**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

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

## September 2018

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## EXECUTIVE SUMMARY

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) is a key statewide program implemented by air districts to address health risks from existing permitted facilities. State law requires the South Coast Air Quality Management District (SCAQMD) to prepare an Annual Report of activities. This report fulfills that requirement and also provides a summary of staff activities in relation to other toxic air contaminant programs in calendar year 2017.

In 2017, staff reviewed a variety of work products submitted by 35 different facilities as a requirement of the AB 2588 Program. Staff also continued reviewing reports and proposed risk reduction measures for two facilities in the city of Paramount that have been identified as Potentially High Risk Level Facilities (potential cancer risk greater than one hundred in one million or a total acute or chronic HI greater than five). Through SCAQMD's ambient monitoring efforts in the cities of Paramount and Long Beach, staff designated a third facility, Lubeco Inc., in the city of Long Beach as a Potentially High Risk Level Facility.

In addition to AB 2588 Program activities, SCAQMD staff worked on a variety of other toxic programs in 2017, including completing rule development work on the Rule 1401 guidance document, review of the final version of United States Environmental Protection Agency's (U.S. EPA) National Air Toxics Assessment (NATA) for 2014, source testing, and air monitoring efforts. In addition, staff analyzed changes and potential impacts to permitting and AB 2588 from the Office of Environmental Health Hazard Assessment (OEHHA) regarding new or revised toxic air contaminant health values.

# 1. INTRODUCTION

SCAQMD has a comprehensive air toxics program. At the heart of this program are Rule 1401 – New Source Review of Toxic Air Contaminants, to ensure toxic emissions from new and modified sources do not exceed specified risk levels and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, which implements various aspects of SCAQMD's AB 2588 Program. AB 2588 is the Air Toxics "Hot Spots" Information and Assessment Act, Health and Safety (H&S) Code Section 44300 et seq. SCAQMD's air toxic program also includes a series of source specific rules that address toxic air contaminants for specific industries or equipment categories.

This report summarizes SCAQMD's air toxics program activities in 2017, including AB 2588 activities, rule development activities, dispersion modeling support for rules and permits, and other air toxic related programs such as ambient monitoring efforts in Paramount, and source testing and air monitoring efforts in support of the AB 2588 Program. This report also satisfies Section 44363 of the California H&S Code that requires SCAQMD to annually prepare and publish a status and forecast report of all AB 2588 Program activities.

The AB 2588 Program, combined with implementation of Rule 1402, includes requirements for toxic emissions inventories, categorizing and prioritizing facilities, reviewing and approving detailed Air Toxics Inventory Reports (ATIR), Health Risk Assessments (HRA), Risk Reduction Plans (RRP), and providing public notification. Rule 1402 was amended on October 7, 2016 to include a provision to allow facilities to participate in a Voluntary Risk Reduction Program. The Voluntary Risk Reduction Program is an alternative to complying with the traditional AB 2588 and Rule 1402 approach that provides facilities that meet specific criteria, an opportunity to reduce health risks below the Notification Risk Level with a Modified Public Notification approach. Qualifying facilities must submit a Voluntary Risk Reduction Plan (VRRP) for approval. The Voluntary Risk Reduction Program will achieve risk reductions both sooner and beyond what is required in the traditional Rule 1402 process. In addition to the Voluntary Risk Reduction Program, amendments included special requirements for Potentially High Risk Level Facilities. Potentially High Risk Facilities have an estimated cancer risk that exceeds 100 in-one-million which must implement an Early Action Reduction Plan while the facility concurrently prepares their Health Risk Assessment and Risk Reduction Plan.

## 1.1 Background

There are two broad classes of facilities within the AB 2588 Program: core facilities and facilities in the industry-wide source categories. Industry-wide source facilities are generally small businesses with relatively similar emission profiles (such as gas stations and autobody shops). Facilities that are in industry-wide source categories have fewer requirements under AB 2588 than core facilities and are discussed further in Section 2.4 of this report. Core facilities must regularly report their emissions of toxic air contaminants and do the following:

- ***Emissions Reporting*** – Core facilities in the AB 2588 Program submit an air toxics inventory every four years through the Annual Emissions Reporting (AER) Program.

- ***Prioritization*** - From the reported toxic emissions, SCAQMD staff prioritizes facilities, using a state – required procedure approved by the Governing Board, into three categories:

high, intermediate, and low. High priority facilities are then asked to prepare an ATIR or elect to prepare a VRRP, if eligible.

- ***Health Risk Assessment*** - High priority facilities might need to prepare a HRA, if the ATIR indicates that the facility is still considered a high priority.

- ***Public Notice*** - If the health risk reported in the HRA exceeds the Notification Risk Levels in Rule 1402 (a Maximum Individual Cancer Risk (MICR) of ten in one million, a total acute or chronic Hazard Index (HI) of one or the more stringent of either the National Ambient Air Quality Standard (NAAQS) for lead or ambient concentration limit in an applicable SCAQMD rule), then the facility is required to provide public notice to the affected community.

- ***Risk Reduction*** - Facilities with health risks above the Action Risk Levels in Rule 1402 (a MICR of twenty five in one million, cancer burden of one half, a total acute or chronic HI of three, or the NAAQS for lead) must reduce their risks below those levels.

Figure 1 provides an overview of the AB 2588 Program and the different paths a core facility must follow under Rule 1402. Currently there are 432 core facilities in SCAQM's AB 2588 Program.

SCAQMD staff reviews HRAs to ensure they follow methodologies established by OEHHA and the California Air Resources Board (CARB), as required by H&S Code Section 44360(c). The health risk values presented in this Annual Report that were approved prior to 2015 were calculated using the methodologies available at the time of HRA approval, and have not been recalculated based on more recent guidance.[1] OEHHA's HRA Guidelines were revised and approved in early 2015 and takes into account more recent science that has documented greater risks when children are exposed to cancer causing compounds, in addition to other changes. This change in methodology results in residential cancer risks that are about two to six times higher for a given level of exposure compared to the previous methodology. The health risks in all HRAs finalized by SCAQMD staff in 2015 and later were calculated using the 2015 OEHHA HRA Guidelines.

[1] The potential effect of the 2015 OEHHA HRA Guidelines on SCAQMD's AB 2588 Program is discussed in detail in the staff report to amended Rules 212, 1401, 1401.1, and 1402 found here: http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-jun1-028.

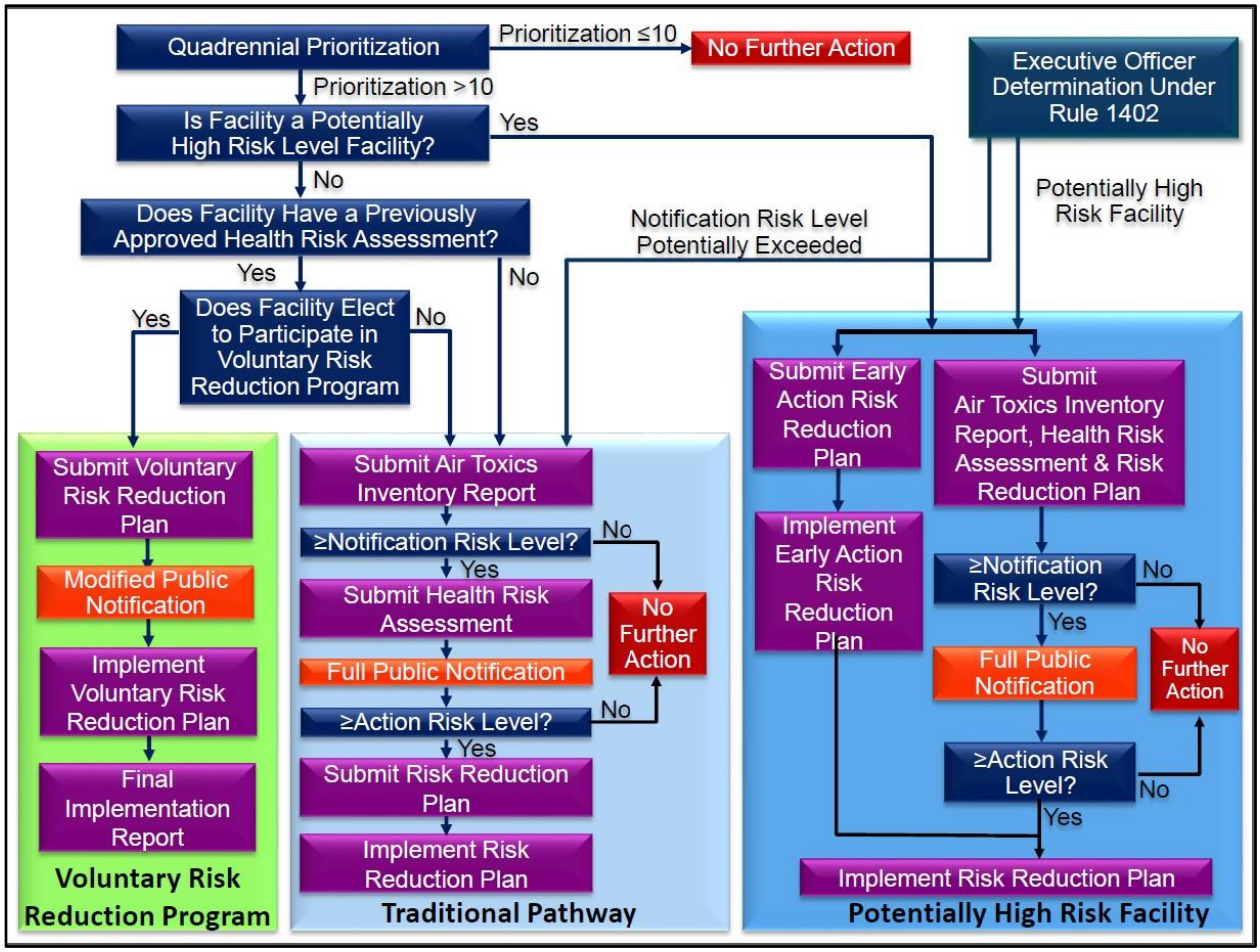


**Figure 1 – Overview of the AB 2588 "Hot Spots" Program**

From the beginning of the AB 2588 Program in 1987 through the end of 2017, staff has reviewed and approved 339 HRAs from 310 facilities. There are more approved HRAs than facilities as some facilities have prepared more than one HRA. Of these 310 facilities, 27 facilities were required to implement risk reduction measures. 55 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 in a 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 approved HRAs illustrated in Figures 2, 3, and 4 are based on the information in Appendix A. Appendix A lists the core facilities and the health risks from their approved HRAs. Table A-1 in Appendix A lists the facilities in order of their cancer risks and Table A-2 in Appendix A is ordered by facility ID. Table A-3 in Appendix A lists facilities which have prepared a RRP for the AB 2588 Program and their corresponding health risks [H&S Code 44363(a) (2) and (3)]. Appendix B shows trends in ambient air toxics in the South Coast Air Basin (Basin). Appendix C contains a list of acronyms and abbreviations used in this report.

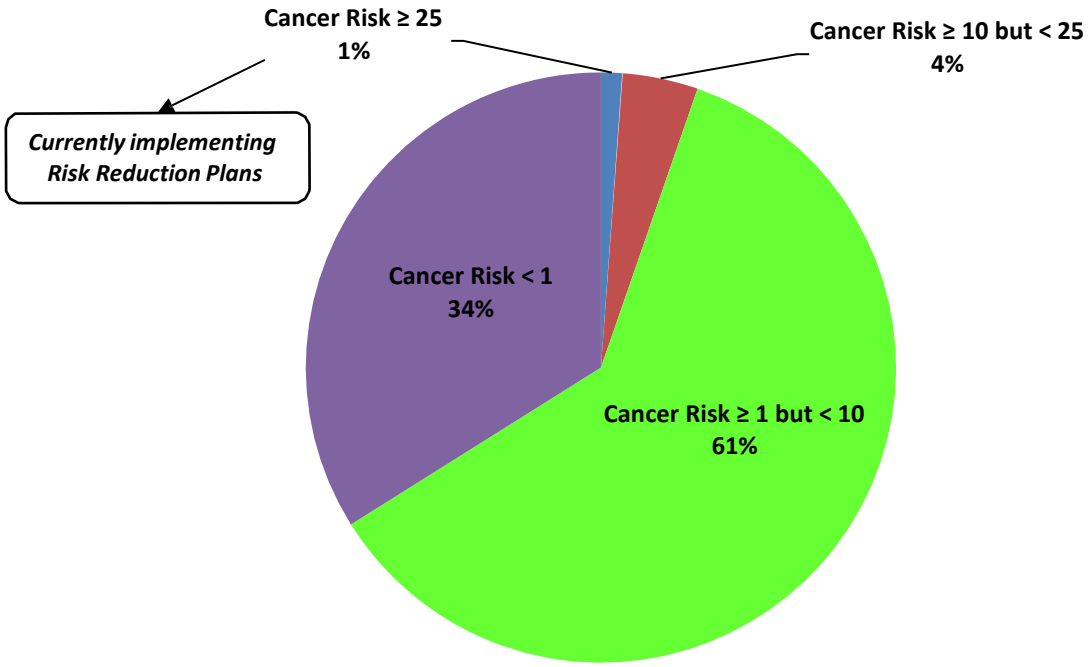


**Figure 2 – Distribution of Cancer Risks (Chances in a Million) for AB 2588 Facilities with an Approved HRA**

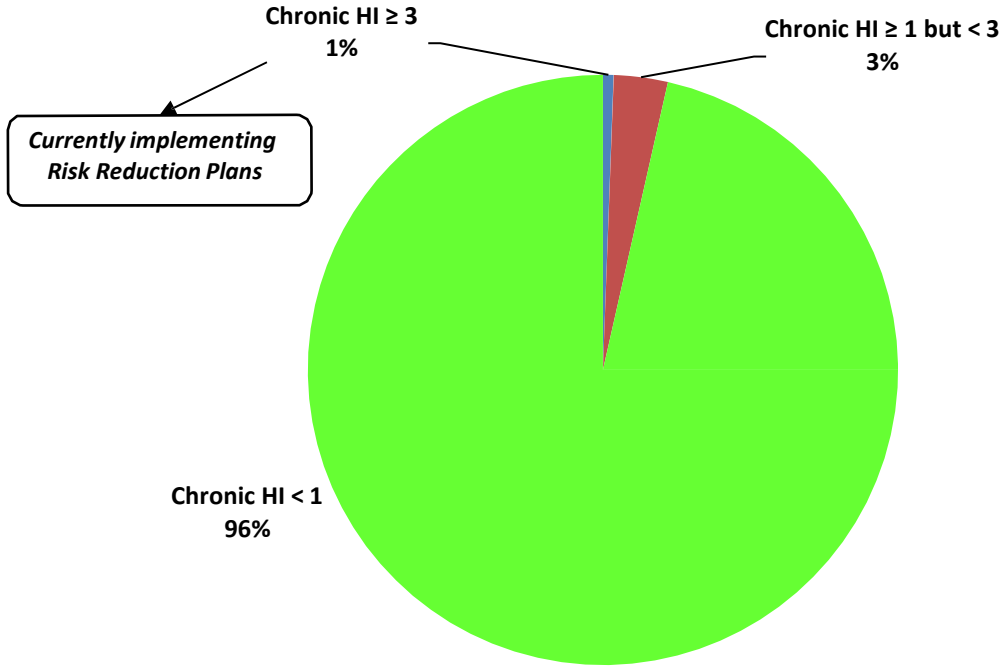


**Figure 3 – Distribution of Chronic Hazard Indices for AB 2588 Facilities with an Approved HRA**

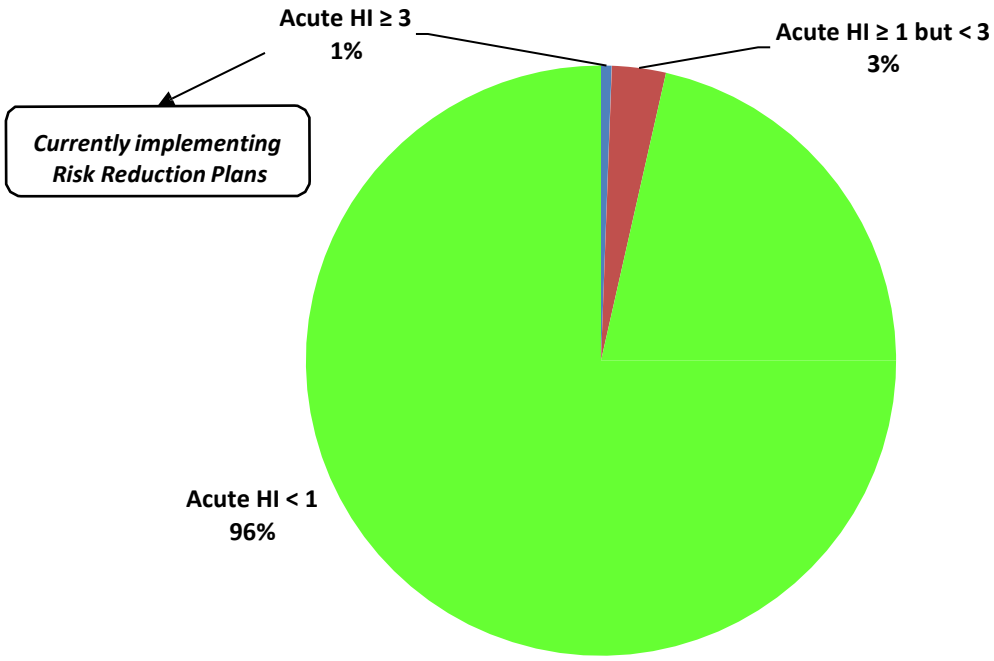


**Figure 4 – Distribution of Acute Hazard Indices for AB 2588 Facilities with an Approved HRA**

## 2. 2017 TOXICS ACTIVITIES

This section highlights SCAQMD staff activities in 2017 for various stages of the AB 2588 Program, implementation of Rules 1401 and 1402, air monitoring and source testing projects conducted in conjunction with the AB 2588 Program and Rule 1402, development of industry-wide source category HRAs, source-specific air toxic rule development efforts that address toxic air contaminants for specific industries or equipment categories, Rule 1401 permitting and HRA modeling review, and Rule 1420.2 modeling review.

