 and Rule 1402 Supplemental Guidelines, (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)*.⁹ This document is commonly referred to as the AB 2588 Supplemental Guidelines.
- **Public Notification** – If the health risk reported in the HRA exceeds the Notification Risk Levels of Rule 1402, then the facility is required to provide public notice to the affected community. The Notification Risk Levels of Rule 1402 are triggered when cancer risk from the facility exceeds 10 chances in-one-million, or when the acute or chronic hazard indices are greater than 1. The requirements for public notification are described in the *South Coast AQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402*, October 2016 (South Coast AQMD Public Notification Procedure).¹⁰ These requirements emphasize transparency in communicating risk to the affected community in the following ways:
 - The notice must clearly identify the area above the notification thresholds.

⁹ *AB 2588 and Rule 1402 Supplemental Guidelines, (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act)*, September 2020, South Coast AQMD. <https://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf>

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

- The notice must be distributed to all addresses (individual residences and workplaces), and to parents of children attending school in the area of impact.
- The approved HRA must also be provided to all schools in the area of impact.
- South Coast AQMD conducts a public meeting to describe the HRA results to the affected community and to answer questions from community members.
- **Risk Reduction** – Rule 1402 adopts stringent health risk thresholds and aggressive implementation schedules that are beyond the traditional AB 2588 and SB 1731 state requirements (see Table 2-2). Under state requirements, facilities exceeding a significant risk threshold must reduce risk within five years. Under Rule 1402, Potential High Risk Level facilities must submit an Early Action Reduction Plan to immediately reduce risk, followed by a detailed Risk Reduction Plan (RRP) designed to comprehensively reduce risk. The RRP under Rule 1402 must be implemented as quickly as feasible, but no later than two years after approval. Facilities exceeding the Action Risk Level under Rule 1402 must also implement risk reduction plans no later than two and a half years after risk reduction plan approval.¹¹ Rule 1402 also includes an optional Voluntary Risk Reduction Program (VRRP) provision that is designed to achieve risk reductions that are not otherwise required under state program requirements. In order to qualify for the Voluntary Risk Reduction Program, a facility must have a previously approved HRA and must not be designated as a Potentially High Risk Level facility.
- **Fees** – State and local costs of implementing AB 2588 are recovered through annual fees. As described previously, AB 2588 requires each district to recover state and district program costs. These fees are specified in South Coast AQMD Rules 307.1.]

Table 2-1: AB 2588 Core Facilities by Industry

Facility Categories	Number of Facilities
Aerospace	40
Airports	1
Amusement Parks	2
Building / Construction / Mineral Products	47
Bulk Plants	17
Chemical Plants	11
Dairy / Poultry Farms	6
Electricity Generation	26
Electronic	4
Entertainment	6
Fermentation and Brewing (Breweries/Distilleries/Wineries)	1
Food flavoring manufacturing	1
Furniture / Household Products	3

¹¹ Rule 1402 allows extensions, but only for those facilities that meet certain requirements. Extensions are not allowed for facilities exceeding the Significant Risk Level. Even with extensions, the implementation timelines are shorter than state requirements.

Facility Categories	Number of Facilities
Glass Production	1
Harbors	1
Hospitals and Health-Related	29
Hydrogen Production	3
Iron and Steel Production	6
Landfill - Industrial Waste	1
Landfill - Municipal Solid Waste	20
Metal and Alloys Products	29
Military Base	3
Office Buildings	1
Other Agricultural Processing	2
Other Food Processing Facility	1
Other Utilities	12
Other Waste Disposal	2
Petroleum Refinery	11
Pharmaceuticals	5
Plastic Manufacturing	7
Pulp and Paper Manufacturing	4
Schools and Educational Institutions	16
Terminal Depots	15
Wastewater Treatment - Municipal	20
Water Supply	9
Oil & Gas Production	32
Other Industrial / Manufacturing	38
Other Service / Commercial	3
Other Institutional / Commercial	12

Table 2-2: Rule 1402 Risk Reduction Categories

Rule Levels 1402	Thresholds	Requirements	RRP Implementation Timeline
Notification Risk Level	Cancer risk of 10 chances in-one-million or greater Acute or chronic HI of 1.0 or greater Exceeding lead National Ambient Air Quality Standard (NAAQS)	Public notification	No risk reduction required

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

Figure 2-3 shows the process used by South Coast AQMD to implement AB 2588 under Rule 1402.

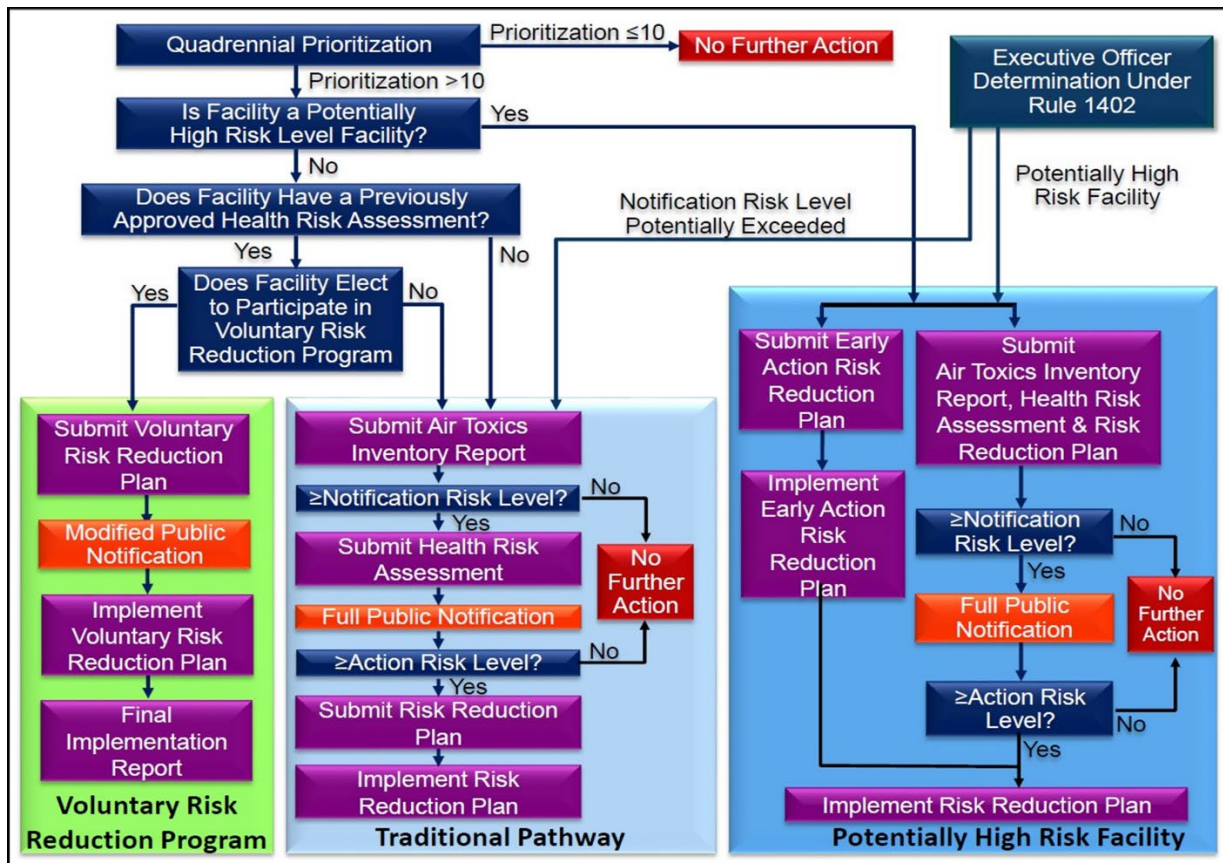


Figure 2-3: Overview of the AB 2588 Program

Progress in Implementation the AB 2588 Program

From the beginning of the AB 2588 Program in 1987 through the end of 2023, staff has reviewed and approved 360 HRAs from 344 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 344 facilities, 32 were required to implement risk reduction measures, 65 were required to perform public notification activities, while the remaining facilities were below the public notification threshold. As a result of the AB 2588 Program, about 95 percent of facilities that have been in the Program historically have HRAs demonstrating cancer risks below ten chances in-one-million and a hazard index (HI) of less than 1.0 for both non-cancer acute and non-cancer chronic, or their emissions have been low enough to not require an HRA.

The summary of risks from approved HRAs illustrated in Figure 2-4 is based on the information in Appendix B, which lists the core facilities and the health risks from their approved HRAs. It should be noted that the data presented in Appendix B represents the most recent HRA and in the cases where an RRP is required, the information represents residual risks if facilities have implemented their RRP. Table B-1 in Appendix B lists the facilities in order of their cancer risks, and Table B-2 in Appendix B lists the same facilities ordered by facility ID. Table C-1 in Appendix C lists facilities that have prepared 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.

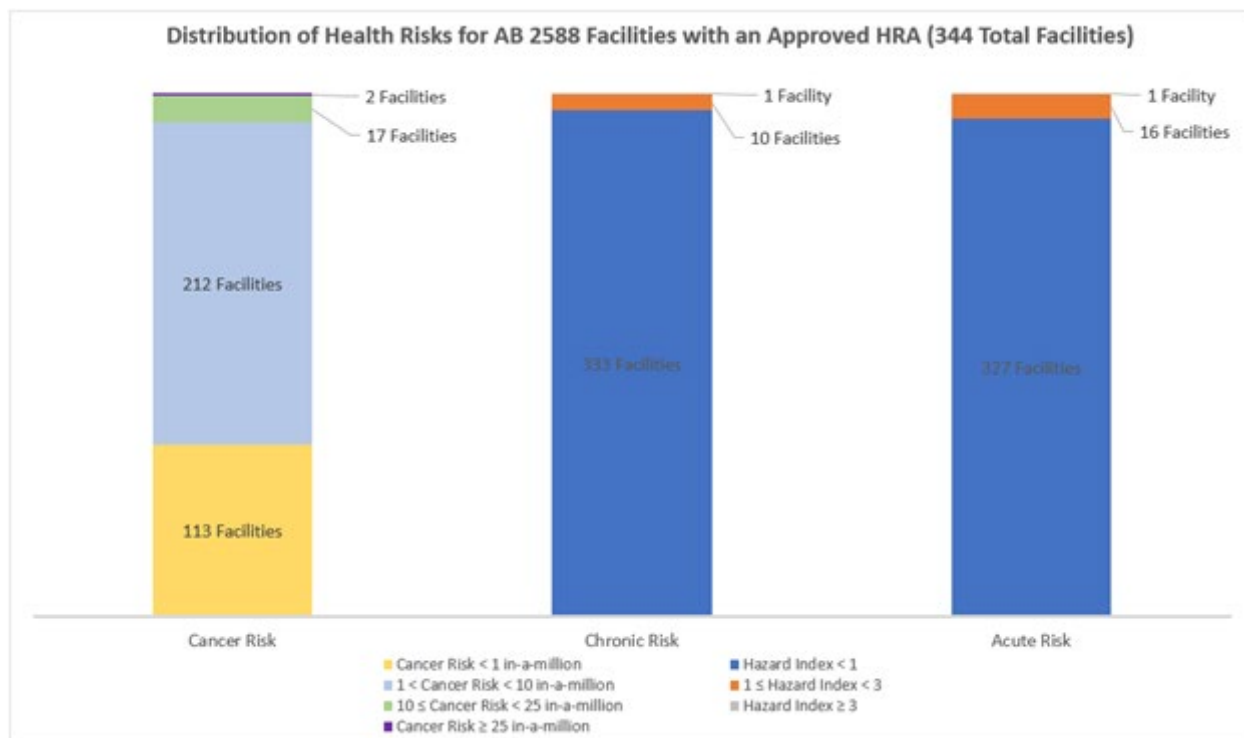


Figure 2-4: Distribution of Risks for AB 2588 Facilities with an Approved HRA

Summary of South Coast AQMD Staff Activities for AB°2588 Facilities in 2023

In 2023, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on 53 facilities with six facilities having priority scores greater than 10. Key activities

conducted include review of three Initial Information submittals for ATIRs, nine ATIRs, five revised priority scores, eight HRAs, three EARPs, two RRP, one RRP progress report, two VRRPs, and two VRRP progress reports. Many of these key activities were for facilities that generally have more sources and are more complex such as refineries and other industrial facilities. Overall, a total of 27 documents were reviewed in 2023 from 25 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 toxic contaminants, including special monitoring projects and emission investigations. As a result of lessons learned during South Coast AQMD's investigation into air monitoring for sources of toxic metal emissions in Paramount, West Rancho Dominguez, and other areas, South Coast AQMD continues to investigate, identify, and pursue remediation of additional sources across our four-county region that may emit high levels of toxic air contaminants.¹² If facilities are identified with high levels of toxic emissions, South Coast AQMD may seek Orders for Abatement from the independent South Coast AQMD Hearing Board to require these facilities to quickly reduce their emissions to a level that does not pose an immediate threat to public health. South Coast AQMD may also designate facilities as Potentially High Risk Level Facilities under Rule 1402.

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

Beginning in March of 2022 and proceeding throughout 2023, South Coast AQMD staff investigated 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. In April of 2023, OEHHA released a draft updated cancer inhalation unit risk factor (IUR) for EtO to make their risk factors more consistent with U.S. EPA. The AB2588 program uses OEHHA risk factors. Additional details are presented in Chapter 3. 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.