### 2.1 Air Toxic Inventory Reports and Health Risk Assessments

Under the AB 2588 Program, facilities are required to report their toxic emissions to SCAQMD quadrennially (i.e., once every four years) through the web-based AER Program in a streamlined reporting process to obtain a preliminary inventory of toxic air contaminants. During the interim years, facilities continue to report toxic emissions through the AER Program for 23 toxic air contaminants. Under the quadrennial reporting process, facilities report emissions of 177 toxic air contaminants along with the distance to the nearest residential and worker receptor to calculate the cancer and non-cancer priority scores for each facility. Every year, criteria and toxic emissions data for the previous calendar year are posted to SCAQMD's FIND web tool.[2] In 2017, 154 facilities were required to report their quadrennial toxic emission inventory updates. Based on emissions inventory submittals, SCAQMD staff calculated priority scores for each facility taking into account potency, toxicity, and quantity of hazardous materials released from the facility; the proximity of the facility to potential receptors, including, but not limited to, hospitals, schools, daycare centers, residences, and worksites; and any other factors that SCAQMD staff determined would indicate the facility may pose a significant risk to receptors. SCAQMD's Prioritization Procedure also includes adjustment factors for exposure period, averaging times, and the treatment of multi-pathway pollutants.[3]

Upon calculation of a priority score for each facility, SCAQMD staff conducts a more detailed evaluation and audit of those facilities with a priority score greater than 10 to confirm use of the correct emission factors, control efficiencies, source test methods, and relative proportions of toxic air contaminants. In addition, staff conducts further analyses to confirm the distance to sensitive receptors and workers, and reviews emissions trends and facility changes such as new or modified permitted equipment or pollution controls. In cases where the facility has a prior HRA, staff compares the priority score results with the most recent HRA or RRP, if applicable. The additional information obtained through priority score auditing will often negate the need to require an ATIR and HRA. If, however, the priority score remains greater than 10, the facility is asked to prepare a detailed ATIR or, if eligible, a VRRP.

Facilities that prepare an ATIR or a VRRP must submit a detailed inventory of approximately 450 toxic air contaminants, as well as provide stack parameters and locations using the latest CARB Hotspots Analysis and Reporting Program (HARP).[4] The most recent version of HARP

[2] http://www.aqmd.gov/home/tools/public/find
[3] http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/prioritization
[4] http://www.arb.ca.gov/toxics/harp/harp.htm

incorporates the methodologies from the 2015 OEHHA HRA Guidelines[5] and incorporates U.S. EPA's recommended air quality dispersion model called AERMOD[6] to estimate the concentration of pollutants. Meteorological data for use in HARP and AERMOD can be downloaded from SCAQMD's website.[7]

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

In addition to collecting and reviewing quadrennial emission inventories based on emission calculations, SCAQMD staff regularly engages in air toxics monitoring and air toxics source testing at and near many facilities. In 2017, as part of the Community Air Toxics Initiative, SCAQMD staff conducted investigations in the cities of Paramount and Compton. The investigations focused on the monitored levels of hexavalent chromium in the area, a known carcinogen that even at low concentrations can cause lung and nose cancers in people after long-term exposure.

### *2.2.1 Paramount*

In 2013, SCAQMD received a series of metallic odor complaints from local community members in the City of Paramount and began investigating local sources of emissions, including initiating a local air sampling study. Metal air toxics were the focus of the monitoring, consistent with the community complaints and with the emissions from metal processing facilities in the area. Monitoring results indicated that there were two metals of concern: nickel and hexavalent chromium.

In 2016, as part of the same ongoing investigation, SCAQMD staff deployed several ambient monitors in mostly industrial areas of the City of Paramount in order to identify the local sources of the hexavalent chromium emissions, and the industrial processes that were generating these emissions. This information was critical in developing solutions to reducing these emissions and their impact on the community. Monitoring of metal contaminants in the industrial areas of the City of Paramount found higher levels of nickel, total chromium, and hexavalent chromium in the neighborhoods very close to the industrial areas, but lower levels in the neighborhoods just a few blocks downwind.

SCAQMD staff continued to conduct inspections, surveillance, and complaint investigations in 2017. Although many of the issues found from inspections were not related to hexavalent chromium, over three dozen Notices of Violation were issued to eight facilities and 94 Notices to Comply were issued to 60 facilities. This resulted in changes to operations and new facilities requiring SCAQMD permits. Additionally, in order to help identify the types of operations and specific facilities that contributed the most to the high levels of hexavalent chromium in the air, SCAQMD staff collected and analyzed 148 samples of dust and debris at 18 facilities and tested emissions from 17 pieces of equipment at six facilities. Orders for Abatement were issued to four facilities: Aerocraft (December 2016), Anaplex (January 2017), Carlton Forge Works (July 2017), and Lubeco (August 2017). Carlton Forge Works in particular was issued an Order for Abatement to reduce odors. Air quality inspectors have been in the area on a regular basis to respond to

[5] https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk

[6] http://www.epa.gov/ttn/scram/dispersion_prefrec.htm#aermod

[7] http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod

complaints and perform odor surveillance. As a result, the number of odor complaints has fallen and Carlton Forge Works has continued to make changes to their operations to reduce odors. In addition, Aerocraft Heat Treating, Anaplex Corporation, and Lubeco were designated as Potentially High Risk Level Facilities under Rule 1402 due to observed high monitored levels of hexavalent chromium near them.

#### *2.2.2 Compton*

In July 2017, SCAQMD began special air monitoring in the city of Compton to measure levels of hexavalent chromium near several metal-processing facilities in the community, with an emphasis on chromium plating and anodizing facilities. Similar to Paramount, Compton has several potential chrome-emitting facilities in close proximity to each other and to sensitive receptors (e.g., hospitals, schools, homes, and senior centers). The purpose of the air monitoring effort was to determine whether these facilities pose a significant health risk to the community.

During 2017, 51 inspections of facilities in Compton were conducted. Of these 51 inspections, 16 Notices of Violation were issued, 52 Notices to Comply were issued, and 56 complaints were investigated. Samples were collected every three days and analyzed at SCAQMD's laboratory with the results available on SCAQMD's website.[8] Although SCAQMD's initial efforts have been focused on metal-processing facilities, there are other potential sources of hexavalent chromium that are being considered, such as cement from cement processing facilities and road construction projects. Updates will continue to be posted to the SCAQMD website.[9]

### 2.3 Summary of SCAQMD Staff Activities for AB 2588 Facilities in 2017

In 2017, staff addressed facilities in various stages of the AB 2588 process and initiated audit activities on facilities with priority scores greater than 10. Key activities conducted include review of 14 Air Toxics Inventory Reports, three Health Risk Assessments, five Risk Reduction Plans, and 10 Voluntary Risk Reduction Plans. Many of these key activities were for facilities that are in Group I, which are facilities that tend to have more sources and are more complex such as refineries and other industrial facilities. In 2017, facilities that met the eligibility criteria were notified of the option for either submitting a traditional Air Toxics Inventory Report and Health Risk Assessment or a Voluntary Risk Reduction Plans. Of the 13 facilities that were offered the option to prepare either an Air Toxics Inventory Report or Voluntary Risk Reduction Program, six facilities selected the Voluntary Risk Reduction Plan option, four facilities selected to prepare an Air Toxics Inventory Report through the traditional AB 2588 process, and three facilities submitted emissions inventory corrections which resulted in revised priority scores of less than 10. One facility was notified as a Potentially High Risk Level facility. Overall, a total of 76 documents were reviewed in 2017 with some facilities having multiple documents submitted for SCAQMD staff review. Table 1 presents a summary of key activities for facilities participating in the traditional AB 2588 Program and Table 2 presents a summary of key activities for facilities participating in the Rule 1402 Voluntary Risk Reduction Program.

[8] http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities/reports-data-assessments

[9] http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities

**Table 1 – Actions Taken in 2017 for Facilities in the Traditional AB 2588 Program**

| Facility Name | ID # | ATIR | | | HRA | | | RRP | | | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | C | A | R | C | A | R | C | A | |
| Aerocraft [a] | 23752 | x | x | | x | x | | x | x | | |
| All American Asphalt | 132954 | | | x | | | x | | | | |
| Anadite [b] | 8015 | | | | | | | | | | Revised Priority Score less than 10 |
| Anaplex [a] | 16951 | x | x | | x | x | | x | x | | |
| Boral Roofing | 1073 | x | x | | | | | | | | |
| Bowman Plating Company | 18989 | | | | | | | | | x | |
| Equilon Enter. LLC, Shell Oil Prod. US [b] | 800372 | | | | | | | | | | ATIR submittal due in 2018 |
| Fontana Paper Mills | 11716 | x | | | | | | | | | |
| Gerdau/TAMCO | 18931 | | | | | | | | | | Implementing RRP |
| Glendale City Water and Power [b] | 800327 | x | | | | | | | | | |
| Griswold Industries | 800318 | x | | x | | | | | | | ATIR and Preliminary HRA shows health risks below Notification Levels |
| GS II, Inc. [b] | 183567 | x | x | | | | | | | | Initially elected VRRP, but opted out later |
| Hixson Metal Finishing | 11818 | | | | | | | | | x | |
| Kaiser Aluminum | 16338 | | | x | | | | | | | |
| LA City, Bureau of Street Maintenance | 116480 | | | | | | | | | | Revised Priority Score less than 10 |
| Lubeco [a] | 41229 | | | | | | | | | | ATIR, HRA, and RRP submittals due in 2018 |
| Matrix Oil | 182970 | | | | | | | | | | ATIR submittal due in 2018 |
| MM West Covina [b] | 113873 | x | x | | | | | | | | |
| Phillips 66 Wilmington Refinery [b] | 171107 | x | x | | | | | | | | |
| Quemetco | 8547 | | | | | | | x | | x | |
| So Cal Gas Co./Playa Del Rey Storage Facility | 8582 | x | | | | | | | | | |
| SoCal Holding, LLC | 169754 | | | | | | | | | | ATIR submittal due in 2018 |
| Triumph Processing | 800267 | x | x | | | | | | | | |
| UC Irvine [b] | 800288 | x | x | | | | | | | | Revised Priority Score less than 10 |
| Universal City Studios [b] | 800202 | | | | | | | | | | Revised Priority Score less than 10 |

Notes:

*For ATIRs, HRAs, and RRPs: R=Report Received; C=Comment letter sent to facility; A=Report Approved.*

[a] *Classified as Potentially High Risk Level Facility and currently under an Order for Abatement.*

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

**Table 2 – Actions Taken in 2017 for Facilities in the Voluntary Risk Reduction Program**

| Facility Name | ID # | VRRP | | | Status |
|---|---|---|---|---|---|
| | | R | C | A | |
| Chevron Products Co. [b] | 800030 | x | | | |
| GS II, Inc. [b] | 183567 | x | | | Initially elected VRRP, but opted out later |
| Hyperion Water Reclamation Plant, City of Los Angeles Bureau of Sanitation [b] | 800214 | x | | | |
| Orange County Sanitation District, Fountain Valley [b] | 17301 | x | | | |
| Orange County Sanitation District, Huntington Beach [b] | 29110 | x | | | |
| Phillips 66 Carson Refinery [b] | 171109 | x | x | | |
| Tesoro Calciner [b] | 174591 | x | | | |
| Tesoro Los Angeles Refinery [b] | 800436 | x | | | |
| | 174655 | | | | |
| | 174694 | | | | |
| | 174703 | | | | |
| Tesoro Sulfur Recovery Plant [b] | 151798 | x | | | |
| Torrance Refining [b] | 181667 | x | x | | |
| Ultramar (Valero) Refinery [b] | 800026 | x | | | |

Notes:
*For VRRPs: R=Report Received; C=Comment letter sent to facility; A=Report Approved.*
[a] *Classified as Potentially High Risk Level Facility and currently under an Order for Abatement.*
[b] *Indicates facility notified to prepare either an ATIR or a VRRP. Facilities listed in this table elected to prepare a VRRP.*

A description of these activities for each facility in Tables 1 and 2 is listed below.

### *2.3.1 Aerocraft Heat Treating Company (ID 23752) – Paramount*[10]

Aerocraft Heat Treating Company (Aerocraft) operates a facility in the City of Paramount that processes forgings, castings, bar, plate and rough-machined parts. The facility uses various heat treating furnaces, quench tanks, and metal grinding equipment, as well as plasma cutting operations. Based on ambient monitoring conducted near Aerocraft which showed elevated levels of hexavalent chromium, Aerocraft was officially designated as a Potentially High Risk Level Facility on December 14, 2016. As part of this designation, Aerocraft was required to submit an Early Action Risk Reduction Plan by March 14, 2017, an ATIR by May 16, 2017, a HRA and a RRP by June 13, 2017. (Additional details regarding the ambient monitoring in Paramount and near Aerocraft and events that led up to the designation of Aerocraft as a Potentially High Risk Facility are discussed in the 2016 AB2588 Annual Report and on the SCAQMD's website[10]).

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

[10] Information regarding Aerocraft and compliance-related activities in Paramount can be found at the following link:
http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities

On May 16, 2017, Aerocraft submitted an ATIR, and the HRA and RRP were submitted on June 13, 2017, in accordance with the required deadlines. Conditional approval of the revised Early Action Risk Reduction Plan was granted on May 31, 2017. Staff are currently reviewing all submitted documents.

### *2.3.2 All American Asphalt (ID 132954) – San Fernando*

All American Asphalt operates a recycled asphalt product processing plant in the City of San Fernando. The company is contracted by the Department of Public Works to recycle and manufacture asphalt for repaving of city streets and roads. The operations involve asphalt batching and blending, an asphalt storage tank, storage silos for crumb rubber, baghouses, and an electrostatic precipitator to control particulate emissions.

All American Asphalt was required to prepare and submit an ATIR on September 21, 2011, based on their 2010 quadrennial emissions inventory. The draft ATIR was submitted on March 19, 2012. A source test was requested by SCAQMD staff for the hot mix dryer baghouse, which was conducted from November 12 through November 14, 2013, submitted on December 19, 2013, and approved on March 18, 2014. A final draft of the ATIR was submitted to SCAQMD on December 17, 2013 and a HRA was requested by the SCAQMD on March 6, 2014. A draft HRA was submitted on July 9, 2014. Health risks reported in the draft HRA were mainly generated from arsenic, naphthalene and hexavalent chromium emissions. In the months following the submittal, a site visit was conducted on January 21, 2015 to verify operations reported in the HRA. OEHHA also approved new HRA Guidelines that placed greater emphasis on infant's and children's higher susceptibility to carcinogenic compounds. The HARP software used to estimate risks was updated on March 6, 2015 by the California Air Resources Board. Because these changes happened after the submittal, the health risks results in the HRA were recalculated. Health risks estimated in the draft HRA were less than the AB 2588 and Rule 1402 notification levels. This draft HRA was finalized and approved on February 1, 2017.

### *2.3.3 Anadite Inc. (ID 8015 ) – South Gate*

Anadite is a metal finishing facility located in the City of South Gate with operations such as cleaning and etching aluminum, titanium, stainless steels, and ferrous alloys, primer and paint application, liquid honing, and sand blasting services. The facility primarily serves the aerospace industry.

On June 30, 2017, SCAQMD staff sent a letter requesting Anadite to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions with hexavalent chromium emissions from a surface preparation tank containing chromic acid and a passivation tank containing nitric acid as the main air toxic contributing to the high priority score.

After a careful review of the facility's 2015 emissions reported to SCAQMD, the facility provided information correcting their reported emissions on July 31, and October 31, 2017. After SCAQMD's staff review and approval of the corrections, the priority score was recalculated and found to be below 10. Subsequently, on December 15, 2017, SCAQMD staff sent a letter informing Anadite of the revised priority score and that no further action was required in response to the original notice.

### *2.3.4 Anaplex Corporation (ID 16951) - Paramount*

Anaplex Corporation (Anaplex) operates a metal processing and finishing company in the City of Paramount. The facility processes parts for commercial and defense aerospace applications. The processes include anodizing and plating process lines which use hexavalent chromium, nickel, and cadmium. Additional details regarding the ambient monitoring in Paramount and near Anaplex and events that led up to the designation of Anaplex as a Potentially High Risk Facility are discussed in the 2016 AB2588 Annual Report and on the SCAQMD's website.[11]

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

Anaplex submitted an Early Action Reduction Plan on March 13, 2017. SCAQMD staff provided comments on April 26, 2017 and requested revisions and resubmittal of the Early Action Risk Reduction Plan. Anaplex submitted a revised Early Action Risk Reduction Plan on May 11, 2017 which was conditionally approved on May 31, 2017.

On May 15, 2017, Anaplex submitted an ATIR and a HRA and RRP on June 13, 2017. SCAQMD staff provided written comments regarding all three documents on December 8, 2017, and requested revisions and resubmittal of each document. Staff are currently reviewing all submitted documents.

### *2.3.5 Boral Roofing, LLC (ID 1073) – Corona*

Boral Roofing, LLC (Boral Roofing) is a clay and concrete tile manufacturing plant located in the City of Corona. Boral Roofing has two production lines for manufacturing clay roof tiles. Clay is delivered by trucks and then premixed by a skip loader. The clay is then grounded into a fine powder in a mill, screened, and transported to storage silos. Clay is transferred by belt conveyor to their manufacturing process where it is mixed with water and additives in pug mills. The wet clay mixture is extruded to tile form, then dried and fired in various natural gas kilns.

On March 20, 2017, SCAQMD staff sent a letter requesting Boral Roofing to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2015 annual emissions with hexavalent chromium and arsenic as the main air toxics contributing to the high priority score.

The ATIR was submitted on August 25, 2017. Following comments from SCAQMD staff regarding technical discrepancies, Boral Roofing submitted the revised ATIR on November 16, 2017 which included corrections to calculations for hexavalent chromium that resulted in lower emissions. Staff are currently reviewing all submitted documents.

[11] http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities

### *2.3.6 Bowman Plating Company, Inc. (ID 18989) – Unincorporated LA County*

Bowman Plating Company (Bowman), located near the City of Compton, has been in operation since 1945 and provides metal finishing and non-destructive testing, and processes materials including aluminum, titanium, composites, steel, and stainless steel for aerospace, defense, and related industries. Bowman's previously approved HRA from 2007 showed a maximum cancer risk of 14.2 in a million, mainly due to hexavalent chromium emissions from paint spraying operations. Subsequent annual emission reports submitted by Bowman for calendar years 2011 through 2013 showed increased use of hexavalent chromium-containing spray paints and lower control efficiencies, and consequently the 2007 HRA (using 2006 emissions inventory year) was no longer representative of the facility's current health risks. As a result, staff required Bowman to submit an updated HRA using the 2013 emission inventory.

Bowman submitted an HRA using their 2013 emission inventory on October 24, 2014. This HRA was then updated by SCAQMD staff to incorporate the 2015 OEHHA HRA Guidelines resulting in a maximum residential cancer risk of 110 in a million, and 17 in a million for the maximum exposed worker receptor, both primarily from hexavalent chromium emissions. SCAQMD staff approved the HRA on December 11, 2015, and since the cancer risks exceeded the Action Risk Level specified in Rule 1402, Bowman was required to conduct public notification and to submit a RRP. Notices of the public notification meeting were sent out to 118 people in the area where potential health risks were above the health risk levels established in Rule 1402. SCAQMD staff held a public notification meeting at the Corps Community Center to present the results of the HRA on February 9, 2016.

On June 8, 2016, Bowman submitted a RRP based on their approved HRA. SCAQMD staff sent a comment letter on September 15, 2016 and a revised RRP was submitted by Bowman on October 26, 2016. SCAQMD staff reviewed the proposed risk reduction measures, emission calculations, and modeling analysis which projected a potential maximum residential cancer health risk of 5 in one million, once the revised RRP was fully implemented. However, the modeling analysis submitted with the revised RRP did not properly account for the maximum potential hexavalent chromium emissions from the three spray booths based on their permitted emission limits. Adding these emissions increased the total risk from the facility to approximately 17.02 in one million, which is below the Action Risk Level. The revised RRP was conditionally approved on February 10, 2017, noting that sufficient information was not available on fugitive dust emissions and if information regarding fugitive emissions become known to SCAQMD in the future, that would substantially impact health risks to exposed persons, implementation, or effectiveness of the plan, SCAQMD may require the RRP to be updated and resubmitted pursuant to Rule 1402(k)(1). The RRP was fully implemented on March 30, 2017

### *2.3.7 Chevron Products Co., El Segundo Refinery (ID 800030) – El Segundo*

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

On October 14, 2016, SCAQMD staff sent a letter requesting Chevron ES to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual

emissions with furans, polycyclic aromatic hydrocarbons, arsenic, cadmium, and related compounds as the main air toxics contributing to the high priority score. Chevron elected to participate in the Voluntary Risk Reduction Program and submitted a VRRP on March 27, 2017 which is currently under review.

### *2.3.8 Equilon Enterprises LLC dba Shell Oil Products US (ID 800372) – Carson*

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

On October 10, 2017, SCAQMD staff sent a letter requesting Equilon to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions with benzene, ethyl benzene, and napthalene emissions as the main air toxics contributing to the high priority score. Equilon elected to prepare an ATIR which is due on March 9, 2018. Staff are currently reviewing all submitted documents.

### *2.3.9 Fontana Paper Mills Inc. (ID 11716) – Fontana*

Fontana Paper Mills Inc. (Fontana Paper Mills) is a manufacturing plant for asphalt roofing material, including shingles and saturated and coated roofing paper underlayments. The facility recycles paper products and manufactures roll stock for shingle backing or underlayments. The emissions from the asphalt mixer, heater and rollcoater are controlled by thermal oxidizer. Other emissions from the saturator process are controlled by a scrubber, followed by a high efficiency air filter. Emissions of polycyclic aromatic hydrocarbons are the main toxic pollutant of concern and can occur when asphalt is heated.

SCAQMD staff noted discrepancies in reported emissions from three asphalt roofing companies and determined that additional investigation was warranted. As a result, on October 14, 2016, SCAQMD staff requested an emissions inventory update from Fontana Paper Mills in order to get a better understanding of actual emissions and corresponding health risks. Because Fontana Paper Mills did not have a previously approved HRA, an ATIR was requested based on its 2014 annual emissions. The ATIR was submitted on March 14, 2017, and the facility proposed source testing of toxic air contaminants at the high efficiency air filter vents. However, since Fontana Paper Mills is currently undergoing modifications in order to be able to manufacture products using polymer asphalt, source testing was postponed until construction for the modified manufacturing line has been completed. Construction should be completed by the end of June 2018.

### *2.3.10 Gerdau S.A. / TAMCO (ID 18931) – Rancho Cucamonga*[12]

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

[12] http://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/gerdau

Gerdau was directed to submit an ATIR and HRA based on significantly high levels of cadmium reported in its 2011 annual emissions reporting. The HRA was approved on October 8, 2015 and based on the 2015 OEHAA HRA Guidelines. Several health risks in the approved HRA exceeded levels specified in Rule 1402 and Gerdau was therefore required to notify the public regarding the results of its HRA, and also submit a RRP. Notices of the public notification meeting were sent out to 1,523 people in the area where the health risks were above the levels established in Rule 1402. SCAQMD staff held a public notification meeting was held on November 30, 2015 to explain the impact of Gerdau's emissions on public health and to discuss next steps.

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

On July 5, 2017, Gerdau submitted a progress report to update SCAQMD on the status of its risk reduction measures. Seven of the ten measures were implemented and the progress of the remaining three measures was reviewed. SCAQMD staff continues to monitor the progress of the RRP and anticipates all risk reduction measures to be implemented within specified timeframes.

#### *2.3.11 Glendale City, Glendale Water & Power (ID 800327) – Glendale*

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

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

GWP elected to prepare an ATIR and submitted it on July 28, 2017. Staff are currently reviewing all submitted documents.

#### *2.3.12 Griswold Industries (ID 800318) – Costa Mesa*

Griswold Industries, Inc., (Griswold) also known as Cla-Val Co. is a 20-acre production/foundry complex located in the City of Costa Mesa. Griswold manufactures automatic control valves and electronic products for waterworks, fire protection, aviation ground fueling, and marine and industrial customers. Potential air toxic emission sources include natural gas combustion; furnaces; abrasive blasting; sand handling, mixing, and reclamation; metal grinding; metal cutting; and metal coating. Potential health risks from Griswold are primarily from hexavalent chromium emissions related to foundry operations. On February 10, 2016, SCAQMD staff required Griswold to prepare and submit an ATIR based on its 2014 annual emissions. SCAQMD staff conducted a site visit to verify the emission sources and to identify potential sources of fugitive emissions. Griswold

submitted an ATIR on December 23, 2016. Revisions to the ATIR followed on August 30, 2017 and on September 21, 2017 to correct certain parameters. After reviewing the ATIR and the preliminary HRA information, SCAQMD staff concluded that the health risks were below the Notification Risk Level in Rule 1402. On October 27, 2017, Griswold was notified that no further action was required.

### *2.3.13 GS II, Inc. (ID 183567) – Wilmington*

GS II, Inc. (GS II), located in the City of Wilmington, manufactures asphalt roof shingles. The manufacturing process at the facility includes asphalt storage tanks, asphalt heaters, roll coaters and saturators and are primary emission sources.

As described previously, due to discrepancies in reported emissions from three asphalt roofing companies, on October 28, 2016, SCAQMD staff sent a letter requesting GS II to prepare either an ATIR or a VRRP in order to get a better understanding of actual emissions and corresponding health risk. On November 14, 2016, GS II staff informed SCAQMD staff of their intention to participate in the Voluntary Risk Reduction Program. However, GS II informed SCAQMD staff on November 1, 2017 that the company wanted to opt out of the Voluntary Risk Reduction Program. As a result, on November 1, 2017 SCAQMD staff terminated GS II's participation in the Voluntary Risk Reduction Program and notified GS II that an ATIR and HRA was due within 90 days of the notification letter. Staff are currently reviewing all submitted documents.

### *2.3.14 Hixson Metal Finishing (ID 11818) - Newport Beach* [13]

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

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

[13] http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/hixson-metal-finishing

impact. SCAQMD staff held a public notification meeting at the Hoag Conference Center on June 18, 2015.

Hixson submitted its first RRP on March 2, 2015. On May 8, 2015, SCAQMD staff rejected Hixson's first RRP and required resubmittal. Hixson subsequently submitted a second RRP on June 5, 2015. On June 26, 2015, SCAQMD staff rejected Hixson's second RRP due to its failure to demonstrate that the proposed controls reduce risks below Rule 1402 thresholds. Hixson resubmitted a revised RRP on July 1, 2015, and SCAQMD staff conditionally approved it on July 24, 2015. The associated permits to construct implementing the RRP were approved on December 11, 2015 and a second public notification meeting was held on February 11, 2016 at the Hoag Conference Center to inform interested parties regarding the key activities surrounding the RRP. In the 2016 Annual Report for the AB 2588 Program, staff incorrectly stated that the RRP was fully implemented as of December 31, 2016. The Order for Abatement expired on December 31, 2016, as Hixson had constructed all the measures contained in the RRP. However, one of the risk reduction measures requires all emissions from Building 2 to be captured and routed through a dry scrubber followed by ULPA filters. The existing chromic acid anodizing tank (Tank 70) is located in Building 2 and currently has a control system that includes an ULPA filtration system. As part of the modifications to Building 2, existing Tank 70 is being replaced with a new chromic acid anodizing tank (also designated Tank 70) vented to the new Building 2 control system, which also includes ULPA filtration. However, there was an issue with the temperature controls for the new Tank 70, which has delayed its operation. Since the existing Tank 70 is already being controlled by an ULPA filtration system, there are no additional emissions expected from the continued operation of existing Tank 70 compared to new Tank 70, as proposed in the RRP. It is anticipated that new Tank 70 will be operational in 2018. Ambient monitoring for hexavalent chromium continues in the vicinity of Hixson.

#### *2.3.15 Hyperion Water Reclamation Plant, City of Los Angeles Bureau of Sanitation (ID 800214) – Playa del Rey*

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

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

On November 23, 2016, Hyperion elected to participate in the Voluntary Risk Reduction Program and submitted a VRRP on January 24, 2017. Staff are currently reviewing all submitted documents.

#### *2.3.16 Kaiser Aluminum Fabricated Products, LLC (ID 16338) – Los Angeles*

Kaiser Aluminum Fabricated Products located in the City of Los Angeles, develops fabricated aluminum products for major suppliers and manufacturers in the aerospace, general automotive, engineering and custom industrial markets. They also manufacture aluminum extrusions, cast logs, billets, and semi-fabricated products. The facility was required to prepare and submit an ATIR

based on its 2010 annual emissions. SCAQMD staff conducted a site visit in October 2014 to verify the sources of emissions identified in the ATIR. After obtaining approval of the source test results, staff recalculated a new priority score below 10 and provided final approval of the ATIR on September 19, 2017.

### *2.3.17 LA City Bureau of Street Maintenance (ID 116480) – Los Angeles*

The Los Angeles City Bureau of Street Maintenance (Bureau) operates an asphalt batch plant on Olympic Boulevard in Los Angeles. The asphalt is used to maintain 6,500 centerline miles of public roadways and 800 centerline miles of alleys within the city. The plant recycles asphalt concrete and consists of crushers, natural gas-fired rotary dryers and storage silos. Particulate emissions are controlled by baghouses and misters.

On May 31, 2017, SCAQMD staff sent a letter requesting its Bureau to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2015 annual emissions with polycyclic aromatic hydrocarbons as the main air toxics contributing to the high priority score. Bureau staff subsequently provided information that the asphalt batch plant was undergoing major renovations and would not operate in any capacity for the majority of 2018 calendar year. The shutdown of the facility also occurred prior to the date SCAQMD staff notified the Bureau to prepare an ATIR. Based on the information, SCAQMD staff notified the Bureau on July 14, 2017 that no further action was needed at this time but that the emissions from the Bureau's facility would be evaluated at the next quadriennial reporting year, which will be after renovations are completed.

### *2.3.18 Lubeco, Inc. (ID 41229 ) – Long Beach*

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

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

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

and a meteorological station on the facility property and permission to conduct additional source tests.

Because of the ambient measurements, SCAQMD staff notified Lubeco on September 8, 2017 that the facility may be designated as a Potentially High Risk Level Facility. Lubeco representatives and SCAQMD staff met on September 22, 2017 to discuss the monitoring results that had led to the notification. On September 28, 2017, Lubeco was officially designated as a Potentially High Risk Level Facility. As part of this designation, Lubeco was required to expeditiously reduce risks and to submit an Early Action Reduction Plan by December 27, 2017, an ATIR by February 27, 2018, a HRA and a RRP by March 27, 2018. The Early Risk Reduction Plan was submitted on December 8, 2017. Staff are currently reviewing all submitted documents.

### *2.3.19 Matrix Oil Corporation (ID 182970) – La Habra Heights*

Matrix Oil Corporation (Matrix) is a private oil and natural gas production company operating an oil production site in La Habra Heights. This site consists of 17 total active crude oil producing wells generating approximately 400 barrels per day of crude oil. This site also produces roughly 400,000 cubic feet of field gas daily. Matrix operates five microturbines to power the site.

On June 30, 2017, SCAQMD staff sent a letter requesting Matrix to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2015 annual emissions with polycyclic aromatic hydrocarbons being the main air toxics contributing to the high priority score. Matrix submitted their ATIR on August 1, 2017. During the review process, SCAQMD staff noticed that an incorrect emission factor for microturbines was used by the facility resulting in lower emissions compared to what was reported. After emission revisions were submitted by the facility, SCAQMD staff recalculated a new priority score below 10. On October 10, 2017, SCAQMD staff sent a letter informing Matrix of the revised priority score and that no further action was required in response to the original notice.

### *2.3.20 MM West Covina LLC (ID 113873 ) – West Covina*

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

On January 11, 2017, SCAQMD staff sent a letter requesting MM West Covina to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2014 annual emissions with dioxins and hexavalent chromium being the main air toxic contributors to the high priority score.

On February 15, 2017, MM West Covina elected to prepare an ATIR. The ATIR was submitted on June 13, 2017. SCAQMD staff provided comments on August 17, 2017 requiring revisions to the ATIR which was provided on August 29, 2017. SCAQMD staff approved the ATIR on March 27, 2018, and notified the facility to prepare and submit a HRA by June 26, 2018.

### *2.3.21 Orange County Sanitation District, Fountain Valley (Plant No. 1) (ID 17301) – Fountain Valley*

The Orange County Sanitation District (OCSD) is a public agency that provides wastewater collection, treatment, and reclamation services in central and northwest Orange County. Plant No. 1, located in Fountain Valley, is one of the two wastewater treatment plants operated by OCSD. Plant No. 1 treats wastewater from residential, commercial and industrial sources using advanced primary and secondary treatment.

On April 28, 2017, SCAQMD staff sent a letter requesting OCSD Plant No. 1, to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions with formaldehyde being the main air toxic contributor to the high priority score. Formaldehyde emissions were from three cogeneration engines combusting primarily digester and supplemental natural gas. Digester gas is produced at the facility through anaerobic digestion, which is part of the solids processing facilities.

OCSD elected to participate in the Voluntary Risk Reduction Program, and submitted the VRRP on September 25, 2017. The plan focused on installation of oxidation catalysts on the exhaust of the three engines, which serves to reduce formaldehyde emissions and emissions of nitrogen oxides. The oxidation catalyst system was previously planned and fully permitted on February 28, 2017. Staff are currently reviewing all submitted documents.

### *2.3.22 Orange County Sanitation District, Huntington Beach (Plant No. 2) (ID29110 ) – Huntington Beach*

The Orange County Sanitation District (OCSD) is a public agency that provides wastewater collection, treatment, and reclamation services in central and northwest Orange County. Plant No. 2, located in Huntington Beach, is one of the two wastewater treatment plants operated by OCSD. Plant No. 2 treats wastewater from residential, commercial and industrial sources using advanced primary and secondary treatment.