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 emission sources coming from the Parter Medical Products facility.

¹²<http://www.aqmd.gov/home/news-events/community-investigations>

Vernon

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

In March 2022, 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 residential community (Figure 2-7). Three monitors were placed nearby on 50th Street and 49th Street (Figure 2-8) and three samplers were placed 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.]

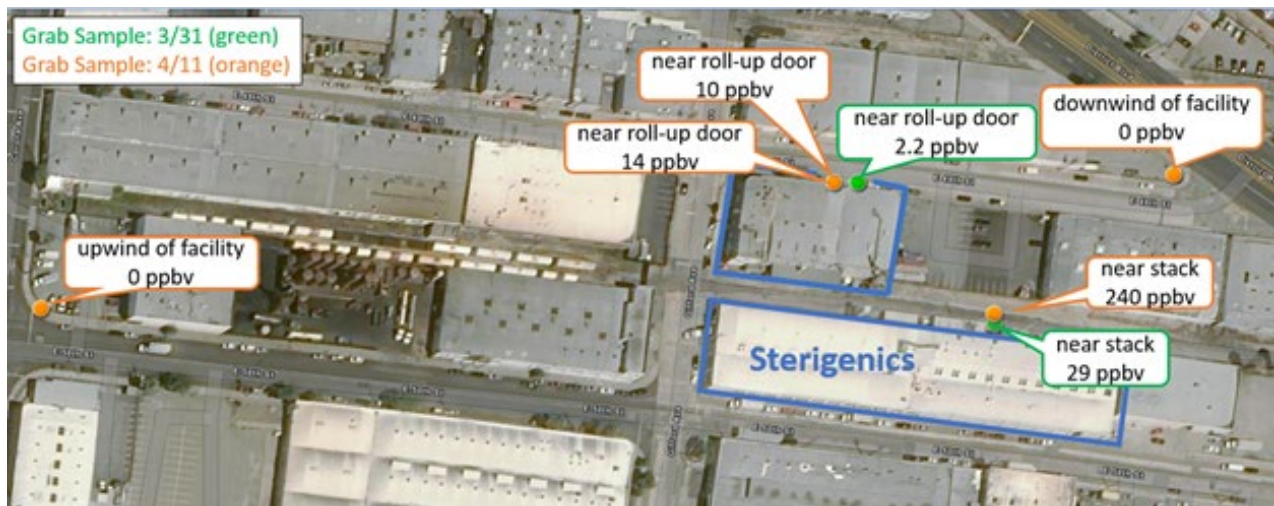


Figure 2-5: Map of Grab Samples



Figure 2-6: Map of Community Grab Samples



Figure 2-7: Map of 24-Hour Sampling Locations

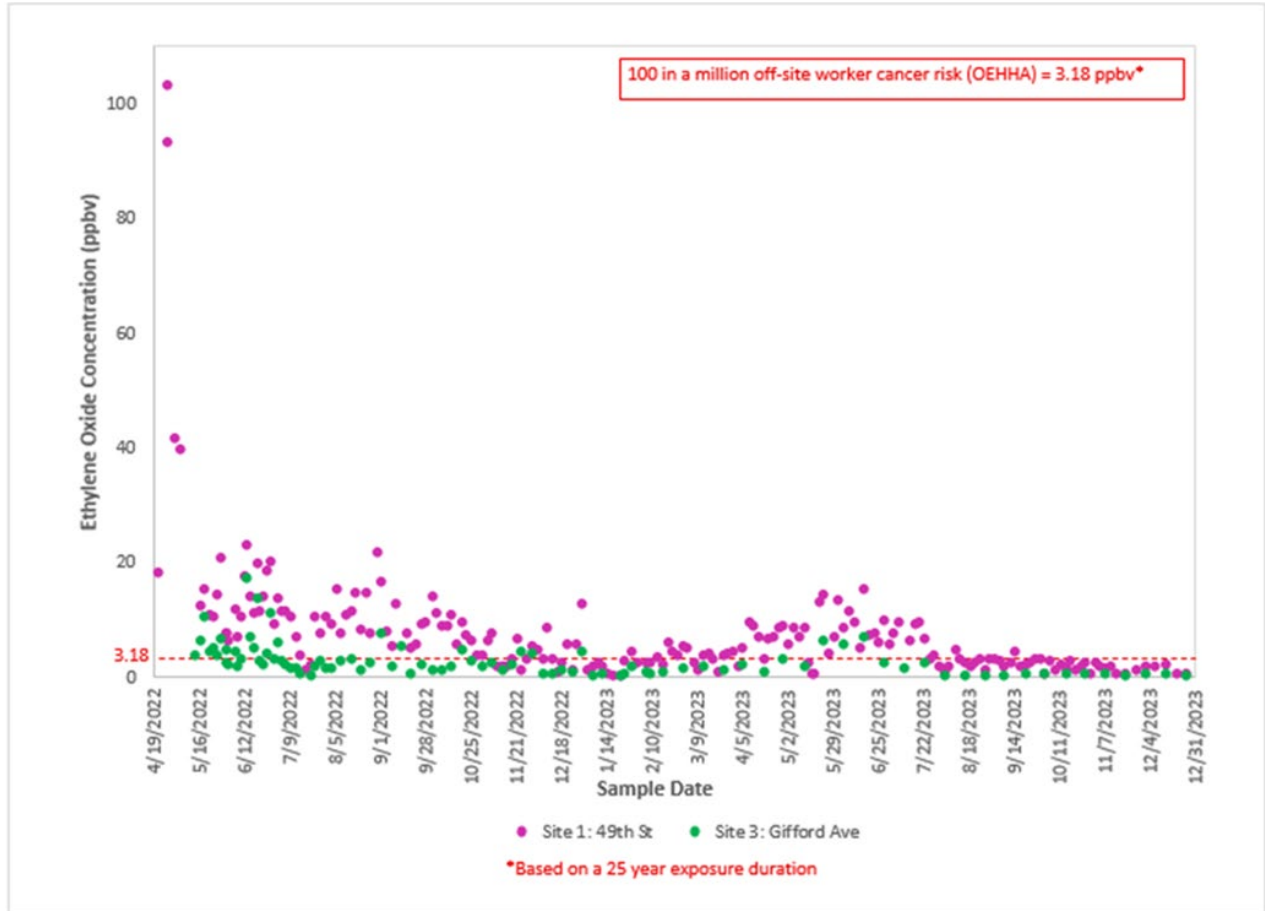


Figure 2-8: Plot of 24-Hour Time Integrated Sample Concentrations

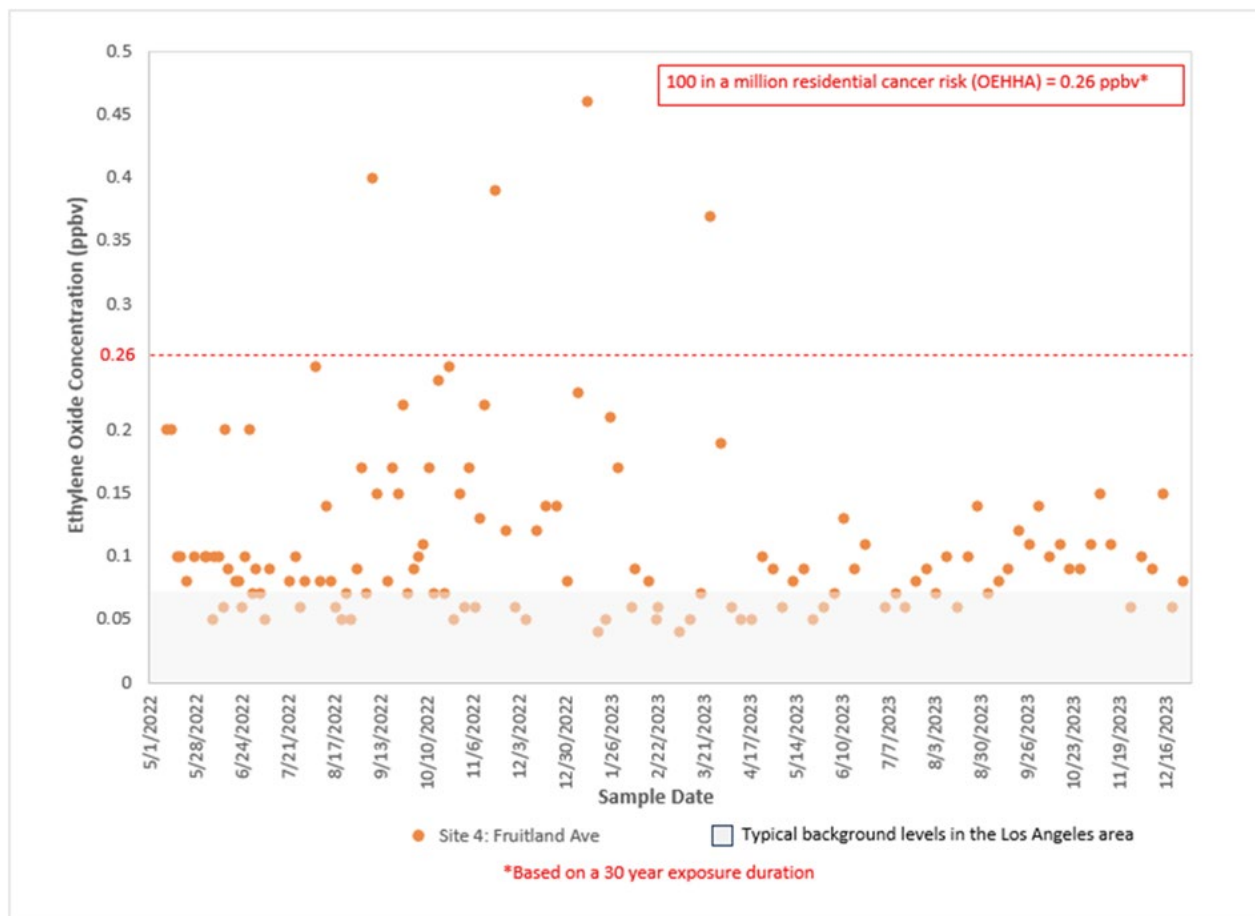


Figure 2-9: Plot of 24-Hour Time Integrated Sample Concentrations

On June 7, 2022, the Sterigenics Vernon facility (49th and 50th Street buildings) was designated as a Potentially High Risk Level Facility, requiring a reduction of toxic emissions from operations as well as submittal of an EARP, ATIR, HRA and RRP. 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 represents 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.

Sterigenics made operational improvements throughout 2023, leading to a reduction in monitored levels of EtO. Sterigenics has plans to make further improvements to facility operations, which is anticipated to result in additional reductions in monitored EtO levels. 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 Sterigenics 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 but 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 2-10: May of Grab Samples



Figure 2-11: Map of 24-Hour Sampling Locations

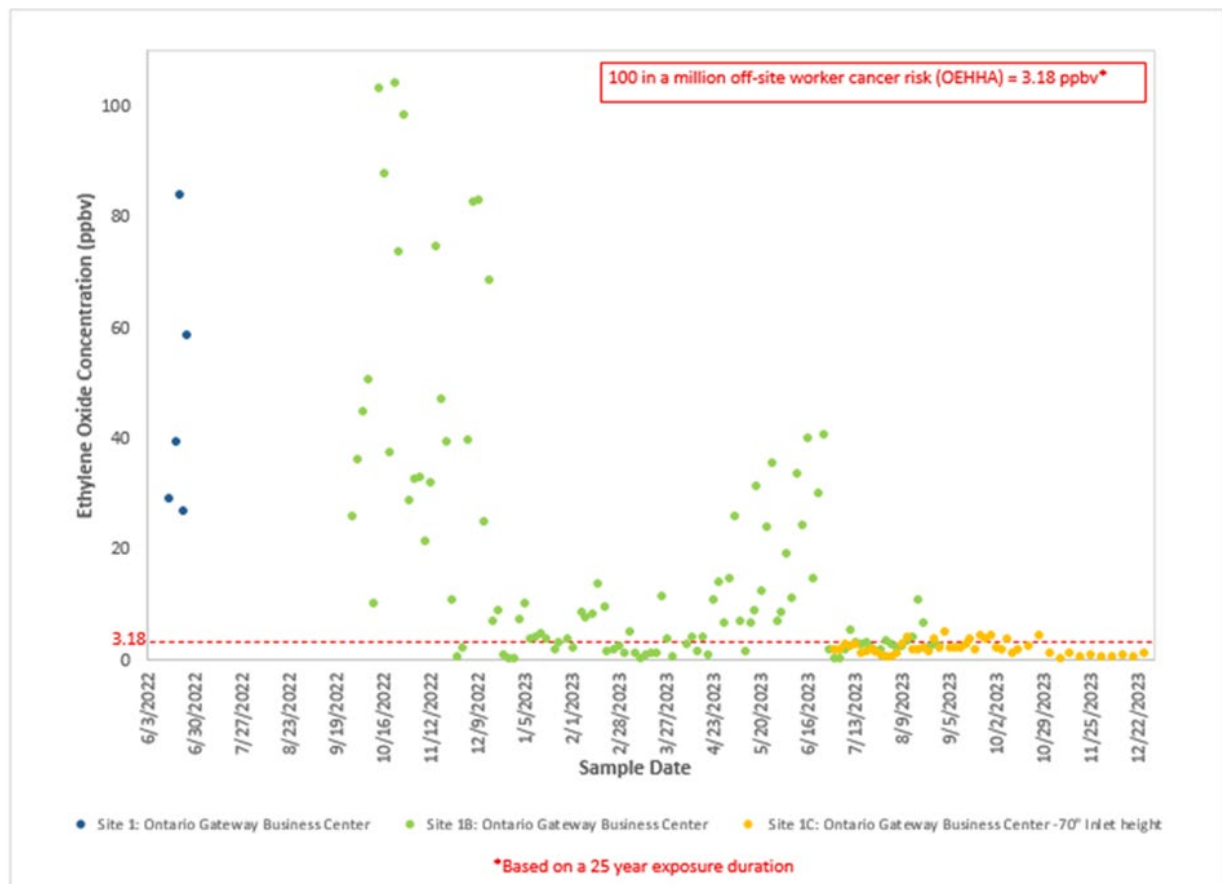


Figure 2-12: Plot of 24-Hour Time Integrated Sample Concentrations

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 as as submittal of an EARP, ATIR, HRA and RRP. The designation was based on sampling results taken from mid-June through September 2022 showing average concentrations of ethylene oxide of 65.6 ppbv—substantially higher than a concentration of 3.18 ppbv, which represents a cancer risk of 100 chances in a million to offsite workers using current OEHHA methodology and risk value for EtO.