On April 28, 2017, SCAQMD staff sent a letter requesting OCSD Plant No. 2 to prepare either an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions with formaldehyde being the main air toxic contributor to the high priority score. Formaldehyde emissions were from three cogeneration engines combusting primarily digester and supplemental natural gas. Digester gas is produced at the facility through anaerobic digestion, which is part of the solids processing facilities.

OCSD elected to participate in the Voluntary Risk Reduction Program, and submitted the VRRP on September 25, 2017. The plan focused on the installation of oxidation catalysts on the exhaust of the three engines, which serves to reduce formaldehyde emissions and emissions of nitrogen oxides. The oxidation catalyst system was previously planned and fully permitted on February 28, 2017. Staff are currently reviewing all submitted documents.

### *2.3.23 Phillips 66 Company, Los Angeles Refinery (ID 171109) - Carson*

The Phillips 66 Company operates two linked facilities, five miles apart, in Carson and Wilmington. The Phillips 66 Carson Refinery (Carson Refinery) was built in 1923 and is situated on approximately 235 acres. The refinery processes mainly heavy, high-sulfur crude oil, which is received by pipeline and at a terminal in the Port of Long Beach. The Carson Refinery produces

intermediate product, which is then sent to the Phillips 66 Wilmington Refinery for further processing to produce petroleum fuels and fuel-grade petroleum coke. These facilities have fluid catalytic cracking, alkylation, hydrocracking, coking and naphtha reforming units.

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

Carson Refinery elected to participate in the Voluntary Risk Reduction Program, and submitted the VRRP on August 1, 2017. Following review, SCAQMD staff noted several deficiencies. Revisions and clarifications were provided by Carson Refinery staff on September 17, November 7, and November 22, 2017 to address the deficiencies. Staff are currently reviewing all submitted documents.

#### *2.3.24 Phillips 66 Company, Los Angeles Refinery – Wilmington Plant (ID 171107) – Wilmington*

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

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

Wilmington Refinery elected to prepare an ATIR, and submitted the ATIR on August 1, 2017. Following review, SCAQMD staff found several deficiencies. Revisions were submitted by Wilmington Refinery staff on November 10, and December 15, 2017. Staff are currently reviewing all submitted documents.

#### *2.3.25 Quemetco (ID 8547) – City of Industry* [14]

Quemetco operates a battery recycling and lead recovery facility in the City of Industry. At this facility, used batteries are received, fragmented, and the lead-containing materials are recovered and purified. The primary pollutants for this facility are arsenic, lead, benzene, and 1,3-butadiene.

Multiple AB 2588 HRAs have been approved for Quemetco in the past, most recently in 2010. In October and November 2013, SCAQMD staff conducted source tests at Quemetco. The results of the 2013 source tests showed elevated arsenic, benzene, and 1,3-butadiene emissions compared to previous 2009, 2010, and 2012 source tests. As a result, on December 10, 2013, SCAQMD staff requested that Quemetco prepare and submit an HRA pursuant to Rule 1402. Quemetco submitted

[14] http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/quemetco

an HRA on May 9, 2014. SCAQMD staff sent a comment letter on September 23, 2014 requiring Quemetco to revise their HRA in several areas including an assessment of potential lead impacts relative to the National Ambient Air Quality Standard, and to address minor comments from the Office of Environmental Health Hazard Assessment (OEHHA). Quemetco provided an updated HRA in January 2015. SCAQMD staff requested that Quemetco prepare a new HRA to include two scenarios: 1) a baseline scenario utilizing the November 2013 SCAQMD source test input into the dispersion model, and 2) dispersion modeling that reconciled any potential differences between onsite fenceline monitoring data that became available in 2014 and source tests also available from 2014. Quemetco provided an updated HRA in May 2015. On September 16, 2015, SCAQMD sent Quemetco a tentative approval of the staff-modified revised HRA. Quemetco commented that the monitoring data collected onsite required revision before incorporating into the HRA. SCAQMD staff evaluated Quemetco's monitoring data in late 2015 and early 2016. Onsite fenceline monitoring data was corrected for pre-existing arsenic on blank filters and the dispersion modeling source parameters were also adjusted.

Additionally, in 2014, SCAQMD staff initiated a technology demonstration pilot study for in-stack continuous emissions monitoring system (CEMS) and fenceline/perimeter ambient air monitoring for multi-metals. Contracts with Cooper Environmental Services, the only manufacturer of these types of continuous monitors, were initiated to implement the study. The pilot study was conducted at Quemetco and Gerdau in 2015. Preliminary findings from 2015 for ambient multi-metal monitor showed favorable results for lead and less quantitative results for other metals, but most results were useful for trend detection. Quemetco purchased the in-stack CEMS.

SCAQMD staff approved the HRA on May 17, 2016 with some revisions. The approved HRA showed that the residential cancer health risk was 16 in one million, the worker chronic HI was 1.28, and the cancer burden was 2.0. These values exceeded the Action Risk Level of Rule 1402 and public notification and a RRP were required. Notice of the public meeting was sent to approximately 8,000 residents and businesses within the public notification area. A public notification meeting was held on June 23, 2016 at La Puente High School.

Quemetco submitted an RRP on November 16, 2016. As part of the RRP, Quemetco proposed using in-stack multi-metals CEMS to ensure that Rule 1402 risk thresholds are not exceeded. Quemetco's RRP was conditionally approved on June 22, 2017. The conditions for approval were all related to operation of the CEMS.

In addition, Quemetco has requested a permit modification to allow a 25% increase in their daily throughput. SCAQMD staff is processing this permit request, and is also preparing an Environmental Impact Report (EIR) as required by the California Environmental Quality Act (CEQA). The EIR will evaluate the potential environmental impacts of this proposed permit modification and will include an analysis of the health risks associated with the throughput increase. There will be multiple opportunities for the public to provide input on the EIR. The Final EIR will include responses to all comments received and must be certified before the permit modification request can be considered for approval.

### *2.3.26 Southern California Gas Company, Playa del Rey Storage Facility (ID 8582) – Playa del Rey*

Southern California Gas Company (SoCal Gas) is a public utilities company that owns and operates a natural gas storage facility in the Playa del Rey community in the City of Los Angeles. Natural gas is compressed and stored in underground reservoirs. There are transmission pipelines for distributing natural gas from the facility. Primary devices at the facility include three natural gas internal combustion engines driving air compressors.

On May 31, 2017, SCAQMD staff sent a letter requesting SoCal Gas to prepare an ATIR due to the facility having a priority score greater than 10 based on its 2015 annual emissions with formaldehyde, 1,3-butadiene and benzene being the main air toxic contributors to the high priority score. On October 31, 2017, the ATIR was submitted. Staff are currently reviewing all submitted documents.

### *2.3.27 California Resources Corporation / SoCal Holding, LLC (ID 169754) – Huntington Beach*

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

On October 11, 2017, SCAQMD sent a letter requesting SoCal Holding to prepare an ATIR due to the facility having a priority score greater than 10 based on 2015 annual emissions with polycyclic aromatic hydrocarbons and benzene being the main air toxic contributors to the high priority score. The source for polycyclic aromatic hydrocarbons emissions was a flare located on a leased property northwest of the intersection of Goldenwest Street and Pacific Coast Highway. Benzene emissions were reported as fugitive leaks throughout the facility. Staff are currently reviewing all submitted documents.

### *2.3.28 Tesoro Refining & Marketing Co., LLC, Calciner (ID 174591) – Wilmington*

Tesoro Calciner produces calcined petroleum coke, or raw or "green" petroleum coke heated to high temperatures so that volatile hydrocarbon compounds and excess moisture are heated out of the coke. Equipment in Tesoro Calciner's operations include a rotary kiln, baghouses, conveyor belts, receiver and separator vessels, an afterburner, surge bins, boiler, bucket elevators, loading and unloading stations, shakers, and storage silos.

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

After review of the VRRP, SCAQMD staff found several deficiencies and on January 31, 2018, a letter requesting revision and resubmittal of the VRRP was sent. SCAQMD staff is currently waiting for the necessary revisions to be submitted before continuing the review of the VRRP.

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

The Tesoro Los Angeles Refinery (Tesoro Refinery) is located along the city border between the cities of Carson and Wilmington in south Los Angeles County. The Tesoro Refinery was originally two adjacent but not contiguous refineries but has been undergoing consolidation through the Los Angeles Refinery Integration and Compliance (LARIC) Project.[15] The Tesoro Refinery will be comprised of approximately 930 acres with a processing capacity of approximately 380,000 barrels per day. In 2017, the Tesoro Corporation underwent a name change to Andeavor.

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

Tesoro Refinery elected to participate in the Voluntary Risk Reduction Program, and submitted their VRRP on May 23, 2017. After initial review, SCAQMD staff required Tesoro Refinery to make several revisions. Both SCAQMD staff and Tesoro representatives have met several times regarding the revisions and risk reduction measures proposed. SCAQMD staff is currently waiting for the necessary revisions to be submitted before continuing the review of the VRRP.

### *2.3.30 Tesoro Sulfur Recovery Plant (ID 151798) – Carson*

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

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

The Tesoro Sulfur Recovery Plant elected to participate in the Voluntary Risk Reduction Program, and submitted the VRRP on May 23, 2017. After review, on February 15, 2018, SCAQMD staff sent a letter requesting revisions and resubmittal of the VRRP. SCAQMD staff is currently waiting for the necessary revisions to be submitted before continuing review of the VRRP.

### *2.3.31 Torrance Refining Company LLC (ID 181667) – Torrance*

Torrance Refining Company LLC (Torrance Refining) is a subsidiary of PBF Energy, an independent petroleum refiner and supplier of unbranded transportation fuels, heating oils, petrochemical feedstocks, lubricants, and other petroleum products. The Torrance Refinery sits on 750 acres in the City of Torrance and has a 155,000 barrels per day of crude oil processing capacity. The refinery produces various petroleum productions along with coke, and sulfur.

[15] www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/tesoro_feir.pdf

On January 11, 2017, SCAQMD staff sent a letter requesting Torrance Refining to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2015 annual emissions polycyclic aromatic hydrocarbons,, arsenic, benzene, and cadmium being the main air toxic contributors to the high priority score.

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

The facility submitted the VRRP on August 24, 2017. After review, on October 19, 2017, SCAQMD staff sent a comment letter requesting revisions and resubmittal of the VRRP. The revised VRRP was received on November 2, 2017. However, information regarding risk reduction measures and the implementation schedules required more revisions. Subsequently, on November 28, 2017, Torrance Refining Company submitted additional revised VRRP files, which is currently under review.

#### *2.3.32 Triumph Processing, Inc. (ID 800267) – Lynwood*

Triumph Processing, Inc. (Triumph) owns and operates a metal treating and finishing facility in the City of Lynwood. Triumph treats aluminum and titanium parts for the aerospace industry by using anodizing, plating and painting operations.

On May 31, 2017, SCAQMD staff sent a letter requesting Triumph to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on its 2014 annual emissions with methylene phenyl diisocyanates being the main air toxic contributor to the high priority score. Methylene phenyl diisocyantes emissions were due to coating operation in the spray booths.

Triumph elected to prepare an ATIR, which was submitted on October 30, 2017. As part of the ATIR submittal, Triumph staff audited the reported emissions and discovered that they had misreported the quantities of isocyanates and diisocyanates. This information, along with the submitted ATIR, is currently under review.

#### *2.3.33 University of California, Irvine (ID 800288) – Irvine*

The University of California, Irvine (UCI) is a public research university located in the City of Irvine. On March 30, 2017, SCAQMD sent a letter requesting UCI to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions with polycyclic aromatic hydrocarbons emissions as the main contributor to the high priority score. Polycyclic aromatic hydrocarbons emissions were mainly from the gas turbine powering the cogeneration unit at the university.

UCI elected to prepare an ATIR which was submitted on August 29, 2017. Following review, SCAQMD staff revised the priority score with updated distances between the cogeneration unit and the nearest receptors. The revised priority score was calculated to be less than 10 and SCAQMD staff notified UCI on September 20, 2017 that no further action was required in response to the original notification.

#### *2.3.34 Ultramar Refining Company (ID 800026) – Wilmington*

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

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

Ultramar elected to participate in the Voluntary Risk Reduction Program and submitted the VRRP on August 25, 2017. After review by SCAQMD staff, items were found to be missing, which included throughput data, emission factors, calculation basis, and certain devices and device descriptions. Ultramar subsequently provided the missing information on September 15 and October 26, 2017. Ultramar provided information on emission factor reference sources on February 26, 2018. SCAQMD staff is currently reviewing the VRRP and accompanying revisions.

#### *2.3.35 Universal City Studios, LLC (ID 800202) – Universal City*

Universal City Studios, LLC (Universal) is an amusement park and a motion picture/television studio located in Universal City. The facility uses a number of spray booths to apply coatings for park operations.

On June 30, 2017, SCAQMD staff sent a letter requesting Universal to either prepare an ATIR or a VRRP due to the facility having a priority score greater than 10 based on 2015 annual emissions with isocyanate and diisocyanate emissions as the main contributor to the high priority score. Universal informed SCAQMD staff that some elements of the 2015 emissions report required corrections and clarifications. Universal provided evidence showing the usage of certain coatings containing isocyanates in spray booths were over-reported and that none of the isocyanates and diisocyanates reported contained toluene diisocyanates. Substantiating information for correction to the emissions report were provided to SCAQMD staff on August 4 and August 24, 2017. SCAQMD staff reviewed and approved the amendments to the emissions report and the resulting priority score was calculated to be below 10. SCAQMD informed Universal on September 29, 2017 that no further action was required based on the original notification request.

### 2.4 Rule 1401 Permitting and HRA Modeling Projects

Under Rule 1401, any new, relocated, or modified permit units which emit toxic air contaminants as specified in the rule are subject to specific allowable limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic HI. In 2017, SCAQMD staff processed approximately 2,100 Rule 1401 permit applications for 1,300 facilities. Under Rule 1401, SCAQMD staff reviews new and modified permit applications to ensure that the health risk levels are not exceeded. Staff also provides review and verification of air quality and HRA analyses for Hearing Board cases. In 2017, SCAQMD staff reviewed and approved 20 HRAs for permit applications.

### 2.5 Rule 1420.2 Modeling Projects

Rule 1420.2 – Emission Standards for Lead from Metal Melting Facilities, was adopted on October 2, 2015 to protect public health by minimizing public exposure to lead emissions and preventing

exceedances of the NAAQS for lead in the Basin. The rule established ambient lead monitoring requirements, stricter ambient lead thresholds, enclosure requirements, and more comprehensive housekeeping provisions for lead-acid battery manufacturers, secondary smelters, scrap recyclers, and an iron and steel mini-mill. Under this rule, air dispersion modeling is used to find the appropriate location for placement of the ambient air monitors. In 2017, SCAQMD staff reviewed dispersion modeling for four facilities under Rule 1420.2, which concluded the compliance determination efforts started in 2016. Table 2 shows the facilities evaluated under this rule.

**Table 3 – Rule 1420.2 Facilities with Dispersion Modeling Review**

| Facility Name | ID # |
|---|---|
| P. Kay Metal , Inc. | 72937 |
| Teledyne Battery Products | 173302 |
| Industrial Battery Engineering, Inc. | 3277 |
| Senior Aerospace, SSP | 105598 |

## 2.6 Rules Adopted or Amended in 2017

### *2.6.1 Adopted Rule 1430 – Control of Emissions from Grinding Operations at Metal Forging Facilities (March 2017)*

Rule 1430 was adopted with the objective of reducing toxic emissions, particulate matter emissions, and odors from metal grinding and cutting operations at metal forging facilities. Prior to this rule, these activities were exempt from SCAQMD permitting and were unregulated. Air monitoring and sampling has shown metal particulates, which may contain toxic air contaminants such as nickel and cadmium, are generated by metal grinding and cutting operations. Rule 1430 prohibits metal grinding and cutting operations in the open and includes requirements to vent metal grinding and cutting operations to emission control devices, to meet a specified emission standard for the emission control devices, conduct metal grinding and cutting operations in a building enclosure, and housekeeping measures to further reduce fugitive emissions.

### *2.6.2 Adopted Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (July 2017)*

Rule 1466 established requirements to minimize fugitive particulate matter emissions from earth-moving activities at sites determined by U.S. EPA, California Department of Toxic Substances Control, State Water Resources Control Board, or Regional Water Quality Control Board to contain soil with arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, or polychlorinated biphenyls. The Executive Officer can also identify sites that would be applicable to Rule 1466 based on specified criteria. The rule requires monitoring of ambient PM10 levels, and dust control measures such as fencing and wetting of soil and use of chemical stabilizers. Notification to SCAQMD is required when earth-moving activities are occurring and when PM10 levels are exceeded, along with signage and recordkeeping requirements. The Resolution directed staff to return to the Governing Board no later than February 2018, with an amendment for the

Board's consideration to expand the list of applicable toxic air contaminants to include pesticides, herbicides, other metals, persistent bioaccumulative toxics, and semivolatile organic compounds.

#### *2.6.3 Amended Rule 1401 – New Source Review of Toxic Air Contaminants (September 2017)*

In June 2015, Rule 1401 was amended to incorporate the 2015 OEHHA Health Risk Assessment Guidelines (2015 OEHHA HRA Guidelines). The amendments allowed spray booths and retail gasoline dispensing facilities to continue the use of the previous guidelines to allow staff additional time to better understand potential permitting impacts. Based on analysis of SCAQMD permits, implementation of the 2015 OEHHA HRA Guidelines to have minimal impacts to new or modified spray booths or gasoline dispensing facilities. Amended Rule 1401 required that these two source categories begin using SCAQMD's Risk Assessment Procedures (Version 8.1) which incorporate the 2015 OEHHA HRA Guidelines for spray booths and gasoline dispensing facilities, revised emission factors and speciation profiles for gasoline dispensing facilities, and updated meteorological data. The amendments also updated the list of toxic air contaminants to be consistent with OEHHA.

#### *2.6.4 Amended Rule 1420 – Emissions Standard for Lead (December 2017)*

The amendments to Rule 1420 further protect public health from exposure to lead from facilities not covered under Rules 1420.1 and 1420.2, and help ensure continued attainment of the NAAQS for lead. The amendments include an initial ambient air lead concentration limit of 0.150 µg/m3 averaged over any consecutive 30 days, which will be lowered to a final limit of 0.100 µg/m3 by 2021 to be consistent with Rules 1420.1 and 1420.2. The rule also establishes requirements for building enclosures, revisions to the point source lead emission limits, periodic source testing, conditional ambient air monitoring, and enhanced housekeeping measures.

#### *2.6.5 Amended Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (December 2017)*

Rule 1466 was adopted on July 7, 2017 to control fugitive particulate matter emissions from soils with toxic air contaminants. During the adoption of Rule 1466, the Governing Board directed staff to expand the list of applicable toxic air contaminants to include pesticides, herbicides, other metals, persistent bioaccumulative toxics, and semi-volatile organic compounds. The amendment also expands the applicability of Rule 1466 to other government designated sites and provides for alternative compliance and clarified certain provisions.

### 2.7 Toxic Program Impacts with New or Revised Toxic Air Contaminants

Pursuant to Rule 1402, once OEHHA finalizes the identification of a new toxic air contaminant or revises a risk value for an existing toxic air contaminant, SCAQMD staff provides notice to the Governing Board and affected industries annually through the AB2588 Annual Report. This report also includes a preliminary estimate of Rule 1402 program impacts. Rule 1401 includes additional requirements for reporting to the Governing Board on permitting impacts.

OEHHA proposed changes to two Reference Exposure Levels (RELs) in 2017; one for Hexamethylene Diisocyanate (HDI) - CAS#822060, and the other for toluene - CAS#108883[16]. RELs are airborne concentration levels of a chemical that are anticipated to result in adverse non-cancer health effects for specified exposure durations in the general population, including sensitive subpopulations, when exceeded. RELs cover different types of exposure: infrequent 1-hour exposures, repeated 8-hour exposures, and continuous long-term exposure. The proposed HDI and toluene RELs were developed using the most recent *Air Toxics "Hot Spots" Program Technical Support Document for the Derivation of Noncancer Reference Exposure Levels*[17], finalized by OEHHA in 2008. The public review and comment period for both proposed REL changes was from December 1, 2017 to February 14, 2018. SCAQMD staff will evaluate the impact of the REL changes once they are finalized and published by OEHHA.

## 2.8 National Air Toxics Assessment (NATA)

Every three years, beginning in 1996, U.S. EPA prepares a National Air Toxics Assessment (NATA).[18] The purpose of NATA is to provide census-tract modeled ambient and exposure concentrations and risks by: (1) identification and prioritization of toxic air contaminants of greatest concern and, (2) determination of the relative risk contribution from each of the major source categories (i.e., on-road, off-road, point, and area). The results would allow U.S. EPA, state and local agencies to prioritize pollutants, sources and areas of interest for additional studies. As part of this process, SCAQMD staff coordinates with U.S. EPA and CARB staff to ensure that NATA incorporates the best available local emissions data. The current triennial inventory process began in September 2016 for the purpose of reviewing data from the 2014 National Emissions Inventory. In September 2016, U.S. EPA released preliminary point source data for review, which included over 1,300 facilities within SCAQMD's jurisdiction. In January 2017, U.S. EPA amended the data set to account for updated meteorological data and the unit risk change for ethylene oxide. SCAQMD staff identified approximately 70 facilities as potential sources of elevated risk for further investigation.

Following the investigation, SCAQMD staff made several corrections to emissions, source characteristics, processes, pollutants, and stack parameters for approximately 20 facilities. The corrections were provided to U.S. EPA from April to May, 2017. The second review for data regarding non-point source data began in late June. U.S. EPA's anticipated schedule for review of this information was through the end of 2017, with final results available in Spring of 2018. The results have not been finalized and preliminary information has not been released to the public yet.

[16] https://oehha.ca.gov/air/crnr/public-comment-period-and-workshops-draft-reference-exposure-levels-hexamethylene

[17] https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-technical-support-document-derivation

[18] The U.S. EPA's web portal to NATA is at: https://www.epa.gov/national-air-toxics-assessment

# 3. FUTURE ACTIVITIES

## 3.1 AB 2588 Activities

In 2018, staff will prioritize approximately 260 facilities, and notify those with high priority scores to prepare ATIRs or VRRPs, if eligible, and HRAs and RRPs, if necessary. There are a substantial number of ATIRs and VRRPs that are expected to be reviewed in 2018. Public notification will also occur for multiple facilities including GS II (ID 57094), Aerocraft Heat Treating Co. (ID 23752), and Anaplex Corporation (ID 16951).

## 3.2 Model-Monitor Reconciliation

In response to community concerns regarding fugitive emissions and difficulties quantifying those emissions, the SCAQMD Governing Board, at its June 3, 2016 meeting, approved a contract for Protocol Development for Reconciling Air Quality Monitoring Data with Dispersion Modeling Results to provide support in developing a consistent methodology for facilities to use when preparing AB 2588 HRAs. On June 30, 2017, work on this contract was suspended due to a potential conflict of interest issue which was brought to staff's attention. Staff is currently working to resolve this conflict.

## 3.3 Rulemaking

### *3.3.1 – Proposed Amended Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities*

Amendments to Rule 1403 will include specific requirements when conducting asbestos-emitting demolition/renovation activities at schools, daycare centers, and other establishments that have sensitive populations. Amendments may include other provisions to improve the implementation of the rule. No specific control strategies have been identified. As of May 2018, one working group meeting has been held.

### *3.3.2 – Proposed Amended Rule 1407 - Control of Emissions of Arsenic, Cadmium and Nickel from Non-Ferrous Metal Operations*

Amendments to Rule 1407 will establish additional requirements to minimize air toxics from metal melting operations. SCAQMD staff is analyzing sources subject to the proposed amendments and may develop a separate proposed Rule 1407.1 for the largest sources subject to the proposed amendments and expand the applicability to address ferrous metal operations and hexavalent chromium emissions. As of May 2018, four working group meetings have been held. Control strategies under discussion include adopting point source controls and parameter monitoring for air pollution control equipment, as well as building enclosures to minimize or eliminate cross-draft and certain housekeeping measures.

### *3.3.3 – Proposed Rule 1407.1 – Control of Emissions of Arsenic, Cadmium and Nickel from Ferrous Metal Operations*

Proposed Rule 1407.1 will address ferrous metal melting, compared to Proposed Amended Rule 1407 which will address non-ferrous melting. During the rulemaking process, some stakeholders requested to maintain the existing applicability of Rule 1407 and address ferrous metal melting in a separate rule. Proposed Rule 1407.1 will primarily be a data gathering rule with requirements for emissions testing, analyses, and recordkeeping. Emissions testing may include testing for arsenic,

cadmium, hexavalent chromium, lead, and nickel. Analyses may include bag house catch, raw materials, final materials, metal-containing waste, and slag. Recordkeeping requirements may include melt logs, weight of metal-containing waste, and schedules of housekeeping and maintenance. SCAQMD staff will evaluate Rule 1407.1 data for emissions data from ferrous metal-melting operations for future rulemaking.

### *3.3.4 – Proposed Amended Rule 1410 – Hydrogen Fluoride Use at Refineries*

The proposed amendments will establish requirements for use of hydrogen fluoride at refineries. Hydrogen fluoride is a chemical compound used in petroleum alkylation processes to make higher octane gasolines. When contacted with moisture, it converts to hydrofluoric acid, which is highly corrosive and toxic. Six working group discussions were held in 2017. The measures under discussion involve identifying alternative alkylation technologies, methods to transition from hydrogen fluoride to other alkylation technologies, and monitoring methodologies, and mitigation of the effects of any releases. There are currently two refineries within SCAQMD's jurisdiction which would be subject to this rule. Previously, Rule 1410 was adopted in 1991 but suspended the following year due to Los Angeles Superior Court action.

### *3.3.5 – Proposed Rule 1435 - Control of Emissions from Metal Heat Treating Processes*

Proposed Rule 1435 will establish requirements to reduce metal particulate emissions from heat treating processes. SCAQMD staff is currently evaluating metal heat treating processes to determine the significance of hexavalent chromium emissions. No specific control strategies have been identified at this time.

### *3.3.6– Proposed Amended Rule 1469 - Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations*

Proposed Amended Rule 1469 proposes new requirements for hexavalent chromium-containing tanks that are currently not regulated, building enclosures, housekeeping and best management practices, periodic source testing, and parameter monitoring of pollution control equipment. Proposed Amended Rule 1469 includes provisions for a revised chemical fume suppressant certification process that further considers toxicity and exposure, and provisions to encourage the elimination of hexavalent chromium in Rule 1469 processes. Additional proposed amendments are incorporated to align Rule 1469 with U.S. EPA National Emission Standards for Hazardous Air Pollutants for Chromium Electroplating.

### *3.3.7– Proposed Rule 1480 – Air Toxics Metal Monitoring*

Proposed Rule 1480 will establish provisions for when ambient monitoring is required and the toxic air contaminants that will be monitored. Ambient air monitoring measures concentration of specific pollutants in ambient air can identify emission sources that were previously not known and need pollution controls, and can assist in determining effectiveness of existing pollution controls that are currently implemented. The rule is intended to provide a comprehensive approach to all toxic metals monitoring as well as provide current and consistent sampling methodologies across all programs. Threshold levels for the monitored toxic air contaminants and approaches for monitoring will also be addressed. As of May 2018, one working group meeting has been held.

## APPENDIX A - HEALTH RISKS FROM FACILITIES WITH AN APPROVED HRA

The tables in Appendix A list the facilities and the health risks identified in their HRAs or RRPs as reviewed and approved by SCAQMD staff. Risks presented in this table 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 HRA 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 SCAQMD staff in 2015 were recalculated to reflect the 2015 OEHHA HRA Guidelines.

Appendix A-1 lists the facilities in order of their cancer risks and Appendix A-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 A-3 lists the status of the facility's RRP and is presented by facility ID. Attention should also be given to the other footnotes in the table denoting facilities with updated HRAs pending approval and facilities with health risks including emergency diesel internal combustion engines. It also provides the current status of each facility as follows:

- A – Active (note that facilities with "Active" status within SCAQMD's database might not be in operation currently)
- I – Inactive
- OB – Out of business

"Inactive" and "out of business" facilities have been retained for historical purposes since staff occasionally receives public inquiries regarding "inactive" or "out of business" facilities. Facilities that have gone through change of ownership could have different name and facility ID numbers. The following health risk levels are identified in SCAQMD Rule 1402 – Control of Toxic Air Contaminants from Existing Sources:

- **Action Risk Level:** Cancer risk ≥ 25 in a million; Acute HI ≥ 3.0; Chronic HI ≥ 3.0, Cancer Burden ≥ 0.5
- **Public Notification Level:** Cancer risk ≥ 10 in a million; Acute HI > 1.0; Chronic HI > 1.0
- **Exemption Level:** Cancer risk < 1 in a million; Acute HI < 0.1; Chronic HI < 0.1