Monitoring results for 2023 show a downward trend. Sterigenics plans to make improvements to the facility, such as enclosing the operations in a total permanent enclosure, and it is anticipated that these improvements will lead to additional decreases in monitored EtO levels. 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 located in Carson and in the surrounding. Mobile monitoring was conducted to collect survey data on VOCs, and signals associated with EtO were elevated near and downwind of the facility.

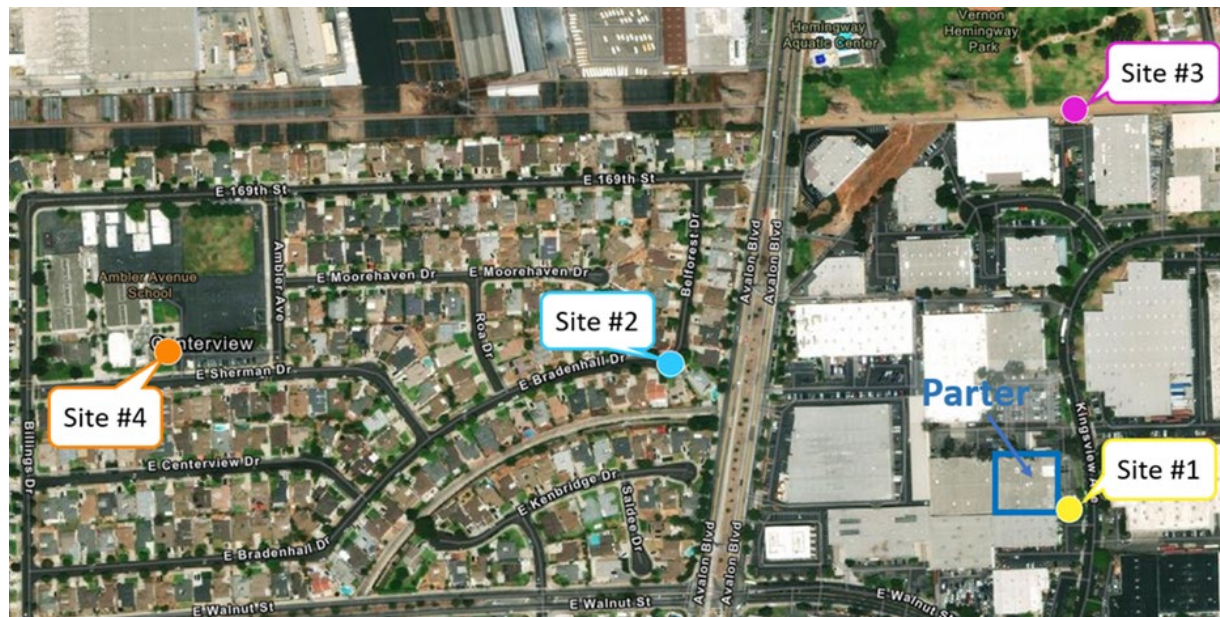


Figure 2-13: Map of 24-Hour Integrated Sample Locations

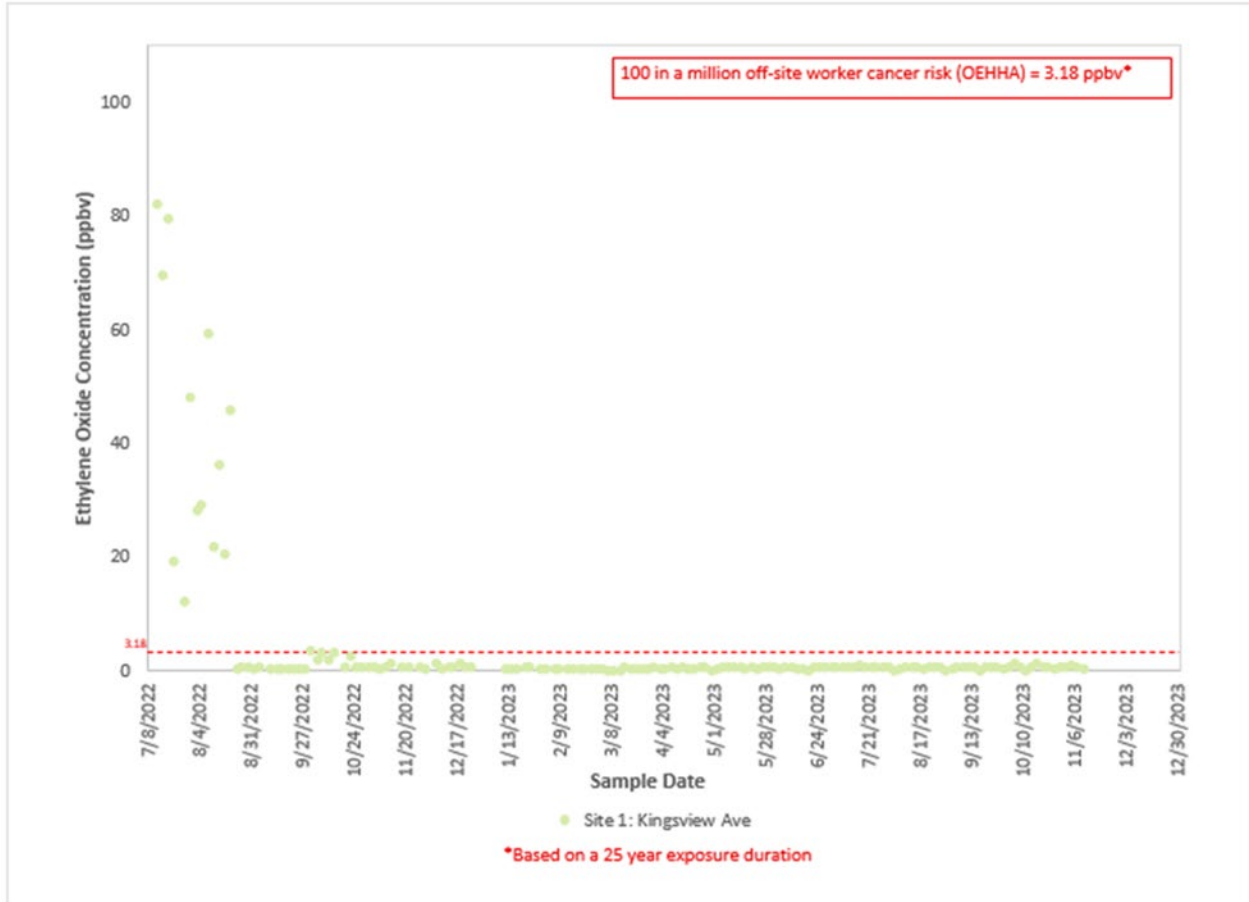


Figure 2-14: Plot of 24-Hour Near Source Samples

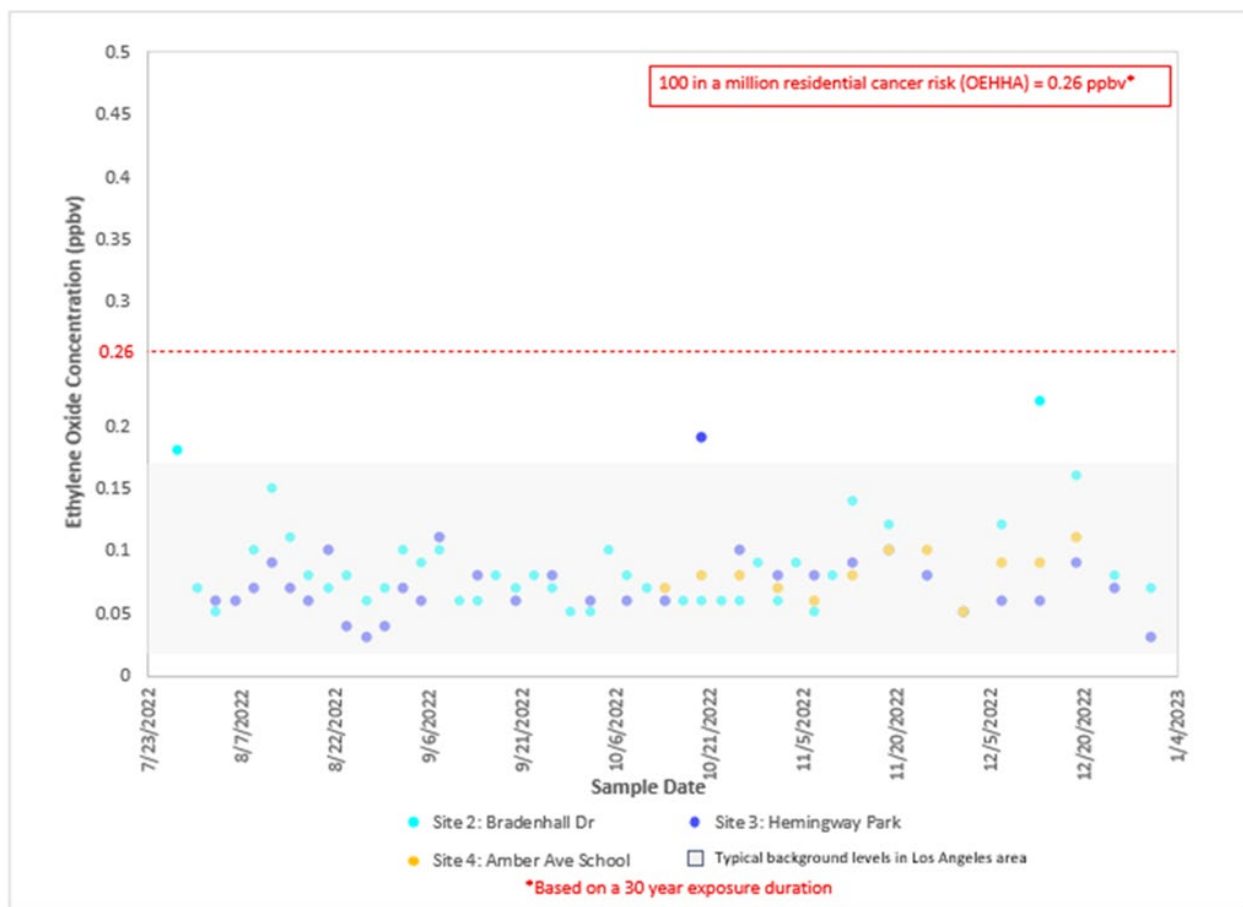


Figure 2-15: Plot of 24-Hour Community Samples

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 indicate that almost all the readings from monitors in the nearby community (i.e. Sites #2, 3, and 4) are within expected background levels in the Los Angeles area. South Coast AQMD worked with Parter to identify the source(s) of EtO from their operations and identified actions to reduce emissions. The facility has implemented various measures including installing additional air pollution control equipment to reduce emissions of ethylene oxide.¹³ After an extended period of time with monitoring results at or below background levels, monitors were removed from the Carson area with the last sample being taken on November 11, 2023.

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 upon recommendations from local air districts. CARB has designated the following communities for the AB 617 Program in the South Coast AQMD jurisdiction:

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

- Wilmington, Carson, West Long Beach
- San Bernardino, Muscoy
- 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 South Coast AQMD's AB 617 program is available online at www.aqmd.gov/ab617.