## Table A-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 ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 11818 | A | HIXSON METAL FINISHING | NEWPORT BEACH | 0.8 | ND | 0.04 | 0.006 | 2015 |
| 124838 | OB | EXIDE TECHNOLOGIES | LOS ANGELES | 0 | ND | 0 | 0 | 2013 |
| 18989 | A | BOWMAN PLATING CO INC | COMPTON | 5.01 | 0.00102 | 0.0141 | 0.0115 | 2015 |
| 18931 | A | GERDAU | RANCHO CUCAMONGA | 8.7 | 0.25 | 0.49 | 0.61 | 2015 |
| 171107 | A | PHILLIPS 66 CO/LA REFINERY WILMINGTON PL | WILMINGTON | 23.2 | 0.29 | 0.1 | 0.7 | 2013 |
| 122822 | I | CONSOLIDATED FILM INDUSTRIES | HOLLYWOOD | 21.0 | ND | 0.1 | 0.4 | 2000 |
| 176967 | A | GAS RECOVERY SYSTEMS, INC | IRVINE | 20.1 | 0.18 | 0.6 | 0.3 | 2009 |
| 14495 | A | VISTA METALS CORP | FONTANA | 19.8 | 0.06 | 0.0 | 0.3 | 2008 |
| 165192 | A | TRIUMPH AEROSTRUCTURES, LLC (b) | HAWTHORNE | 19.7 | ND | 0.64 | 0.24 | 1999 |
| 11142 | OB | KEYSOR-CENTURY CORP | SAUGUS | 17.0 | ND | 0.5 | 0.1 | 2000 |
| 8547 | A | QUEMETCO INC (c) | INDUSTRY | 7.1 | 0.45 | 0.09 | 0.69 | 2016 |
| 22911 | A | CARLTON FORGE WORKS | PARAMOUNT | 15.4 | ND | 1.76 | 1.04 | 2016 |
| 35302 | A | OWENS CORNING (c) | COMPTON | 14.0 | 0.02 | 0.1 | 0.1 | 2000 |
| 41229 | A | LUBECO INC | LONG BEACH | 14.0 | ND | 0.0 | 0.1 | 2002 |
| 48323 | A | SIGMA PLATING CO INC | LA PUENTE | 13.8 | 0.017 | 0.01 | 0.74 | 2001 |
| 23907 | A | JOHNS MANVILLE CORP | CORONA | 13.0 | ND | 0.4 | 2.7 | 1999 |
| 18648 | OB | CROWN CITY PLATING CO. | EL MONTE | 12.0 | ND | 0.4 | 0.1 | 2000 |
| 29110 | A | ORANGE, COUNTYOF - SANITATION DISTRICT (d) | HUNTINGTON BEACH | 10.7 | ND | 1.8 | 0.5 | 2007 |
| 800436 | A | TESORO REFINING AND MARKETING CO | WILMINGTON | 10.7 | 0.37 | 0.3 | 0.4 | 2013 |
| 155828 | A | GARRETT AVIATION SVCS. LLC DBA STANDARD | LOS ANGELES | 9.3 | ND | 0.19 | 0.25 | 2002 |
| 106797 | OB | SAINT-GOBAIN CONTAINERS LLC | LOS ANGELES | 9.9 | ND | 0.0 | 0.1 | 2000 |
| 101380 | OB | GENERAL DYNAMICS OTS (DOWNEY) INC | DOWNEY | 9.8 | ND | 0.0 | 0.1 | 2000 |
| 148925 | A | CHERRY AEROSPACE LLC | SANTA ANA | 9.7 | ND | 0.1 | 0.2 | 1999 |
| 800373 | I | CENCO REFINING COMPANY | SANTA FE SPRINGS | 9.7 | ND | 0.3 | 0.1 | 2000 |
| 800183 | A | PARAMOUNT PETR CORP (EIS USE) | PARAMOUNT | 9.6 | ND | 0.0 | 0.0 | 2002 |
| 800318 | A | GRISWOLD INDUSTRIES | COSTA MESA | 9.5 | 0.01 | 0.1 | 0.0 | 2001 |
| 15504 | A | SCHLOSSER FORGE CO | RANCHO CUCAMONGA | 9.5 | 0.067 | 1.59 | 1.11 | 2002 |
| 800149 | A | US BORAX INC | WILMINGTON | 9.5 | ND | 0.0 | 0.0 | 2000 |
| 10510 | A | GREGG INDUSTRIES INC | EL MONTE | 9.4 | ND | 0.6 | 0.6 | 2008 |
| 62897 | OB | NORTHROP GRUMMAN CORP, MASD | PICO RIVERA | 9.4 | ND | 1.0 | 0.5 | 2000 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 42922 | OB | CMC PRINTED BAG INC | WHITTIER | 9.0 | ND | 0.0 | 0.0 | 1995 |
| 174710 | A | TESORO LOGISTICS OP LLC, VINVALE MARKETI | SOUTH GATE | 9.0 | ND | 0.0 | 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 |
| 1744 | A | KIRKHILL RUBBER CO | BREA | 8.7 | 0.001 | 0.2 | 0.1 | 2007 |
| 175124 | A | AEROJET ROCKETDYNE OF DE, INC. | CANOGA PARK | 8.7 | ND | 0.0 | 0.0 | 1995 |
| 44454 | A | STRUCTURAL COMPOSITES IND | POMONA | 8.6 | 0.001 | 0.0 | 0.2 | 2002 |
| 107168 | I | ADVANCED SPA DESIGNS | LA HABRA | 8.6 | ND | 0.0 | 0.0 | 1995 |
| 2680 | A | LA CO., SANITATION DISTRICT | WHITTIER | 8.6 | ND | 0.0 | 0.0 | 1999 |
| 15736 | A | HENRY CO | HUNTINGTON PARK | 8.5 | ND | 0.0 | 0.0 | 2000 |
| 800057 | A | KINDER MORGAN LIQUIDS TERMINALS, LLC | CARSON | 8.5 | ND | 0.0 | 0.1 | 1999 |
| 800079 | A | PETRO DIAMOND TERMINAL CO | LONG BEACH | 8.3 | ND | 0.0 | 0.2 | 1998 |
| 125281 | OB | MODERN PLATING, ALCO CAD-NICKEL PLATING | LOS ANGELES | 8.2 | ND | 0.1 | 0.0 | 1995 |
| 21615 | OB | PERKINELMER OPTOELECTRONICS SC, INC | AZUSA | 8.1 | ND | 0.2 | 0.1 | 1998 |
| 110924 | A | WESTWAY TERMINAL COMPANY | SAN PEDRO | 8.0 | ND | 0.3 | 0.5 | 1997 |
| 3609 | I | AL'S PLATING CO INC | LOS ANGELES | 7.8 | ND | 0.3 | 0.2 | 1999 |
| 37603 | A | SGL TECHNIC INC, POLYCARBON DIVISION | VALENCIA | 7.8 | ND | 0.0 | 0.4 | 1998 |
| 800182 | A | RIVERSIDE CEMENT CO (c) | RIVERSIDE | 7.8 | 0.11 | 0.1 | 0.1 | 2001 |
| 13920 | A | ST. JOSPEH HOSPITAL | ORANGE | 7.7 | 0.004 | 0.8 | 0.3 | 2008 |
| 800089 | A | EXXONMOBIL OIL CORPORATION | TORRANCE | 7.7 | 0.15 | 0.2 | 0.5 | 2013 |
| 18294 | A | NORTHROP GRUMMAN CORP, AIRCRAFT DIV | EL SEGUNDO | 7.6 | ND | 0.13 | 0.05 | 1999 |
| 113170 | A | SANTA MONICA - UCLA MEDICAL CENTER (b) | SANTA MONICA | 7.6 | 0.14 | 0.2 | 0.0 | 1997 |
| 800214 | A | LA CITY, SANITATION BUREAU (c) | PLAYA DEL REY | 7.6 | ND | 0.1 | 0.0 | 1999 |
| 20197 | A | LAC/USC MEDICAL CENTER | LOS ANGELES | 7.5 | ND | 0.7 | 0.4 | 2007 |
| 800032 | A | CHEVRON U.S.A. INC (EIS USE) | MONTEBELLO | 7.5 | 0.14 | 0.0 | 0.2 | 1999 |
| 800150 | A | US GOVT, AF DEPT, MARCH AFB (NSR USE) | RIVERSIDE | 7.4 | 0.02 | 0.3 | 0.0 | 2008 |
| 108701 | A | SAINT-GOBAIN CONTAINERS LLC | EL MONTE | 7.3 | ND | 0.1 | 0.1 | 2000 |
| 117560 | A | EQUILON ENTER, LLC-SHELL OIL PROD. US | WILMINGTON | 7.3 | ND | 0.0 | 0.1 | 1998 |
| 174655 | A | TESORO REFINING & MARKETING CO, LLC | CARSON | 7.3 | ND | 0.3 | 0.1 | 2000 |
| 800026 | A | ULTRAMAR INC (NSR USE ONLY) | WILMINGTON | 7.2 | 0.18 | 0.7 | 0.2 | 2012 |
| 800113 | A | ROHR,INC | RIVERSIDE | 7.2 | 0.01 | 0.9 | 0.0 | 2007 |
| 800236 | A | LA CO. SANITATION DIST | CARSON | 7.2 | ND | 0.2 | 0.1 | 2007 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 49387 | A | UNIV CAL, RIVERSIDE | RIVERSIDE | 7.1 | ND | 0.0 | 0.0 | 1999 |
| 27343 | OB | CON AGRA INC, GILROY FOODS DBA | SANTA ANA | 7.1 | ND | 0.2 | 0.1 | 1995 |
| 57094 | A | GS ROOFING PRODUCTS CO, INC/CERTAINTEED (c) | WILMINGTON | 7.0 | ND | 0.0 | 0.0 | 2000 |
| 140499 | A | AMERESCO HUNTINGTON BEACH, L.L.C. | HUNTINGTON BEACH | 7.0 | ND | 0.0 | 0.0 | 1995 |
| 800209 | A | BKK CORPORATION, LANDFILL DIVISION GNRL | WEST COVINA | 6.9 | ND | 0.0 | 0.1 | 2000 |
| 800372 | A | EQUILON ENTER. LLC, SHELL OIL PROD. US | CARSON | 6.9 | ND | 0.4 | 0.1 | 2001 |
| 20280 | A | METAL SURFACES INC | BELL GARDENS | 6.8 | 0 | 0.9 | 0.3 | 2011 |
| 5723 | A | DUCOMMUN AEROSTRUCTURES INC | ORANGE | 6.7 | ND | 0.0 | 0.1 | 1999 |
| 173913 | A | TRIUMPH PROCESSING, EMBEE DIV, INC. | SANTA ANA | 6.6 | ND | 0.21 | 0.58 | 2000 |
| 17301 | A | ORANGE, COUNTY OF - SANITATION DISTRICT | FOUNTAIN VALLEY | 6.6 | 0.001 | 0.4 | 0.3 | 2007 |
| 118998 | OB | CYTEC FIBERITE INC | CULVER CITY | 6.6 | ND | 0.0 | 0.2 | 1997 |
| 171109 | A | PHILLIPS 66 COMPANY/LOS ANGELES REFINERY | CARSON | 6.6 | 0.11 | 0.0 | 0.3 | 2011 |
| 6643 | A | TECHNICOLOR INC | NORTH HOLLYWOOD | 6.5 | ND | 0.0 | 0.1 | 2007 |
| 34764 | A | CADDOCK ELECTRONICS INC | RIVERSIDE | 6.5 | ND | 0.0 | 0.1 | 2002 |
| 168088 | A | PCCR USA | LYNWOOD | 6.5 | ND | 0.1 | 1.6 | 1995 |
| 11726 | A | GE ENGINE SERVICES | ONTARIO | 6.5 | ND | 0.1 | 0.6 | 1999 |
| 2852 | A | THE WALT DISNEY COMPANY | BURBANK | 6.4 | 0.03 | 0.0 | 0.0 | 1997 |
| 800066 | A | HITCO CARBON COMPOSITES INC | GARDENA | 6.4 | ND | 0.3 | 0.0 | 1995 |
| 16660 | A | THE BOEING COMPANY | HUNTINGTON BEACH | 6.4 | 0.02 | 0.01 | 0.08 | 2015 |
| 4477 | A | SO CAL EDISON CO | AVALON | 6.3 | 0.02 | 0.0 | 0.0 | 2012 |
| 1226 | A | HYATT DIE CAST & ENGINEERING CORP | CYPRESS | 6.2 | ND | 0.0 | 0.1 | 1996 |
| 800067 | A | BOEING SATELLITE SYSTEMS INC | EL SEGUNDO | 6.2 | ND | 0.0 | 0.1 | 2000 |
| 146570 | A | ROHM AND HAAS CHEMICALS LLC | LA MIRADA | 6.2 | ND | 0.5 | 0.8 | 1999 |
| 45262 | A | LA CO, SANITATION DISTRICT UNIT NO.02 | GLENDALE | 6.2 | ND | 0.0 | 0.1 | 1998 |
| 140961 | A | GKN AEROSPACE TRANSPARENCY SYS INC | GARDEN GROVE | 6.0 | ND | 0.0 | 0.5 | 1996 |
| 800022 | A | CALNEV PIPE LINE CO (NSR USE) | BLOOMINGTON | 5.9 | ND | 0.0 | 0.1 | 1999 |
| 800047 | I | FLETCHER OIL & REF CO | CARSON | 5.9 | ND | 0.0 | 0.0 | 1998 |
| 800198 | A | ULTRAMAR INC (NSR USE ONLY) | WILMINGTON | 5.9 | ND | 0.0 | 0.1 | 1999 |
| 800279 | A | SFPP, L.P. | ORANGE | 5.9 | ND | 0.0 | 0.2 | 1999 |
| 8578 | OB | 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 |
| 65382 | A | SFPP, L.P. | BLOOMINGTON | 5.8 | ND | 0.0 | 0.0 | 1996 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 164864 | A | ARROWHEAD BRASS & PLUMBING | LOS ANGELES | 5.7 | ND | 0.3 | 0.0 | 1995 |
| 800288 | A | UNIV CAL IRVINE (NSR USE ONLY) | IRVINE | 5.6 | ND | 0.0 | 0.1 | 1996 |
| 22410 | A | PALACE PLATING | LOS ANGELES | 5.6 | ND | 0.73 | 0.38 | 2004 |
| 38971 | A | RICOH ELECTRONICS INC | IRVINE | 5.6 | ND | 0.0 | 0.4 | 1995 |
| 14146 | A | MAC GREGOR YACHT CORP | COSTA MESA | 5.5 | ND | 0.0 | 0.1 | 1998 |
| 43201 | A | SNOW SUMMIT INC | BIG BEAR LAKE | 5.5 | ND | 0.2 | 0.0 | 2007 |
| 54424 | A | L & L CUSTOM SHUTTERS | PLACENTIA | 5.5 | ND | 0.2 | 0.2 | 2001 |
| 800409 | A | NORTHROP GRUMMAN SPACE & MISSION SYSTEMS | REDONDO BEACH | 5.5 | ND | 0.5 | 0.2 | 1998 |
| 800196 | A | AMERICAN AIRLINES INC (EIS USE) | LOS ANGELES | 5.4 | 0.190 | 0.86 | 0.08 | 2002 |
| 800171 | A | EXXONMOBIL OIL CORPORATION | VERNON | 5.3 | ND | 0.1 | 0.0 | 1997 |
| 134018 | A | INDUSTRIAL CONTAINER SERVICES-CA LLC | MONTEBELLO | 5.2 | ND | 0.6 | 0.2 | 2000 |
| 109198 | A | TORCH OPERATING COMPANY | BREA | 5.0 | ND | 0.0 | 0.0 | 2001 |
| 103888 | A | SARGENT FLETCHER INC | EL MONTE | 4.9 | ND | 0.2 | 0.0 | 1999 |
| 800037 | A | DEMENNO/KERDOON | COMPTON | 4.9 | 0.01 | 0.01 | 0.02 | 2009 |
| 11192 | A | HI-SHEAR CORPORATION | TORRANCE | 4.8 | ND | 0.0 | 0.0 | 2008 |
| 800038 | A | THE BOEING COMPANY - C17 PROGRAM | LONG BEACH | 4.8 | ND | 0.2 | 0.1 | 1999 |
| 800264 | A | EDGINGTON OIL COMPANY | LONG BEACH | 4.8 | 0.001 | 0.0 | 0.0 | 2002 |
| 101977 | A | SIGNAL HILL PETROLEUM INC | LONG BEACH | 4.7 | ND | 0.6 | 1.0 | 1998 |
| 3950 | A | CROWN CORK & SEAL CO INC | LA MIRADA | 4.6 | ND | 0.0 | 0.1 | 1997 |
| 83102 | A | LIGHT METALS INC | INDUSTRY | 4.5 | 0.01 | 0.0 | 2.7 | 2002 |
| 157451 | A | VERNON MACHINE CORP, BENDER US DBA | VERNON | 4.4 | 0.001 | 1.0 | 0.0 | 2002 |
| 800041 | A | DOW CHEM U.S.A. (NSR USE) | TORRANCE | 4.4 | ND | 0.1 | 0.0 | 2000 |
| 93346 | A | WAYMIRE DRUM CO,INC.,S EL MONTE FACILITY | SOUTH EL MONTE | 4.3 | ND | 0.1 | 0.2 | 1997 |
| 174591 | A | TESORO REFINING & MARKETING CO LLC, CAL (c) | WILMINGTON | 4.3 | ND | 0.1 | 0.2 | 1995 |
| 177042 | A | SOLVAY USA, INC | LONG BEACH | 4.3 | ND | 0.3 | 0.0 | 2001 |
| 124506 | A | BOEING ELECTRON DYNAMIC DEVICES INC | TORRANCE | 4.2 | ND | 0.5 | 0.1 | 1995 |
| 6459 | OB | HONEYWELL INTERNATIONAL INC | VERNON | 4.1 | ND | 0.0 | 0.0 | 1999 |
| 7533 | A | HUGO NEU-PROLER CO | TERMINAL ISLAND | 4.1 | ND | 1.3 | 0.1 | |
| 18439 | OB | ACE PLATING CO INC | LOS ANGELES | 4.1 | ND | 0.6 | 0.2 | 1998 |
| 45489 | A | ABBOTT CARDIOVASCULAR SYSTEMS, INC. | TEMECULA | 3.8 | 0.01 | 1.3 | 0.0 | 2002 |
| 126060 | A | STERIGENICS US, LLC | ONTARIO | 3.8 | 0 | 0.0 | 0.0 | 2007 |
| 8820 | A | REULAND ELECTRIC CO, H.BRITTON LEES | INDUSTRY | 3.7 | ND | 0.0 | 0.0 | 1996 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 9114 | I | SOMITEX PRINTS OF CAL INC | INDUSTRY | 3.7 | ND | 0.1 | 0.0 | 1996 |
| 17325 | A | ACE CLEARWATER ENTER. | PARAMOUNT | 3.7 | ND | 0.0 | 0.0 | 2002 |
| 106838 | A | VALLEY-TODECO, INC | SYLMAR | 3.7 | ND | 0.2 | 0.2 | 2000 |
| 105598 | A | SENIOR FLEXONICS INC/STAINLESS STEEL DVN | BURBANK | 3.6 | ND | 1.0 | 0.5 | 2001 |
| 7427 | A | OWENS-BROCKWAY GLASS CONTAINER INC | VERNON | 3.6 | ND | 0.01 | 0.06 | 1999 |
| 800007 | OB | ALLIED SIGNAL INC (NSR USE ONLY) | EL SEGUNDO | 3.6 | ND | 0.0 | 0.5 | 2000 |
| 126197 | A | STERIGENICS US, INC. | LOS ANGELES | 3.6 | ND | 0.0 | 0.0 | 1996 |
| 127568 | A | ENGINEERED POLYMER SOLUTION, VALSPAR | MONTEBELLO | 3.5 | ND | 0.1 | 0.5 | 2000 |
| 151899 | A | VINTAGE PRODUCTION CALIFORNIA LLC | NEWHALL | 3.5 | ND | 0.0 | 0.2 | 2000 |
| 140811 | A | DUCOMMUN AEROSTRUCTURES INC | MONROVIA | 3.5 | 0.01 | 0.0 | 0.0 | 2002 |
| 8015 | A | ANADITE INC | SOUTH GATE | 3.5 | ND | 0.63 | 0.78 | 1998 |
| 9163 | A | INLAND EMPIRE UTL AGEN, A MUN WATER DIS | ONTARIO | 3.4 | ND | 0.3 | 0.0 | 2007 |
| 57329 | OB | KWIKSET CORP | ANAHEIM | 3.4 | ND | 0.0 | 0.1 | 2000 |
| 151415 | A | LINN WESTERN OPERATING, INC | BREA | 3.4 | ND | 0.0 | 0.0 | 1999 |
| 800204 | OB | SIMPSON PAPER CO | POMONA | 3.4 | ND | 0.0 | 0.0 | 1996 |
| 153546 | A | HUCK INTL INC. DBA ALCOA FASTENING SYS. | CARSON | 3.3 | ND | 0.0 | 0.0 | 1999 |
| 126191 | A | STERIGENICS US, INC. | LOS ANGELES | 3.3 | ND | 0.0 | 0.0 | 1996 |
| 800063 | A | GROVER PROD. CO (EIS USE) | LOS ANGELES | 3.3 | 0.039 | 0.88 | 0.07 | 2001 |
| 800189 | A | DISNEYLAND RESORT | ANAHEIM | 3.3 | 0.03 | 0.1 | 0.1 | 2009 |
| 18396 | A | SPRAYLAT CORP | LOS ANGELES | 3.2 | 0 | 0.7 | 0.0 | 2012 |
| 6384 | A | LA CO., RANCHO LOS AMIGOS MEDICAL CENTER | DOWNEY | 3.1 | ND | 0.0 | 0.1 | 1999 |
| 113676 | A | VICKERS | LOS ANGELES | 3.0 | ND | 0.0 | 0.0 | 1995 |
| 11435 | A | THE PQ CORP | SOUTH GATE | 3.0 | ND | 0.0 | 0.0 | 1998 |
| 174703 | A | TESORO REFINING & MARKETING CO LLC CARSO | CARSON | 3.0 | ND | 0.0 | 0.0 | 1994 |
| 10005 | A | ELECTRONIC CHROME GRINDING CO INC | SANTA FE SPRINGS | 3.0 | 0.01 | 0.2 | 0.1 | 2001 |
| 52517 | A | REXAM PLC, REXAM BEVERAGE CAN COMPANY | CHATSWORTH | 2.9 | 0.01 | 0.7 | 0.1 | 2009 |
| 18452 | A | UCLA (REGENTS OF UC) (c) | LOS ANGELES | 2.9 | ND | 0.0 | 0.1 | 1999 |
| 2613 | A | US GOVT, NAVY DEPT,NAVAL WEAPONS STN | SEAL BEACH | 2.9 | ND | 0.1 | 0.0 | 2002 |
| 116868 | A | EQUILON ENT LLC/RIALTO TERMINAL | BLOOMINGTON | 2.9 | ND | 0.0 | 0.0 | 1999 |
| 800035 | A | CONTINENTAL AIRLINES INC (NSR USE ONLY) | LOS ANGELES | 2.8 | ND | 0.0 | 0.1 | 1995 |
| 48274 | A | FENDER MUSICAL INST | CORONA | 2.8 | ND | 0.0 | 0.4 | 1997 |
| 151798 | A | TESORO REFINING AND MARKETING CO | CARSON | 2.8 | ND | 0.1 | 0.0 | 1999 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 167981 | A | TESORO LOGISTICS OPERATIONS LLC | WILMINGTON | 2.8 | ND | 0.0 | 0.0 | 2000 |
| 800030 | A | CHEVRON PRODUCTS CO. | EL SEGUNDO | 2.7 | 0.28 | 0.3 | 0.1 | 2001 |
| 5887 | A | NEXGEN PHARMA INC | IRVINE | 2.7 | ND | 0.0 | 0.0 | 1997 |
| 16642 | A | ANHEUSER-BUSCH INC., (LA BREWERY) | VAN NUYS | 2.7 | ND | 0.0 | 0.1 | 1999 |
| 25440 | A | ROBERTSHAW CONTROLS CO, GRAYSON CONTROLS | LONG BEACH | 2.7 | ND | 0.0 | 1.0 | 1998 |
| 27701 | A | CADDOCK ELECTRONIC | RIVERSIDE | 2.7 | ND | 0.0 | 0.1 | 2002 |
| 46268 | A | CALIFORNIA STEEL INDUSTRIES INC | FONTANA | 2.7 | 0.02 | 0.2 | 0.0 | 1995 |
| 137517 | A | PACIFIC TERMINALS LLC | ETIWANDA | 2.7 | ND | 0.0 | 0.2 | 2000 |
| 175191 | A | FREEPORT-MCMORAN OIL & GAS | LOS ANGELES | 2.7 | ND | 0.0 | 0.1 | 1997 |
| 35483 | A | WARNER BROTHERS STUDIO FACILITIES | BURBANK | 2.6 | ND | 0.1 | 0.3 | 1997 |
| 134943 | A | ALCOA GLOBAL FASTENERS, INC. SOUTH BAY | TORRANCE | 2.6 | ND | 0.6 | 0.0 | 2008 |
| 37507 | A | TROJAN BATTERY COMPANY | SANTA FE SPRINGS | 2.6 | 0.001 | 1.1 | 1.3 | 2012 |
| 7949 | A | CUSTOM FIBERGLASS MFG CO/CUSTOM HARDTOP | LONG BEACH | 2.5 | ND | 0.0 | 0.0 | 1995 |
| 65381 | A | SFPP, L.P. (NSR USE) | CARSON | 2.4 | ND | 0.0 | 0.1 | 1999 |
| 79682 | A | RAMCAR BATTERIES INC | COMMERCE | 2.4 | 1 | 0.0 | 0.2 | 1998 |
| 18508 | A | AIR PROD & CHEM INC | LOS ANGELES | 2.4 | ND | 0.1 | 0.8 | 1999 |
| 800202 | A | UNIVERSAL STUDIOS INC (EIS USE) | UNIVERSAL CITY | 2.4 | ND | 0.0 | 0.0 | 1996 |
| 800387 | A | CAL INST OF TECH | PASADENA | 2.4 | ND | 0.1 | 0.0 | 2007 |
| 172878 | A | TESORO LOGISTICS OPERATIONS LLC LONG BEA | LONG BEACH | 2.4 | ND | 0.0 | 0.0 | 1999 |
| 133405 | A | BODYCOTE INC/BODYCOTE THERMAL PROCESSING | LOS ANGELES | 2.4 | ND | 0.0 | 0.2 | 1999 |
| 800039 | I | DOUGLAS PRODUCTS DIVISION | TORRANCE | 2.4 | ND | 0.0 | 0.0 | 1996 |
| 1208 | OB | MICROSEMI CORP | SANTA ANA | 2.3 | ND | 0.0 | 0.0 | 2001 |
| 90546 | OB | SORIN BIOMEDICAL INC | IRVINE | 2.3 | ND | 0.0 | 0.0 | 1996 |
| 160437 | A | SOUTHERN CALIFORNIA EDISON | SAN BERNARDINO | 2.3 | <0.01 | <0.01 | <0.01 | 2013 |
| 800056 | A | KINDER MORGAN LIQUIDS TERMINALS, LLC | WILMINGTON | 2.3 | 0.01 | 0.0 | 0.0 | 1997 |
| 800111 | OB | THE BOEING COMPANY | DOWNEY | 2.3 | ND | 0.0 | 0.1 | 1996 |
| 103659 | OB | 4MC-BURBANK, INC. | BURBANK | 2.2 | ND | 0.6 | 0.0 | 2004 |
| 99773 | A | CYTEC FIBERITE INC | ANAHEIM | 2.2 | 0.0004 | 0.0 | 0.2 | 2000 |
| 9668 | A | DELUXE LABORATORIES INC,DELUXE LABORATOR | HOLLYWOOD | 2.1 | ND | 0.0 | 0.0 | 2000 |
| 40829 | A | HAWKER PACIFIC INC | SUN VALLEY | 2.1 | 0.0003 | 0.0 | 0.1 | 2009 |
| 142267 | A | FS PRECISION TECH LLC | RANCHO DOMINGUEZ | 2.0 | ND | 0.1 | 0.2 | 2001 |
| 800181 | A | CALIFORNIA PORTLAND CEMENT CO (c) | COLTON | 2.0 | ND | 0.0 | 0.4 | 1996 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 2605 | A | 3M PHARMACEUTICALS | NORTHRIDGE | 2.0 | ND | 0.4 | 0.4 | 1996 |
| 14502 | A | VERNON CITY, LIGHT & POWER DEPT | VERNON | 2.0 | 0.0004 | 0.0 | 0.0 | 2007 |
| 54627 | A | HICKORY SPRINGS OF CAL INC | COMMERCE | 2.0 | ND | 0.0 | 0.5 | 1998 |
| 800325 | A | TIDELANDS OIL PRODUCTION CO | LONG BEACH | 1.9 | ND | 0.1 | 0.6 | 1999 |
| 10245 | A | LA CITY,SANITATION BUREAU,TERMINAL ISLAN | SAN PEDRO | 1.8 | ND | 0.0 | 0.0 | 2000 |
| 23559 | OB | JOHNSON CONTROLS BATTERY GROUP INC | FULLERTON | 1.8 | ND | 0.0 | 0.1 | 2001 |
| 800003 | A | HONEYWELL INTERNATIONAL INC | TORRANCE | 1.8 | ND | 0.0 | 0.0 | 1999 |
| 8309 | A | CAMBRO MANUFACTURING CO | HUNTINGTON BEACH | 1.7 | ND | 0.0 | 0.1 | 2000 |
| 22467 | A | LEFIELL MFG CO | SANTA FE SPRINGS | 1.7 | ND | 0.7 | 0.2 | 2000 |
| 82512 | A | BREA CANON OIL CO | WILMINGTON | 1.7 | ND | 0.0 | 0.0 | 1996 |
| 132954 | A | ALL AMERICAN ASPHALT | SAN FERNANDO | 1.6 | <0.02 | 0.4 | 0.3 | 2017 |
| 119907 | A | BERRY PETROLEUM COMPANY | SANTA CLARITA | 1.6 | ND | 0.2 | 0.7 | 1999 |
| 119920 | A | PECHINEY CAST PLATE INC | VERNON | 1.6 | ND | 0.3 | 0.3 | 1996 |
| 133660 | A | HAYDEN INDUSTRIAL PRODUCTS | CORONA | 1.6 | ND | 0.8 | 0.4 | 1998 |
| 107350 | A | NATIONAL O-RINGS | DOWNEY | 1.5 | ND | 0.0 | 0.0 | 2001 |
| 2638 | A | OCCIDENTAL COLLEGE | LOS ANGELES | 1.5 | ND | 0.1 | 0.0 | 2007 |
| 126536 | A | CONSOLIDATED FOUNDRIES - POMONA | POMONA | 1.5 | ND | 0.0 | 0.0 | 1999 |
| 25070 | A | LA CO., SANITATION DISTRICT (c) | WHITTIER | 1.5 | 0.003 | 0.3 | 0.1 | 2009 |
| 82513 | A | BREA CANON OIL COMPANY INC | HARBOR CITY | 1.4 | ND | 0.0 | 0.0 | 1996 |
| 800408 | A | NORTHROP GRUMMAN SPACE & MISSION SYSTEMS | MANHATTAN BEACH | 1.4 | ND | 0.9 | 0.1 | 1998 |
| 3968 | A | TABC, INC | LONG BEACH | 1.4 | ND | 0.1 | 0.2 | 1999 |
| 62679 | A | KOP-COAT INC | VERNON | 1.3 | ND | 0.0 | 0.5 | 1997 |
| 126544 | A | PAC FOUNDRIES-INDUSTRY | INDUSTRY | 1.3 | ND | 0.6 | 0.1 | 1996 |
| 161300 | A | SAPA EXTRUDER, INC | INDUSTRY | 1.3 | ND | 0.0 | 0.0 | 1999 |
| 2526 | A | CHEVRON PRODUCTS CO | VAN NUYS | 1.3 | ND | 0.0 | 0.0 | 1996 |
| 22551 | A | THUMS LONG BEACH CO | SAN PEDRO | 1.2 | ND | 0.0 | 0.0 | 2000 |
| 42633 | A | LA CO., SANITATION DIST | POMONA | 1.2 | ND | 0.0 | 0.0 | 1996 |
| 106009 | A | VENOCO INC. | BEVERLY HILLS | 1.2 | ND | 0.0 | 0.0 | 2005 |
| 152054 | A | LINN WESTERN OPERATING INC | BREA | 1.1 | ND | 0.0 | 0.1 | 1996 |
| 42514 | A | LA CO.,SANITATION DIST,CALABASAS LNDFILL | AGOURA | 1.1 | 0 | 0.1 | 0.0 | 2010 |
| 124806 | OB | EXIDE TECHNOLOGIES | INDUSTRY | 1.0 | ND | 0.0 | 0.0 | 1999 |
| 800127 | A | SO CAL GAS CO (EIS USE) | MONTEBELLO | 1.0 | 0 | 0.0 | 0.0 | 2009 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 7730 | A | CARPENTER CO | RIVERSIDE | 0.96 | ND | 0.03 | 1.34 | 2003 |
| 20375 | A | PRUDENTIAL OVERALL SUPPLY | RIVERSIDE | 1.0 | ND | 0.0 | 0.1 | 1997 |
| 6670 | A | TRU CUT INC | LOS ANGELES | < 1 | ND | 0.0 | 0.0 | 2002 |
| 22808 | I | PRICE PFISTER INC | PACOIMA | 0.9 | ND | 0.2 | 0.1 | 1996 |
| 47056 | OB | MYERS CONTAINER CORP, IMACC CORP DIV | HUNTINGTON PARK | 0.9 | ND | 0.2 | 2.0 | 2002 |
| 5177 | A | ITT GILFILLAN UNIT NO.02 | VAN NUYS | 0.9 | ND | 0.1 | 0.2 | 1998 |
| 3134 | A | THUMS LONG BEACH CO, UNIT NO.05 | SAN PEDRO | 0.8 | ND | 0.0 | 0.0 | 1996 |
| 18378 | A | GRUBER SYS INC | VALENCIA | 0.8 | ND | 0.1 | 0.1 | 2004 |
| 22556 | A | THUMS LONG BEACH CO, UNIT NO.02 | SAN PEDRO | 0.8 | ND | 0.0 | 0.0 | 1996 |
| 111415 | A | VAN CAN COMPANY | FONTANA | 0.8 | ND | 0.0 | 0.1 | 1996 |
| 14544 | OB | SANTA FE ENAMELING & METAL FINISHING CO | SANTA FE SPRINGS | 0.8 | ND | 0.0 | 0.4 | 1999 |
| 120088 | A | BREITBURN ENERGY COMPANY, LLC | SANTA FE SPRINGS | 0.8 | ND | 0.0 | 0.0 | 1998 |
| 118406 | A | CARSON COGENERATION COMPANY | CARSON | 0.8 | ND | 0.2 | 0.0 | 2007 |
| 126964 | A | EDWARDS LIFESCIENCES LLC | IRVINE | 0.8 | ND | 0.0 | 0.0 | 1995 |
| 22373 | A | JEFFERSON SMURFIT CORPORATION (U.S.) | LOS ANGELES | 0.7 | ND | 0.0 | 0.0 | 1996 |
| 24060 | A | TOMKINS INDUSTRIES INC-LASCO PRODS GROUP | ANAHEIM | 0.7 | ND | 0.0 | 0.0 | 1996 |
| 800091 | A | MOBIL OIL CORP (NSR USE ONLY) | ANAHEIM | 0.7 | ND | 0.0 | 0.0 | 1999 |
| 772 | A | DEFT INC | IRVINE | 0.7 | ND | 0.0 | 0.0 | 1995 |
| 24756 | A | CRANE CO, HYDRO-AIRE DIV | BURBANK | 0.6 | ND | 0.0 | 0.1 | 1997 |
| 115394 | A | AES ALAMITOS, LLC | LONG BEACH | 0.6 | ND | 0.0 | 0.0 | 1999 |
| 134931 | A | ALCOA GLOBAL FASTENERS, INC. | FULLERTON | 0.6 | ND | 1.90 | 0.02 | 1997 |
| 800327 | A | GLENDALE CITY, GLENDALE WATER & POWER | GLENDALE | 0.6 | ND | 0.0 | 0.0 | 1999 |
| 15647 | A | CUSTOM ENAMELERS INC | FOUNTAIN VALLEY | 0.6 | ND | 0.1 | 0.0 | 2000 |
| 3093 | A | LA CO., OLIVE VIEW/UCLA MEDICAL CENTER | SYLMAR | 0.5 | ND | 0.0 | 0.0 | 1999 |
| 21895 | A | AC PRODUCTS INC | PLACENTIA | 0.5 | ND | 0.0 | 0.0 | 2003 |
| 6281 | A | US GOVT,MARINE CORPS AIR STATION,EL TORO | SANTA ANA | 0.5 | ND | 0.0 | 0.0 | 1996 |
| 1634 | OB | STEELCASE INC, WESTERN DIV | TUSTIN | 0.5 | ND | 0.0 | 0.0 | 1995 |
| 39388 | A | THUMS LONG BEACH CO, UNIT NO.03 | SAN PEDRO | 0.5 | ND | 0.0 | 0.0 | 1996 |
| 61160 | A | GE ENGINE SERVICES | ONTARIO | 0.5 | ND | 0.7 | 0.01 | 2003 |
| 800267 | A | TRIUMPH PROCESSING, INC. | LYNWOOD | 0.5 | 0 | 0.1 | 0.4 | 2012 |
| 152501 | A | PRECISION SPECIALTY METALS INC | LOS ANGELES | 0.5 | ND | 0.4 | 0.2 | 2001 |
| 43436 | A | TST, INC. | FONTANA | 0.4 | 0.11 | 0.0 | 0.4 | 1997 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 18990 | A | LIFE PAINT CO | SANTA FE SPRINGS | 0.4 | ND | 0.0 | 0.0 | 2001 |
| 12660 | I | GOLDSHIELD FIBERGLASS, INC, PLANT #58 | FONTANA | 0.4 | ND | 0.0 | 0.0 | 1994 |
| 44577 | A | LONG BEACH CITY, SERRF PROJECT | LONG BEACH | 0.4 | 0 | 0.0 | 0.1 | 2011 |
| 115536 | A | AES REDONDO BEACH, LLC | REDONDO BEACH | 0.4 | ND | 0.0 | 0.0 | 1998 |
| 122295 | A | FALCON FOAM, A DIV OF ATLAS ROOFING CORP | LOS ANGELES | 0.4 | ND | 0.0 | 0.0 | 1999 |
| 115663 | A | EL SEGUNDO POWER, LLC | EL SEGUNDO | 0.3 | ND | 0.0 | 0.0 | 2000 |
| 25638 | A | BURBANK CITY, PUB SERV DEPT | BURBANK | 0.3 | ND | 0.3 | 0.0 | 1996 |
| 124805 | A | EXIDE TECHNOLOGIES | COMMERCE | 0.3 | ND | 0.0 | 0.0 | 2000 |
| 112192 | OB | CONSOLIDATED DRUM RECONDITIONING CO INC | SOUTH GATE | 0.3 | ND | 0.0 | 0.0 | 1997 |
| 550 | A | LA CO., INTERNAL SERVICE DEPT | LOS ANGELES | 0.3 | ND | 0.0 | 0.0 | 2008 |
| 800343 | A | BOEING SATELLITE SYSTEMS, INC | EL SEGUNDO | 0.3 | ND | 0.0 | 0.2 | 1996 |
| 24520 | A | LA CO, SANITATION DISTRICTS | ROLLING HILLS ESTATE | 0.3 | ND | 0.0 | 0.0 | 1998 |
| 99119 | A | INTERPLASTIC CORP | HAWTHORNE | 0.3 | ND | 0.1 | 0.3 | 1999 |
| 122300 | A | BASF CORPORATION | COLTON | 0.3 | ND | 0.6 | 0.0 | 2002 |
| 19989 | OB | PARKER HANNIFIN AEROSPACE CORP | IRVINE | 0.3 | ND | 0.0 | 0.0 | 1999 |
| 107149 | A | MARKLAND MANUFACTURING INC | SANTA ANA | 0.3 | ND | 0.1 | 0.1 | 2007 |
| 161142 | A | FOAMEX INNOVATIONS, INC. | COMPTON | 0.3 | 0 | 0.0 | 0.0 | 2010 |
| 16264 | A | INTL COATINGS CO INC | CERRITOS | 0.2 | ND | 0.0 | 0.0 | 1999 |
| 800074 | A | LA CITY, DWP HAYNES GENERATING STATION | LONG BEACH | 0.2 | ND | 0.0 | 0.0 | 2000 |
| 48300 | A | PRECISION TUBE BENDING | SANTA FE SPRINGS | 0.2 | ND | 0.0 | 0.0 | 2002 |
| 800168 | A | PASADENA CITY, DWP (EIS USE) | PASADENA | 0.2 | ND | 0.7 | 0.0 | 1996 |
| 800193 | A | LA CITY, DWP VALLEY GENERATING STATION | SUN VALLEY | 0.2 | ND | 0.3 | 0.0 | 1999 |
| 37336 | A | COMMERCE REFUSE TO ENERGY FACILITY | COMMERCE | 0.1 | 0 | 0.0 | 0.0 | 2010 |
| 42676 | A | AES PLACERITA INC | NEWHALL | 0.1 | ND | 0.1 | 0.0 | 2003 |
| 114801 | A | RHODIA INC. | LONG BEACH | 0.1 | ND | 0.0 | 0.1 | 2006 |
| 115389 | A | AES HUNTINGTON BEACH, LLC | HUNTINGTON BEACH | 0.1 | ND | 0.0 | 0.0 | 1999 |
| 7416 | A | PRAXAIR INC | WILMINGTON | 0.1 | ND | 0.0 | 0.0 | 2001 |
| 1992 | A | PRUDENTIAL OVERALL SUPPLY | VAN NUYS | 0.1 | ND | 0.0 | 0.0 | 1997 |
| 16044 | I | SPECIALTY ORGANICS, INC. | IRWINDALE | 0.1 | ND | 0.0 | 0.2 | 1997 |
| 24812 | A | FARMER BROS CO | TORRANCE | 0.1 | ND | 0.0 | 0.0 | 1999 |
| 25012 | A | AMADA MFG AMERICA, INC | LA MIRADA | 0.1 | ND | 0.0 | 0.0 | 2002 |
| 94872 | A | METAL CONTAINER CORP | MIRA LOMA | 0.1 | ND | 0.4 | 0.4 | 2002 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 111110 | A | BRISTOL FIBERLITE INDUSTRIES, INC | SANTA ANA | 0.1 | ND | 0.0 | 0.0 | 1995 |
| 24118 | A | DEVOE COATINGS CO | RIVERSIDE | 0.1 | ND | 0.3 | 0.1 | 1999 |
| 156741 | A | HARBOR COGENERATION CO | WILMINGTON | 0.1 | ND | 0.0 | 0.0 | 2002 |
| 20144 | OB | CANON BUSINESS MACHINES INC | COSTA MESA | 0.0 | ND | 0.0 | 0.1 | 1999 |
| 800320 | A | AMVAC CHEMICAL CORP | LOS ANGELES | 0.0 | ND | 0.1 | 0.3 | 2004 |
| 14217 | OB | MODERN FAUCET MFG COMPANY | LOS ANGELES | 0.0 | ND | 0.0 | 0.5 | 1996 |
| 45938 | A | E.M.E. INC/ELECTRO MACHINE & ENGINEERING | COMPTON | 0.0 | ND | 0.0 | 0.0 | 1999 |
| 117785 | A | BALL METAL BEVERAGE CONTAINER CORP. | TORRANCE | 0.0 | ND | 0.2 | 0.9 | 2001 |
| 22229 | A | PROCESSES BY MARTIN INC | LYNWOOD | 0.0 | ND | 0.0 | 0.0 | 2002 |
| 800075 | A | LA CITY, DWP SCATTERGOOD GENERATING STA | PLAYA DEL REY | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 160150 | A | ERGON ASPHALT & EMULSIONS, INC. | FONTANA | 0.0 | ND | 0.3 | 0.0 | 1999 |
| 115586 | A | SUNDANCE SPAS, INC | CHINO | 0.0 | ND | 0.0 | 0.4 | 1996 |
| 51620 | A | WHEELABRATOR NORWALK ENERGY CO INC | NORWALK | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 61743 | A | AMERON STEEL FABRICATION DIVISION | FONTANA | 0.0 | ND | 0.2 | 0.2 | 2000 |
| 55711 | A | SUNLAW COGENERATION PARTNERS I | VERNON | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 124016 | A | OAKLITE PRODUCTS (BRENT AMERICA, INC./ LEEDER ARDOX) | LA MIRADA | 0.0 | ND | 0.1 | 0.1 | 2000 |
| 55714 | A | SUNLAW COGENERATION PARTNERS I | VERNON | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 119127 | A | PRC-DE SOTO INTERNATIONAL | GLENDALE | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 809 | A | GARNER GLASS CO | CLAREMONT | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 1732 | OB | INTL ELECTRONIC RESEARCH CORP | BURBANK | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 1746 | A | UNITED ALLOYS INC | LOS ANGELES | 0.0 | ND | 0.0 | 0.0 | 1998 |
| 3084 | A | CARDINAL INDUSTRIAL FINISHES INC | SOUTH EL MONTE | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 3100 | A | BAXTER HEALTHCARE CORP, I V SYSTEMS | IRVINE | 0.0 | ND | 0.0 | 0.4 | 1994 |
| 3578 | A | PRUDENTIAL OVERALL SUPPLY | CARSON | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 4616 | OB | SUPERIOR IND INTL INC | VAN NUYS | 0.0 | ND | 0.0 | 0.4 | 1997 |
| 5125 | OB | UTILITY TRAILER MFG CO | INDUSTRY | 0.0 | ND | 0.0 | 0.3 | 1996 |
| 5645 | OB | STANDARD NICKEL CHROMIUM PLATING CO INC | LOS ANGELES | 0.0 | ND | 0.0 | 0.0 | 1999 |
| 6163 | A | OHLINE | GARDENA | 0.0 | ND | 0.3 | 0.7 | 1996 |
| 6315 | A | FLO-KEM, INC. | RANCHO DOMINGUEZ | 0.0 | ND | 0.0 | 0.6 | 1999 |
| 6362 | OB | JACUZZI WHIRLPOOL BATH INC | SANTA ANA | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 7010 | A | PRUDENTIAL OVERALL SUPPLY | IRVINE | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 8560 | A | PRUDENTIAL OVERALL SUPPLY CO | COMMERCE | 0.0 | ND | 0.2 | 0.4 | 1995 |