Chapter 3

South Coast AQMD AB 2588 Implementation Tools



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

3. South Coast AQMD AB 2588 Implementation Tools

Background

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

South Coast AQMD Guidelines and Procedures for AB 2588

Consolidated Emissions Reporting

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

Prioritization Procedures

South Coast AQMD has taken various steps over the years in streamlining prioritization procedures for the AB 2588 Program while maintaining consistency with the CAPCOA guidelines. In 2016, South Coast AQMD adopted the use of local meteorological stations and evaluated risks at the actual closest receptor locations in addition to evaluating receptors in the worst-case wind direction. More recently, in July 2018, the procedures were updated to incorporate the most recent meteorological data set and to simplify the calculation of a facility's non-cancer acute priority score. By using South Coast AQMD's Prioritization Procedure, fewer facilities are incorrectly categorized as high priority.¹⁴ This streamlining leads to improved efficiencies as 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 the facilities that are initially categorized as high priority to ensure proper designation. Certain steps may include confirming the correct use of emission factors, control efficiencies, source test methods, and relative proportions of toxic air contaminants. Additionally, staff confirms the correct distances to residential and worker receptors as well as any modifications to any equipment for the given quadrennial year and contacts the facility as needed for additional clarification. This additional information obtained through priority score auditing will often negate the need to require an ATIR and HRA. This process and use of this refined priority scoring methodology serves to reduce the number of facilities that are required to be notified and overall reduces unnecessary workload for the facilities and for staff.]

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

¹⁴ <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-facility-prioritization-procedure.pdf>

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

General Supplemental Guidelines

The OEHHA HRA Guidance defers to local air districts for specific or additional requirements. The AB 2588 Supplemental Guidelines lists the specific instructions for preparing AB 2588 related documents in the South Coast AQMD jurisdiction. By clearly 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 South Coast AQMD's AB 2588 Program is the provision for the Voluntary Risk Reduction Program. Rule 1402 was amended to provide this option in response to industry interest in a mechanism to voluntarily reduce health risks from their facilities in return for modified public notification requirements. A facility may participate in the Voluntary Risk Reduction Program only if it has a previously approved HRA that is below the Action Risk Level and is not a Potentially High Risk Level facility. This program provides a more expeditious risk reduction program than the traditional pathway under state requirements, and also reduces notification requirements and other process for participating facilities. Under the traditional program, facilities are required to reduce cancer risk below 25 chances in-one-million. To successfully participate in the Voluntary Risk Reduction Program, risks from the participating facility must be reduced below 10 chances in-one-million, which is up to 60% reduction in cancer risk compared to the Action Risk Level. Guidelines that describe the requirements of a VRRP are available online.^{15]}

Air Dispersion Modeling

Modeling Guidance

The United States Environmental Protection Agency's (U.S. EPA) air quality dispersion model AERMOD is required for use to estimate concentrations of toxic air contaminants for risk assessments conducted pursuant to Rules 1401 and 1402. The AERMOD model is a steady-state Gaussian plume model capable of estimating pollutant concentrations from a wide variety of sources that are typically present at a facility. It is a stand-alone application but has also been incorporated into the CARB-developed HARP program as well as other programs from third party developers. South Coast AQMD has developed guidance regarding the use of AERMOD to assist modelers such as the use of regulatory defaults, averaging times, receptor grids and elevation data.¹⁶ The AB 2588 Program staff has provided specific guidance regarding the required

¹⁵ *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>

¹⁶ South Coast AQMD modeling guidance is available at: <http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>

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

Meteorological Data

South Coast AQMD has prepared meteorological data from 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, but 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 that emit toxic air contaminants to comply with certain allowable limits. South Coast AQMD has developed the Rule 1401 Risk Assessment Procedures¹⁷ 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 per week and the tool also includes an interactive map.¹⁸

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, assisting with permit applications, or even scheduling a no-fault on-site inspection, the small business

¹⁷ *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>

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

assistance unit act as advocates for these small businesses. Offering these services to smaller businesses streamlines air quality regulatory efforts while also creating a positive open working relationship with small local businesses.

Public Assistance

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

South Coast AQMD also provides several other services, such as a telephone number to answer billing-related questions¹⁹ and an online complaint system and telephone number where members of the public can notify staff of air quality problems, such as odor and visible emissions.²⁰ These services help to maintain good working relationships with facilities and to protect air quality and public health.

Rules Adopted or Amended in 2023

Adopted Amended Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools

On March 3, 2023, Rule 1401.1 was amended to clarify rule language. The primary amendment was to the definition of "school", which now includes any early learning and development program such as pre-school.

Adopted Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

On December 1, 2023, Rule 1405 was amended to establish new and enhanced control and monitoring requirements to further reduce stack and fugitive emissions. The amendment also includes additional reporting and recordkeeping requirements, as well as curtailment provisions based on monitoring results.

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 of these changes closely. For any finalized changes in risk factors, staff performs a preliminary estimate of potential Rule 1402 program impacts. Notice is provided to the Governing Board and affected industries annually through this and other AB 2588 annual reports.

¹⁹ Billing Services Telephone: 909-396-2900

²⁰ <http://www3.aqmd.gov/webappl/complaintsystemonline/NewComplaint.aspx>
Telephone hotline: 1-800-CUT SMOG® (1-800-288-7664)

Toxic Air Contaminants with New or Proposed Health Values

OEHHA adopted risk values for trimethylbenzenes, 1-bromopropane, and revised values for cobalt sulfate heptahydrate and water-soluble cobalt compounds in 2023. Chronic RELs, 8-hour chronic RELs, and acute RELs were adopted for trimethylbenzenes and 1-bromopropane. Revised cancer potency factors were adopted for cobalt sulfate heptahydrate and water-soluble cobalt compounds.

Trimethylbenzenes have three forms of isomers, which include 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene and 1,2,3-trimethylbenzene. Trimethylbenzenes occur naturally in petroleum deposits and are also found in surface coatings, paints, printing inks, cleaning fluids, and hydraulic fracturing fluids. Additionally, all three isomers are found in biogas.

1-bromopropane compounds are used in solvents for adhesives in laminates and foam products, as well as degreaser or cleaning agents for metal, plastic and glass components, and as an alternative for dry cleaning.

Most cobalt sulfate heptahydrate and water-soluble cobalt compounds are used in the form of cobalt metal powder as an alloying component and in the preparation of cobalt salts. Cobalt salts and oxides are used as pigments in the glass and ceramics industries, as catalysts in the oil and chemical industries, as paint and printing ink driers, and as trace metal additives in agriculture and medicine.

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 2023 from OEHHA

CAS #	Name	Chronic REL $\mu\text{g}/\text{m}^3$	8-Hour Chronic REL $\mu\text{g}/\text{m}^3$	Acute REL $\mu\text{g}/\text{m}^3$
25551-13-7	Trimethylbenzenes ²¹	4	8	2400
106-94-5	1-Bromopropane	1.7	3.4	3300

²¹ The new RELs for trimethylbenzenes include the following three isomers 1,3,5-Trimethylbenzene (CAS no. 108-67-8), 1,2,4-Trimethylbenzene (CAS no. 95-63-6), and 1,2,3-Trimethylbenzene (CAS 526-73-8).

Table 3-2: Revised Cancer Potency Values in 2023 from OEHHA²²

CAS #	Name	Inhalation Cancer Potency Factor (mg/kg-day) ⁻¹
1217	Water-soluble cobalt compounds	35

Assessment of Impacts to Existing Facilities

Prior to the 2022 reporting year the family CAS for trimethylbenzene (listed in Table 3-1) and isomers 1,2,3-trimethylbenzene and 1,3,5-trimethylbenzene had no prior reporting requirements and were not required to be reported by AB 2588 facilities. This was also the case for water-soluble cobalt compounds and 1-bromopropane. However, the 1,2,4 trimethylbenzene isomer did have previous reporting requirements and therefore served as a surrogate for the analysis in this section.

Beginning with the 2022 inventory year, staff looked back at four years of data for existing AB 2588 facilities that reported emissions of trimethylbenzenes and its isomers, water-soluble cobalt compounds, and 1-bromopropane to ensure all four phases of the AB 2588 program were accounted for. The analysis showed that 195 facilities reported trimethylbenzenes, mainly under 1,2,4 trimethylbenzene. A breakdown of facility types and the corresponding number of facilities that reported emissions of trimethylbenzene are presented in Table 3-3. It should be noted that 1-bromopropane was not reported across the previous quadrennial cycle and the single reporter of a water-soluble cobalt compound is included in the list of 195 trimethylbenzene emitting facilities.

Table 3-3: 2022 Summary of Trimethylbenzene Emitting Facilities

Facility Description	Number of Facilities
Aerospace	12
Airports	1
Amusement Parks	2
Building / Construction / Mineral Products	22
Bulk Plants	16
Chemical Plants	5
Electricity Generation	16
Entertainment	5
Harbors	1
Hydrogen Production	1
Iron and Steel Production	1

²² The revised cancer potency values for water soluble cobalt compounds and their CAS numbers include but is not limited to: Cobalt Acetate (Tetrahydrate) 71-48-7, Cobalt Chloride (Hexahydrate) 7646-79-9, Cobalt Hydrocarbonyl 16842-03-8, Cobalt Nitrate (Hexahydrate) 10141-05-6, Cobalt Octoate 136-52-7, Cobalt Sulfate 10124-43-3, and Cobalt Sulfate (Heptahydrate) 10026-24-1.

Landfill - Municipal Solid Waste	6
Metal and Alloys Products	12
Office Buildings	1
Oil & Gas Production	24
Other Food Processing Facility	1
Other Industrial / Manufacturing	10
Other Institutional / Commercial	4
Other Utilities	3
Other Waste Disposal	2
Petroleum Refinery	11
Pulp and Paper Manufacturing	2
Schools and Educational Institutions	10
Terminal Depots	13
Wastewater Treatment - Municipal	11
Military Base	2
Hospitals and Health-Related	1
Total:	195

Of the 195 facilities, 89 have previously approved HRAs. The HRAs for these facilities were approved between 1994 and 2022. 18 of the facilities currently have either non-cancer acute or chronic indices greater than 0.5. Of those 18 facilities, one facility had either a non-cancer acute or chronic index greater than 2.5. These facilities could potentially require public notification and/or risk reduction if trimethylbenzenes become the main risk driver in future inventories.

Similarly, staff also examined the cancer risk from the one water-soluble cobalt emitting facility with a previously approved HRA. The cancer risk from this HRA was less than 20 in-one-million and cobalt compounds were not considered as a driver. Staff intends on re-evaluating this facility during the next reporting cycle to determine if an HRA update is necessary.

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 on new and/or existing equipment to minimize risks from usage of materials containing newly added toxic air contaminants. However, the impacts will be analyzed when Rule 1401 has completed its amendment process.

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 may require further analysis to better understand any possible risks to public health from toxic air contaminants.

AirToxScreen can also provide communities with information regarding health risks from toxic air contaminants. U.S. EPA previously conducted reviews every three years as part of the National Air Toxics Assessment (NATA) but recently transitioned to an annual review for AirToxScreen, starting with inventory year 2020. As of April 2024, results of the 2020 AirToxScreen analysis are still being finalized by U.S. EPA and are expected to be made publicly available later in the year.

In 2023, South Coast AQMD staff also conducted a review of the 2021 AirToxScreen preliminary analysis and provided necessary corrections. The 2021 AirToxScreen analysis is based on U.S. EPA's 2020 National Emissions Inventory (NEI), which is updated to address any corrections identified by South Coast AQMD staff.

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 5.0×10^{-3} per $\mu\text{g}/\text{m}^3$, which results in an equivalent cancer risk many times higher than estimated by OEHHA. Using the OEHHA cancer potency factor for EtO, a concentration of 0.26 ppbv is approximately equivalent to a residential lifetime cancer risk of 100 in-one-million, whereas the updated U.S. EPA IRIS carcinogenicity factor is equivalent to over 2,300 in-one-million lifetime cancer risk. Subsequently, OEHHA released a draft updated cancer inhalation unit risk factor (IUR) for EtO on April 7, 2023. This may result in an updated cancer potency factor much closer to the current IRIS unit risk estimate.

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

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

South Coast AQMD EtO Activities

Ethylene Oxide (EtO) Emissions Investigation

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

- Air monitoring efforts, including mobile monitoring, at the facilities and near the surrounding community.
- Proposition 65 Notice disclosure, 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.
- 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 dropped significantly.

Monitoring results from all sites in 2023 have shown reductions in EtO emissions nearby each of the facilities. The most notable decrease being in Carson where EtO levels near Parter were consistently at background levels, resulting in the monitors being removed by the end of 2023.

Enforcement Action

Starting May 5, 2022, South Coast AQMD inspectors have issued several Notices of Violation (NOV) to the Sterigenics Vernon facility. Similarly, South Coast AQMD inspectors have issued several NOVs to the Sterigenics Ontario facility beginning June 6, 2022. These NOVs were issued for failing to maintain control equipment in good working condition and for public nuisance, in violation of South Coast AQMD's Rule 203, Rule 402, and California Health & Safety Code § 41700. This is an ongoing investigation, and South Coast AQMD has continued to take air samples through 2023 and evaluate all equipment to ensure that the Sterigenics 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 Notifications

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 cause substantial injury to the 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 cause substantial injury to the 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 cause substantial injury to the public health or safety. 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 facilities²³. 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 Spot 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. Facilities must prepare AB 2588 documents in accordance with the OEHHA methodology utilizing state-approved toxicity values. Currently, OEHHA has decided to withdraw its rulemaking intended to update the Cancer Potency Factor for EtO and plans to resume the rulemaking process at a later time. Upon finalization, future HRAs will utilize the update value.

Sterigenics Vernon

On June 7, 2022, South Coast AQMD designated Sterigenics Vernon as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers and required them to implement measures to reduce risks from the facility and provide detailed information on its toxic air emissions and potential health risks. The 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.