## Table A-1 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed in descending order by cancer risk)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk ( per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 8935 | A | TRAIL RITE INC | SANTA ANA | 0.0 | ND | 0.0 | 0.3 | 1996 |
| 10656 | A | NEWPORT LAMINATES | SANTA ANA | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 12493 | A | REMO INC | NORTH HOLLYWOOD | 0.0 | ND | 0.0 | 0.0 | 1997 |
| 12879 | OB | CYTEC ENGINEERED MATERIALS, INC | SAUGUS | 0.0 | ND | 0.0 | 0.0 | 1994 |
| 14191 | I | NIKLOR CHEMICAL COMPANY INC | CARSON | 0.0 | ND | 0.0 | 0.0 | 2002 |
| 19953 | OB | RISTON KELLER INC | IRVINE | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 21544 | A | US GOVT, MARINE CORPS AIR STA @BLD | Tustin | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 22092 | A | WESTERN TUBE & CONDUIT CORP | LONG BEACH | 0.0 | ND | 0.0 | 0.6 | 1997 |
| 24647 | A | J. B. I. INC | COMPTON | 0.0 | ND | 0.0 | 0.2 | 1999 |
| 40806 | A | NEW BASIS | RIVERSIDE | 0.0 | ND | 0.7 | 0.2 | 1997 |
| 47459 | OB | JACUZZI WHIRLPOOL BATH | IRVINE | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 51849 | A | ELIMINATOR CUSTOM BOATS | MIRA LOMA | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 61209 | OB | AKZO NOBEL CHEM INC, FILTROL CORP SUB OF | LOS ANGELES | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 70021 | A | XERXES CORP ( A DELAWARE CORP) | ANAHEIM | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 132343 | A | SPECTRUM PAINT & POWDER, INC. | ANAHEIM | 0.0 | ND | 0.2 | 0.7 | 1997 |
| 144677 | A | PRATT & WHITNEY ROCKETDYNE/RUBY ACQ ENT | CANOGA PARK | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 149241 | A | REGAL CULTURED MARBLE | POMONA | 0.0 | ND | 0.0 | 0.2 | 1995 |
| 160916 | A | FOAMEX INNOVATIONS, INC. | ORANGE | 0.0 | ND | 0.4 | 0.4 | 1994 |
| 800087 | A | MENASCO MFG CO (EIS USE) | BURBANK | 0.0 | ND | 0.0 | 0.0 | 1997 |
| 800273 | OB | CHEMOIL REF CORP (NSR USE ONLY) | SIGNAL HILL | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 800337 | OB | CHEVRON U.S.A., INC (NSR USE) | LA HABRA | 0.0 | ND | 0.0 | 0.0 | 1996 |