The approved Early Action Reduction Plan set a temporary threshold for EtO emissions from the facility to ensure that the facility does not reverse any emission reductions that have been achieved while more permanent controls are put into place. If air monitoring results near the facility exceed the temporary thresholds, the facility must initiate curtailment of its operations. Repeated exceedances of the threshold may result in a temporary shutdown of the facility. Sterigenics Vernon was required to curtail operations by 20% each day between March 4, 2023 and March 7, 2023. Monitoring results during the curtailment period confirm that the reduction measure helped to immediately reduce EtO levels.

In addition to the early action reduction plan, the facility was required to submit an Air Toxics Inventory Report (ATIR), conduct a Health Risk Assessment (HRA), and submit a Risk Reduction Plan (RRP). As of early December 2022, these documents have all been submitted by the facility.

South Coast AQMD staff identified deficiencies and rejected the ATIR on December 2, 2022. Sterigenics did not submit a revised ATIR, therefore South Coast AQMD modified the ATIR to correct the deficiencies and approved it on May 26, 2023. Staff also identified deficiencies with the submitted HRA and rejected it on October 31, 2023. A revised HRA was received on August 15, 2023 which did not address all of the deficiencies. Therefore, as of the end of 2023, staff was modifying the HRA.

Sterigenics Ontario

On September 22, 2022, South Coast AQMD designated Sterigenics Ontario as a Potentially High Risk Level Facility based on the elevated air monitoring results showing potentially high risk levels for off-site workers 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

²³ <https://www.aqmd.gov/home/eto>

continues to work with Sterigenics Ontario on additional immediate and near-term actions to further reduce EtO emissions.

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

In addition, the facility was required to submit an air toxics emissions inventory report (ATIR), conduct a Health Risk Assessment (HRA), and submit a Risk Reduction Plan (RRP). As of early March 2023, these documents have all been submitted by the facility. South Coast AQMD staff identified deficiencies and rejected the ATIR on March 29, 2023. Sterigenics did not submit a revised ATIR, therefore South Coast AQMD modified the ATIR to correct the deficiencies and approved it on October 5, 2023. Staff also identified deficiencies with the submitted HRA and rejected it on October 31, 2023. A revised HRA was received on January 2, 2024, and is currently under review.

Parter

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

Engineering and Permitting Activity

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

Between May 25, 2022, and September 28, 2022, Sterigenics Vernon submitted permit applications to add a filtration system and dry beds at each building. On November 2, 2023, the facility submitted four permit applications to add a new dry bed scrubber to each building and to modify some of the air pollution control systems at the facility. The facility optimized the exhaust of current control equipment and will enclose each building to meet the standards of a PTE. These changes are designed to capture any potential fugitive emissions and increase the control of all emissions of EtO from the facility.

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

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. Rule 1405 was amended on December 1, 2023, to strengthen requirements for sterilization and storage facilities²⁴. The updated rule applies to 15 sterilization facilities and one aeration-only facility. These facilities are required to upgrade existing or add new pollution controls and implement measures to monitor and minimize stack and fugitive emissions. The updated rule may also apply to 28 FDA-registered storage facilities that receive products sterilized by EtO, which would require monitoring of emissions at the fence line. More details related to Rule 1405 requirements can be found on the Rule 1405 webpage²⁵.

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.

²⁴ <https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1405.pdf?sfvrsn=4>

²⁵ <https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1405>

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.

4. Future Activities

AB 2588 Activities

In 2024, staff will prioritize approximately 115 facilities and notify those with high priority scores to prepare ATIRs or VRRPs, as necessary. An HRA, public notification, or RRP may be required if risks exceed regulatory thresholds.

Public notification is expected to occur for at least four facilities including Carpenter Co. (7730), 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; and
- Continue coordination with U.S. EPA and CARB staff to ensure AirToxScreen incorporates the best available local emissions data.

Rulemaking

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

- Proposed Amendments to Rule 1401 – New Source Review of Toxic Air Contaminants. The purpose of Rule 1401 is to specify health risk limits for toxic air contaminants emitted from newly permitted, modified, or relocated units. The toxic air contaminants are identified by the California Office of Environmental Health Hazard Assessment (OEHHA) and listed in Rule 1401 Table 1. Rule 1401 is periodically amended to update Table 1 to include new toxic air contaminants or updated guidelines for health risk limits that OEHHA adopts. Staff held a working group meeting in December 2023 to update Rule 1401 Table 1 to include 8 new toxic air contaminants: 1-bromopropane, trivalent chromium, parachlorobenzotrifluoride (PCBTF), tertiary butyl acetate (TBAC), hexamethylene diisocyanate (HDI) (monomer), polymeric hexamethylene diisocyanate, cobalt, and trimethylbenzenes. In addition to adding the new toxic air contaminants to Rule 1401 Table 1, staff received public comments proposing to add in “child compounds” that already exist in the Consolidated Table of OEHHA/CARB Approved Risk Assessment Health Values. These “child compounds” are close derivatives of “parent compounds” such as the “child compounds” of arsenic acid and arsenic pentoxide related to the “parent compound” of arsenic. The proposed amended rule is still in the information gathering and analysis stage so additional working group meetings and rule amending efforts are anticipated in 2024.

South Coast AQMD staff are also expected to conduct rulemaking for the following toxics rules in 2024:

- Proposed Rule 1445 – Control of Toxic Emissions from Laser Cutting

Appendix A – Description of Active AB 2588 Related Projects

This section includes tables that with details on active AB 2588 projects. Table A-1 lists the facilities that were prioritized in 2023 based on inventory year 2022. 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 2023. Tables A-4 and A-5 list facilities with VRRPs or RRP. Lastly, for any active facilities that had a designation as a Potentially High Risk Level Facility or conducted public notification in 2023, a project overview is included at the end of this section.

Table A-1: Facilities Prioritized in 2023

Facility ID	Facility Name	City	Draft Priority Category
1179	INLAND EMPIRE UTL AGEN, A MUN WATER DIS	CHINO	Low
1912	SADDLEBACK COMMUNITY COLLEGE DISTRICT	MISSION VIEJO	Intermediate
2912	HOLLIDAY ROCK CO INC	UPLAND	Intermediate
3866	SO ORANGE CO. WASTEWATER AUTHORITY	DANA POINT	Intermediate
11245	HOAG HOSPITAL	NEWPORT BEACH	Intermediate
11716	FONTANA PAPER MILLS INC	FONTANA	Low
13088	EASTERN MUNICIPAL WATER DISTRICT	MORENO VALLEY	Intermediate
13920	PROVIDENCE SAINT JOSEPH HOSPITAL	ORANGE	Intermediate
14495	VISTA METALS CORPORATION	FONTANA	Intermediate
14966	VA GREATER LOS ANGELES HEALTHCARE SYS	LOS ANGELES	Intermediate
15504	SCHLOSSER FORGE COMPANY	RANCHO CUCAMONGA	High
16338	KAISER ALUMINUM FABRICATED PRODUCTS, LLC	LOS ANGELES	Low
16951	ANAPLEX CORP	PARAMOUNT	Intermediate
17325	ACE CLEARWATER ENTERPRISES	PARAMOUNT	Low
18989	BOWMAN PLATING CO INC	COMPTON	Low
19159	EASTERN MUNICIPAL WATER DIST	SAN JACINTO	Low
19194	EPPINK OF CALIFORNIA	SOUTH GATE	Low
19390	SULLY-MILLER CONTRACTING CO.	SUN VALLEY	Intermediate
22911	CARLTON FORGE WORKS	PARAMOUNT	Intermediate
23500	COMMERCIAL SANDBLAST CO	VERNON	Low
24718	TIODIZE CO INC	HUNTINGTON BEACH	Intermediate
37507	TROJAN BATTERY COMPANY, LLC	SANTA FE SPRINGS	Intermediate
39496	THE LANSDALE COMPANY	LONG BEACH	Intermediate
43436	TST, INC.	FONTANA	Intermediate

Facility ID	Facility Name	City	Draft Priority Category
45489	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	Intermediate
47901	PARKER HANNIFIN CORP, CONTROL SYS DIV	IRVINE	Intermediate
49111	SUNSHINE CYN LANDFILL REPUBLIC SERV INC	SYLMAR	Intermediate
50299	SAN BER CNTY SOLID WASTE MGMT MID VALLEY	RIALTO	Low
51003	SO CAL EDISON CO	ONTARIO	Low
52886	GARDEN GROVE CITY, PUB. WKS DEPT, WATER	GARDEN GROVE	Intermediate
54497	THORNTON STEEL	ANAHEIM	Low
56100	LA CO., SANITATION DISTRICT	CERRITOS	Intermediate
59225	AMERICH CORP	NORTH HOLLYWOOD	Low
67399	INLAND EMPIRE UTILITIES AGENCY	CHINO	Intermediate
70282	EASTERN MUNICIPAL WATER DISTRICT	MORENO VALLEY	Intermediate
75513	ASSOCIATED READY MIXED CONCRETE INC	LOS ANGELES	Intermediate
79174	INLAND EMPIRE UTL AGEN, A MUN WATER DIST	RANCHO CUCAMONGA	Low
81767	BEHR PROCESS CORP	SANTA ANA	Low
101656	AIR PRODUCTS AND CHEMICALS, INC.	WILMINGTON	Intermediate
102268	PREPRODUCTION PLASTICS, INC	CORONA	Intermediate
103479	BRIDGEMARK CORPORATION	ANAHEIM	Low
108742	REMO INC	VALENCIA	Low
113873	MM WEST COVINA LLC	WEST COVINA	Intermediate
118379	ARROWHEAD REGIONAL MEDICAL CTR	COLTON	Low
126060	STERIGENICS US, LLC	ONTARIO	Intermediate
132954	ALL AMERICAN ASPHALT	SAN FERNANDO	Intermediate
134943	HOWMET GLOBAL FASTENING SYSTEMS INC	TORRANCE	High
135043	ROSE HILLS CO	WHITTIER	Intermediate
140871	PAC RANCHO, INC.	RANCHO CUCAMONGA	Intermediate
142267	FS PRECISION TECH LLC	COMPTON	Low
149620	SOUTHERN CALIFORNIA EDISON	RANCHO CUCAMONGA	Low
155797	LA GAUGE COMPANY	SUN VALLEY	Intermediate
159449	KECK HOSPITAL OF USC	LOS ANGELES	Intermediate
160437	SOUTHERN CALIFORNIA EDISON	REDLANDS	High
164581	FLARE GROUP DBA AVIATION EQUIP PROCESS	COSTA MESA	Low
175264	SYNERGY OIL AND GAS, LLC	LONG BEACH	Low
176369	TESORO LOGISTICS MARINE TERMINAL 3	LONG BEACH	Low
188380	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	Intermediate
191677	VORTEQ PACIFIC	RANCHO CUCAMONGA	Low

Facility ID	Facility Name	City	Draft Priority Category
193318	ZENITH ENERGY WEST COAST TERMINALS LLC	LONG BEACH	Low
194241	STRUCTURAL COMPOSITES INDUSTRIES LLC	POMONA	Low
195107	CALNRG OPERATING, LLC	ANAHEIM	Low
195338	WG HOLDINGS SPV, LLC	LOS ANGELES	Low
800318	GRISWOLD INDUSTRIES	COSTA MESA	Low
800386	LA CO., SHERIFF DEPT	CASTAIC	Low
800387	CAL INST OF TECH	PASADENA	Intermediate

Table A-2: Active ATIR Project

Facility ID	Facility Name	City	Inventory Year	Status
4988	SULLY MILLER CONTRACTING CO.	South Gate	2021	In Progress
7730	CARPENTER CO	Riverside	2019	Approved, HRA required
12036	HOLLIDAY TRUCKING, INC	Rialto	2019	Approved*
14495	VISTA METALS CORPORATION	Rancho Cucamonga	2018	Approved*
15504	SCHLOSSER FORGE COMPANY	Rancho Cucamonga	2018	In Progress
19167	R J. NOBLE COMPANY	Orange	2017	In Progress
42623	ROBERTSON'S READY MIX	Redlands	2017	Approved*
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	Approved, HRA required
115394	AES ALAMITOS	Long Beach	2021	Approved*
126060	STERIGENICS US, LLC.	Ontario	2021	Approved, HRA required
126191	STERIGENICS US, INC.	Vernon	2021	Approved, HRA required
134112	ROBERTSON'S READY MIX	Gardena	2016	Approved*
134943	ARCONIC GLOBAL FASTENERS & RINGS INC	Torrance	2018	Approved, HRA required
148146	ALL AMERICAN ASPHALT	Perris	2017	Approved, HRA required
164581	FLARE GROUP DBA AVIATION EQUIP PROCESS	Costa Mesa	2018	In Progress
185352	SNOW SUMMIT, LLC.	Big Bear Lake	2021	Approved, HRA required
800037	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	Compton	2019	In Progress
800129	SFPP, L.P.	Bloomington	2019	In Progress

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

Table A-3: Active HRA Projects

Facility ID	Facility Name	City	Inventory Year	Status
7730	CARPENTER CO	Riverside	2019	In Progress
17953	PACIFIC CLAY PRODUCTS INC	Lake Elsinore	2017	In Progress
18989	BOWMAN PLATING CO INC	Compton	2019	In Progress
126060	STERIGENICS US, LLC	Ontario	2021	In Progress
126191, 126197	STERIGENICS US, INC	Vernon	2021	In Progress
134943	ARCONIC GLOBAL FASTENERS & RINGS INC	Torrance	2018	In Progress
140871	PAC RANCHO, INC.	Rancho Cucamonga	2018	Complete
180908	ECO SERVICES OPERATIONS CORP.	Carson	2017	Complete
185352	SNOW SUMMIT, LLC.	Big Bear Lake	2021	In Progress

Table A-4: Active VRRP Project

Facility ID	Facility Name	City	Inventory Year	Plan Status	Implementation Progress
182610	ELITE COMFORT SOLUTIONS	Commerce	2015	Approved	In Progress
187165	ALTAIR PARAMOUNT, LLC	Paramount	2019	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 Project

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
112684	Coastline High Performance Coatings, Ltd.	Garden Grove	2019	Approved	In Progress
126060	STERIGENICS US, LLC.	Ontario	2021	Under Review	N/A
126191, 126197	STERIGENICS US, INC.	Vernon	2021	Under Review	N/A
140871	PAC RANCHO, INC.	Rancho Cucamonga	2018	Under Review	N/A

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 HRA was submitted to OEHHA for review and was conditionally approved by OEHHA on December 15, 2021.

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

Since the HRA results were above the Significant Risk Level in Rule 1402, Coastline HPC was required to notify the public about the health risk. Notices of the public notification meeting were

sent out to over 1,000 people in the area of impact. South Coast AQMD staff held a virtual public notification meeting on August 4, 2022, to explain the impact of Coastline HPC's emissions on public health and to discuss next steps.

On August 8, 2023, an annual progress report was received which stated that the facility was on track to implement the remaining reduction measures by the deadline of June 7, 2024.

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

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

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

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

On November 15, 2021, Pac Rancho submitted the revised HRA. South Coast AQMD reviewed the submittal and provided comments on December 17, 2021. After 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. On March 3, 2023, South Coast AQMD approved the HRA as modified. The modified HRA indicated that Pac Rancho posed a maximum cancer risk of 38.7 chances-in-one million at the nearest worker receptor. The HRA also yielded hazard indices of 4.48, 2.87, and 21.26 for worker, 8-hour, and acute non-cancer risk scenarios, respectively. These risks exceeded both the public notification and risk reduction thresholds. Pac Rancho provided public notification to approximately 45 addresses and South Coast AQMD held a virtual public notification meeting on May 2, 2023.

Pac Rancho submitted an RRP on July 5, 2023, but South Coast AQMD rejected the submittal due to a number of deficiencies. A revised RRP submittal was received on August 18, 2023 and as of the end of 2023, staff continues to work with the facility on finalizing the RRP. South Coast AQMD staff anticipates an approval of the RRP in early 2024.

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 calculation methodologies be used to prepare the ATIR.

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

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

The HRA and RRP were received on March 28, 2023. After a review by staff, the HRA was rejected on October 31, 2023, requiring resubmittal by January 2, 2024. The main reason the HRA was rejected was due to the fact that it was not based on the approved ATIR. The RRP was under review by South Coast AQMD staff as of the end of 2023.

On December 29, 2023, a request to amend the EARP was submitted and staff began discussions with Sterigenics Ontario to negotiate the updated terms.

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

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

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

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

The Early Action Reduction Plan was received on September 2, 2022, and detailed the actions that Sterigenics Vernon had taken and would take to immediately reduce risk. These actions included, but are not limited to, sealing off the building, directing indoor ambient air towards control equipment, exploring additional control equipment that could reduce emissions, conducting weekly fence-line 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. A revised ATIR was not received, therefore South Coast AQMD staff modified the ATIR and approved as modified pursuant to Rule 1402 (d)(4)(D) on May 26, 2023.

The HRA and RRP were received on December 6, 2022. After a review by staff, the HRA was rejected on June 15, 2023, requiring resubmittal by August 15, 2023. The main reason the HRA was rejected was due to the fact that it was not based on the approved ATIR. A revised HRA was received on August 15, 2023. After a review by staff, the revised HRA was also found to be deficient mainly because it was not based on the approved ATIR. Staff began to modify the HRA in 2023 and plan to approve as modified pursuant to Rule 1402(e)(2)(D). The RRP was under review by South Coast AQMD staff as of the end of 2023.

On December 29, 2023, a request to amend the EARP was submitted and staff began discussions with Sterigenics Vernon to negotiate the updated terms.

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. It also provides the last known status of each facility as follows:

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

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

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

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

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

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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
11818	A	HIXSON METAL FINISHING (e)	NEWPORT BEACH	1502	1.09	0.2	0.1	2015
140871	A	PAC RANCHO, INC.	RANCHO CUCAMONGA	38.76	0	21.26	4.48	2023
171107	A	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	WILMINGTON	24.5	0.43	0.44	0.15	2020
800372	A	EQUILON ENTER. LLC, SHELL OIL PROD. US	CARSON	22	0.26	1.3	0.07	2020
122822	O	CONSOLIDATED FILM INDUSTRIES, LLC	HOLLYWOOD	21	ND	0.1	0.4	2000
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.6	0.3	2009
14495	A	VISTA METALS CORPORATION	FONTANA	19.8	0.06	0	0.3	2008
165192	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
18989	A	BOWMAN PLATING CO INC	COMPTON	17	0	0.01	0.01	2015
11142	A	KEYSOR-CENTURY CORP	SAUGUS	17	ND	0.5	0.1	2000
22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
35302	A	OWENS CORNING ROOFING AND ASPHALT, LLC	COMPTON	14	0.02	0.1	0.1	2000
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
113873	A	MM WEST COVINA	WEST COVINA	13.3	0.31	1.7	0.98	2020
23907	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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800373	A	LAKELAND DEVELOPMENT COMPANY	SANTA FE SPRINGS	9.7	ND	0.3	0.1	2000
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.1	0.2	1999
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
800318	A	GRISWOLD INDUSTRIES	COSTA MESA	9.5	0.01	0.1	0	2001
800149	A	US BORAX INC	WILMINGTON	9.5	ND	0	0	2000
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.	CANOVA PARK	8.7	ND	0	0	1995
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0	0	0.2	2002
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
200876	A	RKS HUNIGTON 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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
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
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.1	0.1	2001
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
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.2	0.5	2013
13920	A	SAINT JOSEPH HOSPITAL	ORANGE	7.7	0	0.8	0.3	2008
169754	A	SO CAL HOLDING, LLC	HUNTINGTON BEACH	7.6	0.02	0.02	0.04	2019
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.1	0	1999
18294	A	NORTHROP GRUMMAN SYSTEMS CORP	EL SEGUNDO	7.6	ND	0.13	0.05	1999
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.2	0	1997
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
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.2	0.1	2007
800113	A	ROHR, INC.	RIVERSIDE	7.2	0.01	0.9	0	2007
49387	A	UNIV CAL, RIVERSIDE	RIVERSIDE	7.1	ND	0	0	2018
8547	A	QUEMETCO INC	CITY OF INDUSTRY	7.1	0.45	0.09	0.69	2016

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
27343	O	CON AGRA INC, GILROY FOODS DBA	SANTA ANA	7.1	ND	0.2	0.1	1995
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
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
118998	O	CYTEC FIBERITE INC	CULVER CITY	6.6	ND	0	0.2	1997
6643	A	TECHNICOLOR INC	NORTH HOLLYWOOD	6.5	ND	0	0.1	2007
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.5	ND	0	0.1	2002
11726	A	GE ENGINE SERVICES	ONTARIO	6.5	ND	0.1	0.6	1999
168088	A	POLYNT COMPOSITES USA INC	LYNWOOD	6.5	ND	0.1	1.6	1995
200797	A	WESTLAKE ROYAL ROOFING LLC	CORONA	6.4	0	0.51	2.72	2018
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	6.4	0.02	0.01	0.08	2015
2852	A	THE WALT DISNEY COMPANY	BURBANK	6.4	0.03	0	0	1997
199197	A	TEX-TECH ENGINEERED 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
112684	A	COASTLINE HIGH PERFORMANCE COASTINGS LTD.	GARDEN GROVE	6.2	ND	ND	0.01	2022
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
45262	A	LA COUNTY SANITATION DIST SCHOLL CANYON	GLENDALE	6.2	ND	0	0.1	1998
1226	A	HYATT DIE CAST & ENGINEERING CORP	CYPRESS	6.2	ND	0	0.1	1996
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6	ND	0	0.5	1996

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800022	A	CALNEV PIPE LINE, LLC	BLOOMINGTON	5.9	ND	0	0.1	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0	0.2	1999
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0	0.1	1999
800047	O	FLETCHER OIL & REF CO	CARSON	5.9	ND	0	0	1998
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
800288	A	UNIV CAL IRVINE (NSR USE ONLY)	IRVINE	5.6	ND	0	0.1	1996
38971	A	RICOH ELECTRONICS INC	IRVINE	5.6	ND	0	0.4	1995
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.2	0	2007
54424	A	L&L CUSTOM SHUTTERS INC,ALLWOOD SHUTTERS	PLACENTIA	5.5	ND	0.2	0.2	2001
14146	A	MAC GREGOR YACHT CORP	COSTA MESA	5.5	ND	0	0.1	1998
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
800037	A	DEMENNO-KERDOON DBA WORLD OIL RECYCLING	COMPTON	4.9	0.01	0.01	0.02	2009
103888	O	SARGENT FLETCHER INC	EL MONTE	4.9	ND	0.2	0	1999
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

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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
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0	0.01	0.02	2021
82207	A	ALL AMERICAN ASPHALT,ALL AMER AGGREGATES	IRVINE	4.4	0	2.41	0.07	2022
157451	A	BENDER CCP INC	VERNON	4.4	0	1	0	2002
800041	A	DOW CHEM U.S.A.	TORRANCE	4.4	ND	0.1	0	2000
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.3	0	2001
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
124506	A	THE BOEING COMPANY	TORRANCE	4.2	ND	0.5	0.1	1995
152952	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.3	0.1	2003
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
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0	0	0	2007
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.3	0	2002
17325	A	ACE CLEARWATER ENTERPRISES	PARAMOUNT	3.7	ND	0	0	2002
106838	O	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
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
105598	A	SENIOR AEROSPACE SSP	BURBANK	3.6	ND	1	0.5	2001
800007	A	ALLIED SIGNAL INC (NSR USE ONLY)	EL SEGUNDO	3.6	ND	0	0.5	2000
7427	A	OWENS-BROCKWAY GLASS CONTAINER INC	VERNON	3.6	ND	0.01	0.06	1999

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126197	A	STERIGENICS US, INC.	LOS ANGELES	3.6	ND	0	0	1996
140811	A	DUCOMMUN AEROSTRUCTURES INC	MONROVIA	3.5	0.01	0	0	2002
151899	O	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0	0.2	2000
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.1	0.5	2000
8015	A	ANADITE INC	SOUTH GATE	3.5	ND	0.63	0.78	1998
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
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
800063	A	GROVER PROD. CO (EIS USE)	LOS ANGELES	3.3	0.04	0.88	0.07	2001
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0	0	1999
126191	A	STERIGENICS US, INC.	LOS ANGELES	3.3	ND	0	0	1996
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
83102	A	LIGHT METALS INC	CITY OF INDUSTRY	3	0	0.27	0.13	2022
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
113676	A	VICKERS	LOS ANGELES	3	ND	0	0	1995
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3	ND	0	0	1994
52517	A	REXAM BEVERAGE CAN COMPANY	CHATSWORTH	2.9	0.01	0.7	0.1	2009
2613	A	U.S.GVT,NAVY,NAVAL WEAPONS STN SEAL BCH	SEAL BEACH	2.9	ND	0.1	0	2002

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116868	A	EQUILON ENTER. LLC, SHELL OIL PROD. U S	BLOOMINGTON	2.9	ND	0	0	1999
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0	0.1	1999
167981	A	TESORO LOGISTICS, WILMINGTON TERMINAL	WILMINGTON	2.8	ND	0	0	2000
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.1	0	1999
48274	A	FENDER MUSICAL INST	CORONA	2.8	ND	0	0.4	1997
800035	A	CONTINENTAL AIRLINES INC (NSR USE ONLY)	LOS ANGELES	2.8	ND	0	0.1	1995
27701	O	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0	0.1	2002
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
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
194733	A	LGM PHARMA	IRVINE	2.7	ND	0	0	1997
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0	0.1	1997
46268	A	CALIFORNIA STEEL INDUSTRIES INC	FONTANA	2.7	0.02	0.2	0	1995
41229	A	LUBECO INC	LONG BEACH	2.6	ND	ND	ND	2019
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
35483	A	WARNER BROTHERS STUDIO FACILITIES	BURBANK	2.6	ND	0.1	0.3	1997
185059	O	CUSTOM FIBREGLOSS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0	0	1995
800387	A	CAL INST OF TECH	PASADENA	2.4	ND	0.1	0	2007
133405	A	BODYCOTE THERMAL PROCESSING	LOS ANGELES	2.4	ND	0	0.2	1999
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.1	0.8	1999
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0	0.1	1999

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172878	A	TESORO LOGISTICS LONG BEACH TERMINAL	LONG BEACH	2.4	ND	0	0	1999
79682	A	RAMCAR BATTERIES INC	COMMERCE	2.4	1	0	0.2	1998
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
160437	A	SOUTHERN CALIFORNIA EDISON	REDLANDS	2.3	0	0	0	2013
1208	A	MICROSEMI CORP	SANTA ANA	2.3	ND	0	0	2001
800056	A	KINDER MORGAN LIQUIDS TERMINALS, LLC	WILMINGTON	2.3	0.01	0	0	1997
90546	O	SORIN BIOMEDICAL INC	IRVINE	2.3	ND	0	0	1996
800111	O	THE BOEING COMPANY	DOWNEY	2.3	ND	0	0.1	1996
103659	A	ASCENT MEDIA MANAGEMENT SERVICES INC	BURBANK	2.2	ND	0.6	0	2004
99773	A	CYTEC ENGINEERED MATERIALS INC	ANAHEIM	2.2	0	0	0.2	2000
800413	A	HAWKER PACIFIC AEROSPACE	SUN VALLEY	2.1	0	0	0.1	2009
9668	A	DELUXE LABORATORIES	HOLLYWOOD	2.1	ND	0	0	2000
195802	A	VERNON PUBLIC UTILITIES	VERNON	2	0	0	0	2007
142267	A	FS PRECISION TECH LLC	COMPTON	2	ND	0.1	0.2	2001
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2	ND	0	0.5	1998
192266	A	KINDEVA DRUG DELIVERY L.P.	NORTHRIDGE	2	ND	0.4	0.4	1996
800181	O	CALIFORNIA PORTLAND CEMENT CO	COLTON	2	ND	0	0.4	1996
800325	A	TIDELANDS OIL PRODUCTION CO	LONG BEACH	1.9	ND	0.1	0.6	1999
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0	0.1	2001
10245	A	LA CITY, TERMINAL ISLAND TREATMENT PLANT	SAN PEDRO	1.8	ND	0	0	2000
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

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22467	A	LEFIELL MFG CO	SANTA FE SPRINGS	1.7	ND	0.7	0.2	2000
196724	A	E&B NATURAL RESOURCES MANAGEMENT CORP	WILMINGTON	1.7	ND	0	0	1996
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0	0.4	0.3	2017
196103	A	SHADOW WOLF ENERGY, LLC	SANTA CLARITA	1.6	ND	0.2	0.7	1999
133660	A	HAYDEN INDUSTRIAL PRODUCTS	CORONA	1.6	ND	0.8	0.4	1998
119920	A	PECHINEY CAST PLATE INC	VERNON	1.6	ND	0.3	0.3	1996
25070	A	LA CNTY SANITATION DISTRICT-PUENTE HILLS	CITY OF INDUSTRY	1.5	0	0.3	0.1	2009
2638	A	OCCIDENTAL COLLEGE	LOS ANGELES	1.5	ND	0.1	0	2007
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0	0	2001
126536	O	CPP - POMONA	POMONA	1.5	ND	0	0	1999
3968	A	TABC, INC	LONG BEACH	1.4	ND	0.1	0.2	1999
800408	A	NORTHROP GRUMMAN SYSTEMS	MANHATTAN BEACH	1.4	ND	0.9	0.1	1998
82513	A	BREA CANON OIL COMPANY INC	HARBOR CITY	1.4	ND	0	0	1996
187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0	0	1999
62679	O	KOP-COAT INC	LOS ANGELES	1.3	ND	0	0.5	1997
2526	A	CHEVRON USA INC	VAN NUYS	1.3	ND	0	0	1996
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.6	0.1	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
42633	A	LA COUNTY SANITATION DISTRICTS (SPADRA)	POMONA	1.2	ND	0	0	1996
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

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800127	A	SO CAL GAS CO	MONTEBELLO	1	0	0	0	2009
124806	O	EXIDE TECHNOLOGIES	CITY OF INDUSTRY	1	ND	0	0	1999
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1	ND	0	0.1	1997
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
22808	O	PRICE PFISTER INC	PACOIMA	0.9	ND	0.2	0.1	1996
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.2	0	2007
18378	A	GRUBER SYS INC	VALENCIA	0.8	ND	0.1	0.1	2004
14544	O	SANTA FE ENAMELING & METAL FINISHING CO	SANTA FE SPRINGS	0.8	ND	0	0.4	1999
195344	A	WG HOLDINGS SPV, LLC	SANTA FE SPRINGS	0.8	ND	0	0	1998
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
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0	0	1999
24060	A	AQUATIC COMPANY	ANAHEIM	0.7	ND	0	0	1996
22373	A	SMURFIT-STONE CONTAINER ENTERPRISES, INC	LOS ANGELES	0.7	ND	0	0	1996
174340	A	PRC DE SOTO INTERNATIONAL, INC.	IRVINE	0.7	ND	0	0	1995
15647	A	CUSTOM ENAMELERS INC	FOUNTAIN VALLEY	0.6	ND	0.1	0	2000
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
196690	A	HYDRO-AIRE AEROSPACE CORP	BURBANK	0.6	ND	0	0.1	1997
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0	0.1	0.4	2012
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

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152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.4	0.2	2001
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
1634	A	STEELCASE INC, WESTERN DIV	TUSTIN	0.5	ND	0	0	1995
44577	A	LONG BEACH CITY, SERRF PROJECT	LONG BEACH	0.4	0	0	0.1	2011
18990	A	LIFE PAINT CO	SANTA FE SPRINGS	0.4	ND	0	0	2001
122295	A	FALCON FOAM, A DIV OF ATLAS ROOFING CORP	LOS ANGELES	0.4	ND	0	0	1999
115536	A	AES REDONDO BEACH, LLC	REDONDO BEACH	0.4	ND	0	0	1998
43436	A	TST, INC.	FONTANA	0.4	0.11	0	0.4	1997
12660	O	GOLDSHIELD FIBERGLASS, INC, PLANT #58	FONTANA	0.4	ND	0	0	1994
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0	0	0	2010
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0	0	2008
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.1	0.1	2007
122300	A	BASF CORPORATION	COLTON	0.3	ND	0.6	0	2002
115663	A	EL SEGUNDO ENERGY CENTER LLC	EL SEGUNDO	0.3	ND	0	0	2000
124805	A	EXIDE TECHNOLOGIES	COMMERCE	0.3	ND	0	0	2000
99119	A	INTERPLASTIC CORP	HAWTHORNE	0.3	ND	0.1	0.3	1999
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
112192	O	CONSOLIDATED DRUM RECONDITIONING CO INC	SOUTH GATE	0.3	ND	0	0	1997
800343	O	BOEING SATELLITE SYSTEMS, INC	EL SEGUNDO	0.3	ND	0	0.2	1996
25638	A	BURBANK CITY, BURBANK WATER & POWER	BURBANK	0.3	ND	0.3	0	1996
48300	A	PRECISION TUBE BENDING	SANTA FE SPRINGS	0.2	ND	0	0	2002

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800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0	0	2000
16264	A	INTERNATIONAL COATINGS CO INC	CERRITOS	0.2	ND	0	0	1999
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.3	0	1999
800168	A	PASADENA CITY, DWP	PASADENA	0.2	ND	0.7	0	1996
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
25012	A	AMADA AMERICA, INC.	LA MIRADA	0.1	ND	0	0	2002
156741	A	HARBOR COGENERATION CO, LLC	WILMINGTON	0.1	ND	0	0	2002
94872	A	METAL CONTAINER CORP	MIRA LOMA	0.1	ND	0.4	0.4	2002
7416	A	PRAXAIR INC	WILMINGTON	0.1	ND	0	0	2001
115389	A	AES HUNTINGTON BEACH, LLC	HUNTINGTON BEACH	0.1	ND	0	0	1999
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
1992	O	PRUDENTIAL OVERALL SUPPLY	VAN NUYS	0.1	ND	0	0	1997
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
180908	A	ECO SERVICES OPERATIONS CORP.	LONG BEACH	0.06	ND	1.64	0.15	2023
23752	A	AEROCRAFT HEAT TREATING CO INC (e)	PARAMOUNT	0	ND	2.9	0.15	2018
193552	A	VERNON ENVIRONMENTAL RESPONSE TRUST	VERNON	0	ND	0	0	2013
800320	A	AMVAC CHEMICAL CORP	LOS ANGELES	0	ND	0.1	0.3	2004
14191	O	NIKLOR CHEMICAL COMPANY INC	CARSON	0	ND	0	0	2002
22229	A	PROCESSES BY MARTIN INC (MARTIN METALS F	LYNWOOD	0	ND	0	0	2002
6670	O	TRU CUT INC	LOS ANGELES	0	ND	0	0	2002

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800109	A	REYNOLDS METALS CO	TORRANCE	0	ND	0.2	0.9	2001
800009	A	AMERON PROTECTIVE COAT DIV (EIS&NSR USE)	BREA	0	ND	0.2	0.2	2000
124016	O	CHEMETALL U.S., INC,	LA MIRADA	0	ND	0.1	0.1	2000
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0	ND	0	0	2000
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0	ND	0	0	2000
119127	O	PRC-DE SOTO INTERNATIONAL	GLENDALE	0	ND	0	0	2000
800154	A	US GOVT, MARINE CORPS AIR STATION	TUSTIN	0	ND	0	0	2000
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0	ND	0.3	0	1999
20144	A	CANON BUSINESS MACHINES INC	COSTA MESA	0	ND	0	0.1	1999
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	COMPTON	0	ND	0	0	1999
24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0	ND	0	0.2	1999
6315	A	LMC ENTERPRISES, DBA FLO-KEM	RANCHO DOMINGUEZ	0	ND	0	0.6	1999
5645	O	STANDARD NICKEL CHROMIUM PLATING CO INC	LOS ANGELES	0	ND	0	0	1999
1746	A	UNITED ALLOYS INC	LOS ANGELES	0	ND	0	0	1998
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0	ND	0	0	1997
40806	A	NEW BASIS	RIVERSIDE	0	ND	0.7	0.2	1997
12493	O	REMO INC	NORTH HOLLYWOOD	0	ND	0	0	1997
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0	ND	0.2	0.7	1997
4616	O	SUPERIOR IND INTL INC	VAN NUYS	0	ND	0	0.4	1997
22092	A	WESTERN TUBE & CONDUIT CORP	LONG BEACH	0	ND	0	0.6	1997
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0	ND	0	0	1996
61209	O	AKZO NOBEL CHEM INC, FILTROL CORP SUB OF	LOS ANGELES	0	ND	0	0	1996
3084	A	CARDINAL INDUSTRIAL FINISHES INC	SOUTH EL MONTE	0	ND	0	0	1996

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
800337	A	CHEVRON U.S.A., INC (NSR USE)	LA HABRA	0	ND	0	0	1996
809	O	GARNER GLASS CO	CLAREMONT	0	ND	0	0	1996
1732	O	INTL ELECTRONIC RESEARCH CORP	BURBANK	0	ND	0	0	1996
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0	ND	0	0	1996
14217	A	MODERN FAUCET MFG COMPANY	LOS ANGELES	0	ND	0	0.5	1996
10656	A	NEWPORT LAMINATES	SANTA ANA	0	ND	0	0	1996
6163	A	OHLINE	GARDENA	0	ND	0.3	0.7	1996
19953	A	RISTON KELLER INC	IRVINE	0	ND	0	0	1996
115586	A	SUNDANCE SPAS, INC	CHINO	0	ND	0	0.4	1996
55711	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
55714	A	SUNLAW COGENERATION PARTNERS I	VERNON	0	ND	0	0	1996
8935	A	TRAIL RITE INC	SANTA ANA	0	ND	0	0.3	1996
5125	A	UTILITY TRAILER MFG CO	CITY OF INDUSTRY	0	ND	0	0.3	1996
70021	A	XERXES CORP (A DELAWARE CORP)	ANAHEIM	0	ND	0	0	1996
47459	O	JACUZZI WHIRLPOOL BATH	IRVINE	0	ND	0	0	1995
6362	O	JACUZZI WHIRLPOOL BATH INC	SANTA ANA	0	ND	0	0	1995
3578	A	PRUDENTIAL OVERALL SUPPLY	CARSON	0	ND	0	0	1995
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
149241	A	REGAL CULTURED MARBLE	POMONA	0	ND	0	0.2	1995
189043	A	REVLIN DBA ELIMINATOR BOATS	MIRA LOMA	0	ND	0	0	1995
800018	A	BAXTER HEALTHCARE CORPORATION	IRVINE	0	ND	0	0.4	1994
12879	O	CYTEC ENGINEERED MATERIALS, INC	SAUGUS	0	ND	0	0	1994

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index (b)	Non-Cancer Chronic Hazard Index	HRA Approval Year (d)
160916	A	FXI, INC.	ORANGE	0	ND	0.4	0.4	1994
18931	A	GERDAU/TAMCO	RANCHO CUCAMONGA	0	0	0	0	2015

Notes:

- (a) “A” – Active (note that facilities with this status may not be in operation currently); O = Out of Business or Inactive
- (b) Cancer Risk and Non-Cancer Chronic Hazard Index is presented as the higher of residential and worker risk
- (c) ND = Not Determined
- (d) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
- (e) RRP in progress, see Table C-1.

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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
511	A	WHITTIER FERTILIZER CO	PICO RIVERA	9.5	0.02	0.07	0	2020
550	A	LA CO., INTERNAL SERVICE DEPT	LOS ANGELES	0.3	ND	0	0	2008
809	O	GARNER GLASS CO	CLAREMONT	0	ND	0	0	1996
1208	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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
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
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
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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
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
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

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

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (chances in-one-million) (b)	Cancer Burden (c)	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index (b)	HRA Approval Year (d)
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 (e)	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

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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
18439	O	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.6	0.2	1998
18452	A	UNIVERSITY OF CALIFORNIA, LOS ANGELES	LOS ANGELES	2.9	ND	0	0.1	1999
18648	O	CROWN CITY PLATING CO.	EL MONTE	12	ND	0.4	0.1	2000
18931	A	GERDAU/TAMCO	RANCHO CUCAMONGA	0	0	0	0	2015
18989	A	BOWMAN PLATING CO INC	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

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22911	A	CARLTON FORGE WORKS	PARAMOUNT	15.4	ND	1.76	1.04	2016
23559	A	JOHNSON CONTROLS BATTERY GROUP INC	FULLERTON	1.8	ND	0	0.1	2001
23752	A	AEROCRAFT HEAT TREATING CO INC (e)	PARAMOUNT	0	ND	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 HILLS ESTATES	0.3	ND	0	0	1998
24647	A	J. B. I. INC	RANCHO DOMINGUEZ	0	ND	0	0.2	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
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

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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
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

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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	4.4	0	2.41	0.07	2022
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
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	O	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
107149	A	MARKLAND MANUFACTURING INC	SANTA ANA	0.3	ND	0.1	0.1	2007
107350	A	NATIONAL O-RINGS	DOWNEY	1.5	ND	0	0	2001
108701	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

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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	6.2	ND	ND	0.01	2022
113170	A	SANTA MONICA - UCLA MEDICAL CENTER	SANTA MONICA	7.6	0.14	0.2	0	1997
113676	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
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
125281	O	ALCO CAD-NICKEL PLATING, MODERN PLATING	LOS ANGELES	8.2	ND	0.1	0	1995

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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	O	CPP - POMONA	POMONA	1.5	ND	0	0	1999
126544	A	PAC FOUNDRIES-INDUSTRY	CITY OF INDUSTRY	1.3	ND	0.6	0.1	1996
126964	A	EDWARDS LIFESCIENCES LLC	IRVINE	0.8	ND	0	0	1995
127568	A	ENGINEERED POLYMER SOLUTION, VALSPAR	MONTEBELLO	3.5	ND	0.1	0.5	2000
132343	A	SPECTRUM PAINT & POWDER, INC.	ANAHEIM	0	ND	0.2	0.7	1997
132954	A	ALL AMERICAN ASPHALT	SAN FERNANDO	1.6	0	0.4	0.3	2017
133405	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
140871	A	PAC RANCHO, INC.	RANCHO CUCAMONGA	38.76	0	21.26	4.48	2023
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	GARDEN GROVE	6	ND	0	0.5	1996
142267	A	FS PRECISION TECH LLC	COMPTON	2	ND	0.1	0.2	2001
148236	A	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	EL SEGUNDO	4.5	0	0.01	0.02	2021
148925	A	CHERRY AEROSPACE	SANTA ANA	9.7	ND	0.1	0.2	1999
149241	A	REGAL CULTURED MARBLE	POMONA	0	ND	0	0.2	1995
151798	A	TESORO REFINING AND MARKETING CO, LLC	CARSON	2.8	ND	0.1	0	1999

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151899	O	CALIFORNIA RESOURCES PRODUCTION CORP	NEWHALL	3.5	ND	0	0.2	2000
152054	A	LINN WESTERN OPERATING INC	BREA	1.1	ND	0	0.1	1996
152501	A	PRECISION SPECIALTY METALS, INC.	LOS ANGELES	0.5	ND	0.4	0.2	2001
152952	A	SA RECYCLING	TERMINAL ISLAND	4.1	ND	1.3	0.1	2003
153546	A	HUCK INTERNATIONAL INC	CARSON	3.3	ND	0	0	1999
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

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174655	A	TESORO REFINING & MARKETING CO, LLC	CARSON	7.3	ND	0.3	0.1	2000
174703	A	TESORO LOGISTICS,CARSON PROD TERMINAL	CARSON	3	ND	0	0	1994
174710	A	TESORO LOGISTICS, VINVALE TERMINAL	SOUTH GATE	9	ND	0	0	1994
175124	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	8.7	ND	0	0	1995
175126	A	AEROJET ROCKETDYNE OF DE, INC.	CANOGA PARK	0	ND	0	0	1996
177042	A	SOLVAY USA, INC	LONG BEACH	4.3	ND	0.3	0	2001
180631	A	STCDARA, LLC	LA PUENTE	13.8	0.02	0.01	0.74	2001
180908	A	ECO SERVICES OPERATIONS CORP.	LONG BEACH	0.06	ND	1.64	0.15	2023
181426	A	OC WASTE & RECYCLING, COYOTE	NEWPORT COAST	20.1	0.18	0.6	0.3	2009
181667	A	TORRANCE REFINING COMPANY LLC	TORRANCE	7.7	0.15	0.2	0.5	2013
182610	A	ELITE COMFORT SOLUTIONS	COMMERCE	2	ND	0	0.5	1998
182752	A	TORRANCE LOGISTICS COMPANY LLC	VERNON	5.3	ND	0.1	0	1997
182822	A	TORRANCE LOGISTICS COMPANY LLC	ANAHEIM	0.7	ND	0	0	1999
183567	A	GS II, INC.	WILMINGTON	6.3	0.04	1.82	0.19	2018
183926	A	EVONIK CORPORATION	LOS ANGELES	2.4	ND	0.1	0.8	1999
184301	A	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	LOS ANGELES	2.7	ND	0	0.1	1997
185059	O	CUSTOM FIBREGLASS MFG. CO DBA SNUGTOP	LONG BEACH	2.5	ND	0	0	1995
185093	A	BEVERLY HILLS UNIFIED SCHOOL DISTRICT	BEVERLY HILLS	1.2	ND	0	0	2005
185352	A	SNOW SUMMIT, LLC.	BIG BEAR LAKE	5.5	ND	0.2	0	2007
185575	A	BRIDGE ENERGY, LLC	BREA	3.4	ND	0	0	1999
186519	A	EMBEE PROCESSING	SANTA ANA	6.6	ND	0.21	0.58	2000
186899	A	ENERY HOLDINGS LLC	CARSON	0.8	ND	0.2	0	2007
187165	A	ALTAIR PARAMOUNT, LLC	PARAMOUNT	9.6	ND	0	0	2002

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187348	A	HYDRO EXTRUDER, LLC	CITY OF INDUSTRY	1.3	ND	0	0	1999
187823	A	KIRKHILL INC	BREA	18.8	0.07	0.06	0.11	2019
188380	A	VALENCE SURFACE TECHNOLOGIES - LYNWOOD	LYNWOOD	0.5	0	0.1	0.4	2012
189043	A	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
192266	A	KINDEVA DRUG DELIVERY L.P.	NORTHRIDGE	2	ND	0.4	0.4	1996
193244	A	BKEP MATERIALS LLC - FONTANA	FONTANA	0	ND	0.3	0	1999
193552	A	VERNON ENVIRONMENTAL RESPONSE TRUST	VERNON	0	ND	0	0	2013
194241	A	STRUCTURAL COMPOSITES IND	POMONA	8.6	0	0	0.2	2002
194733	A	LGM PHARMA	IRVINE	2.7	ND	0	0	1997
195344	A	WG HOLDINGS SPV, LLC	SANTA FE SPRINGS	0.8	ND	0	0	1998
195802	A	VERNON PUBLIC UTILITIES	VERNON	2	0	0	0	2007
196103	A	SHADOW WOLF ENERGY, LLC	SANTA CLARITA	1.6	ND	0.2	0.7	1999
196690	A	HYDRO-AIRE AEROSPACE CORP	BURBANK	0.6	ND	0	0.1	1997
196724	A	E&B NATURAL RESOURCES MANAGEMENT CORP	WILMINGTON	1.7	ND	0	0	1996
199197	A	TEX-TECH ENGINEERED COMPOSITES INC	GARDENA	6.4	ND	0.3	0	1995
200797	A	WESTLAKE ROYAL ROOFING LLC	CORONA	6.4	0	0.51	2.72	2018
200876	A	RKS HUNIGTON 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

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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
800067	A	THE BOEING COMPANY	EL SEGUNDO	6.2	ND	0	0.1	2000
800074	A	LA CITY, DWP HAYNES GENERATING STATION	LONG BEACH	0.2	ND	0	0	2000
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN	PLAYA DEL REY	0	ND	0	0	2000
800079	A	PETRO DIAMOND TERMINAL CO	LONG BEACH	8.3	ND	0	0.2	1998
800087	A	MENASCO MFG CO (EIS USE)	BURBANK	0	ND	0	0	1997
800109	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

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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	O	CALIFORNIA PORTLAND CEMENT CO	COLTON	2	ND	0	0.4	1996
800182	A	RIVERSIDE CEMENT CO	RIVERSIDE	7.8	0.11	0.1	0.1	2001
800184	A	GOLDEN WEST REF CO	SANTA FE SPRINGS	8.8	ND	0.2	0.1	1997
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
800193	A	LA CITY, DWP VALLEY GENERATING STATION	SUN VALLEY	0.2	ND	0.3	0	1999
800196	A	AMERICAN AIRLINES, INC,	LOS ANGELES	5.4	0.19	0.86	0.08	2002
800198	A	ULTRAMAR INC	WILMINGTON	5.9	ND	0	0.1	1999
800202	A	UNIVERSAL CITY STUDIOS, LLC.	UNIVERSAL CITY	2.4	ND	0	0	1996
800204	O	SIMPSON PAPER CO	POMONA	3.4	ND	0	0	1996
800207	A	METRO ST HOSP (EIS USE)	NORWALK	0	ND	0	0	1996
800209	A	BKK CORP (EIS USE)	WEST COVINA	6.9	ND	0	0.1	2000
800214	A	LA CITY, SANITATION BUREAU (HTP)	PLAYA DEL REY	7.6	ND	0.1	0	1999
800224	A	SO CAL EDISON CO	ETIWANDA	2.7	ND	0	0.2	2000
800236	A	LA CO. SANITATION DIST	CARSON	7.2	ND	0.2	0.1	2007
800273	O	CHEMOIL REF CORP (NSR USE ONLY)	SIGNAL HILL	0	ND	0	0	2000
800278	A	SFPP, L.P. (NSR USE)	CARSON	2.4	ND	0	0.1	1999
800279	A	SFPP, L.P. (NSR USE ONLY)	ORANGE	5.9	ND	0	0.2	1999

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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) Cancer Risk and Non-Cancer Chronic Hazard Index is presented as the higher of residential and worker risk
- (c) ND = Not Determined
- (d) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA Risk Assessment Guidelines for preparation of their HRA.
- (e) RRP in progress, see Table C-1.

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

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

Table C-1: Status of Risk Reduction Plans

Facility ID	Facility Name	Submitted	Approved	Implemented	Residual Risk (e)			
					Cancer Risk	Chronic HI	Acute HI	Cancer Burden
7427	OWENS-BROCKWAY GLASS CONTAINER INC	Yes	Yes	Yes	3.6	0.01	0.06	0.00
7730	CARPENTER CO	Yes	Yes	Yes	1.0	0.03	1.34	0.00
8015	ANADITE INC	Yes	Yes	Yes	3.5	0.63	0.78	N/A
8547	QUEMETCO INC	Yes	Yes	Yes	7.1	0.09	0.69	0.45
8582	SO CAL GAS CO/PLAYA DEL REY STORAGE FACILITY	Yes	Yes	Yes	9.0	0.02	0.46	0.00
11818	HIXSON METAL FINISHING (d)	Yes	Yes	In Progress	TBD	TBD	TBD	TBD
14191	NIKLOR CHEMICAL COMPANY INC (a)	Yes	Yes	Yes	N/A	N/A	N/A	N/A
15504	SCHLOSSER FORGE COMPANY	Yes	Yes	Yes	9.5	1.59	1.11	0.07
16951	ANAPLEX CORP	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 (e)	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 that 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	Facility Name	Address	City	VRRP Approval Year
17301	A	ORANGE COUNTY SANITATION DISTRICT	10844 ELLIS AVE	FOUNTAIN VALLEY	2018
29110	A	ORANGE COUNTY SANITATION DISTRICT	22212 BROOKHURST ST	HUNTINGTON BEACH	2018

Facility ID	Facility Status	Facility Name	Address	City	VRRP Approval Year
800030	A	CHEVRON EL SEGUNDO REFINERY	324 WEST EL SEGUNDO BLVD	EL SEGUNDO	2019
181667	A	TORRANCE REFINING COMPANY	3370 W 190 TH ST	TORRANCE	2020
182610	A	ELITE COMFORT SOLUTIONS	4542 E DUNHAM ST	COMMERCE	2020
800026	A	ULTRAMAR INC	2402 E ANAHEIM ST	WILMINGTON	2021
187165	A	ALTAIR PARAMOUNT, LLC	14700-08 DOWNEY AVE	PARAMOUNT	2023

Appendix D – List of Acronyms and Abbreviations

Acronym	Description
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