Notes:

(a) A = Active (note that facilities with "Active" status within SCAQMD's database might not be in operation currently); I = Inactive; OB = Out of Business

(b) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated or minimized.

(c) SCAQMD staff has requested these facilities to update their HRAs.

(d) This includes risk attributable to the emergency DICE. The total facility risks excluding the emergency DICE are less than 10 in a million.

(e) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA HRA Guidelines for preparation of their HRA.

(f) ND = Not Determined

## Table A-2

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 550 | A | LA CO., INTERNAL SERVICE DEPT | LOS ANGELES | 0.3 | ND | 0.0 | 0.0 | 2008 |
| 772 | A | DEFT INC | IRVINE | 0.7 | ND | 0.0 | 0.0 | 1995 |
| 809 | A | GARNER GLASS CO | CLAREMONT | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 1208 | OB | MICROSEMI CORP | SANTA ANA | 2.3 | ND | 0.0 | 0.0 | 2001 |
| 1226 | A | HYATT DIE CAST & ENGINEERING CORP | CYPRESS | 6.2 | ND | 0.0 | 0.1 | 1996 |
| 1634 | OB | STEELCASE INC, WESTERN DIV | TUSTIN | 0.5 | ND | 0.0 | 0.0 | 1995 |
| 1732 | OB | INTL ELECTRONIC RESEARCH CORP | BURBANK | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 1744 | A | KIRKHILL RUBBER CO | BREA | 8.7 | 0.001 | 0.2 | 0.1 | 2007 |
| 1746 | A | UNITED ALLOYS INC | LOS ANGELES | 0.0 | ND | 0.0 | 0.0 | 1998 |
| 1992 | A | PRUDENTIAL OVERALL SUPPLY | VAN NUYS | 0.1 | ND | 0.0 | 0.0 | 1997 |
| 2526 | A | CHEVRON PRODUCTS CO | VAN NUYS | 1.3 | ND | 0.0 | 0.0 | 1996 |
| 2605 | A | 3M PHARMACEUTICALS | NORTHRIDGE | 2.0 | ND | 0.4 | 0.4 | 1996 |
| 2613 | A | US GOVT, NAVY DEPT,NAVAL WEAPONS STN | SEAL BEACH | 2.9 | ND | 0.1 | 0.0 | 2002 |
| 2638 | A | OCCIDENTAL COLLEGE | LOS ANGELES | 1.5 | ND | 0.1 | 0.0 | 2007 |
| 2680 | A | LA CO., SANITATION DISTRICT | WHITTIER | 8.6 | ND | 0.0 | 0.0 | 1999 |
| 2852 | A | THE WALT DISNEY COMPANY | BURBANK | 6.4 | 0.03 | 0.0 | 0.0 | 1997 |
| 3084 | A | CARDINAL INDUSTRIAL FINISHES INC | SOUTH EL MONTE | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 3093 | A | LA CO., OLIVE VIEW/UCLA MEDICAL CENTER | SYLMAR | 0.5 | ND | 0.0 | 0.0 | 1999 |
| 3100 | A | BAXTER HEALTHCARE CORP, I V SYSTEMS | IRVINE | 0.0 | ND | 0.0 | 0.4 | 1994 |
| 3134 | A | THUMS LONG BEACH CO, UNIT NO.05 | SAN PEDRO | 0.8 | ND | 0.0 | 0.0 | 1996 |
| 3578 | A | PRUDENTIAL OVERALL SUPPLY | CARSON | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 3609 | I | 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 | 0.1 | 1997 |
| 3968 | A | TABC, INC | LONG BEACH | 1.4 | ND | 0.1 | 0.2 | 1999 |
| 4477 | A | SO CAL EDISON CO | AVALON | 6.3 | 0.02 | 0.0 | 0.0 | 2012 |
| 4616 | OB | SUPERIOR IND INTL INC | VAN NUYS | 0.0 | ND | 0.0 | 0.4 | 1997 |
| 5125 | OB | UTILITY TRAILER MFG CO | INDUSTRY | 0.0 | ND | 0.0 | 0.3 | 1996 |
| 5177 | A | ITT GILFILLAN UNIT NO.02 | VAN NUYS | 0.9 | ND | 0.1 | 0.2 | 1998 |
| 5645 | OB | STANDARD NICKEL CHROMIUM PLATING CO INC | LOS ANGELES | 0.0 | ND | 0.0 | 0.0 | 1999 |
| 5723 | A | DUCOMMUN AEROSTRUCTURES INC | ORANGE | 6.7 | ND | 0.0 | 0.1 | 1999 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 5887 | A | NEXGEN PHARMA INC | IRVINE | 2.7 | ND | 0.0 | 0.0 | 1997 |
| 6163 | A | OHLINE | GARDENA | 0.0 | ND | 0.3 | 0.7 | 1996 |
| 6281 | A | US GOVT,MARINE CORPS AIR STATION,EL TORO | SANTA ANA | 0.5 | ND | 0.0 | 0.0 | 1996 |
| 6315 | A | FLO-KEM, INC. | RANCHO DOMINGUE | 0.0 | ND | 0.0 | 0.6 | 1999 |
| 6362 | OB | JACUZZI WHIRLPOOL BATH INC | SANTA ANA | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 6384 | A | LA CO., RANCHO LOS AMIGOS MEDICAL CENTER | DOWNEY | 3.1 | ND | 0.0 | 0.1 | 1999 |
| 6459 | OB | HONEYWELL INTERNATIONAL INC | VERNON | 4.1 | ND | 0.0 | 0.0 | 1999 |
| 6643 | A | TECHNICOLOR INC | NORTH HOLLYWOO | 6.5 | ND | 0.0 | 0.1 | 2007 |
| 6670 | A | TRU CUT INC | LOS ANGELES | < 1 | ND | 0.0 | 0.0 | 2002 |
| 7010 | A | PRUDENTIAL OVERALL SUPPLY | IRVINE | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 7416 | A | PRAXAIR INC | WILMINGTON | 0.1 | ND | 0.0 | 0.0 | 2001 |
| 7427 | A | OWENS-BROCKWAY GLASS CONTAINER INC | VERNON | 3.6 | ND | 0.0 | 0.1 | 1999 |
| 7533 | A | HUGO NEU-PROLER CO | TERMINAL ISLAND | 4.1 | ND | 1.3 | 0.1 | 2003 |
| 7730 | A | CARPENTER CO | RIVERSIDE | 0.96 | ND | 0.03 | 1.34 | 2003 |
| 7949 | A | CUSTOM FIBERGLASS MFG CO/CUSTOM HARDTOP | LONG BEACH | 2.5 | ND | 0.0 | 0.0 | 1995 |
| 8015 | A | ANADITE INC | SOUTH GATE | 3.5 | ND | 0.63 | 0.78 | 1998 |
| 8309 | A | CAMBRO MANUFACTURING CO | HUNTINGTO N BEACH | 1.7 | ND | 0.0 | 0.1 | 2000 |
| 8547 | A | QUEMETCO INC (c) | INDUSTRY | 7.1 | 0.45 | 0.09 | 0.69 | 2016 |
| 8560 | A | PRUDENTIAL OVERALL SUPPLY CO | COMMERCE | 0.0 | ND | 0.2 | 0.4 | 1995 |
| 8578 | OB | ASSOCIATED CONCRETE PROD. INC | SANTA ANA | 5.8 | ND | 0.1 | 0.6 | 1999 |
| 8820 | A | REULAND ELECTRIC CO, H.BRITTON LEES | INDUSTRY | 3.7 | ND | 0.0 | 0.0 | 1996 |
| 8935 | A | TRAIL RITE INC | SANTA ANA | 0.0 | ND | 0.0 | 0.3 | 1996 |
| 9114 | I | SOMITEX PRINTS OF CAL INC | INDUSTRY | 3.7 | ND | 0.1 | 0.0 | 1996 |
| 9163 | A | INLAND EMPIRE UTL AGEN, A MUN WATER DIS | ONTARIO | 3.4 | ND | 0.3 | 0.0 | 2007 |
| 9668 | A | DELUXE LABORATORIES INC,DELUXE LABORATOR | HOLLYWOOD | 2.1 | ND | 0.0 | 0.0 | 2000 |
| 10005 | A | ELECTRONIC CHROME GRINDING CO INC | SANTA FE SPRINGS | 3.0 | 0.01 | 0.2 | 0.1 | 2001 |
| 10245 | A | LA CITY,SANITATION BUREAU,TERMINAL ISLAN | SAN PEDRO | 1.8 | ND | 0.0 | 0.0 | 2000 |
| 10510 | A | GREGG INDUSTRIES INC | EL MONTE | 9.4 | ND | 0.6 | 0.6 | 2008 |
| 10656 | A | NEWPORT LAMINATES | SANTA ANA | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 11142 | OB | KEYSOR-CENTURY CORP | SAUGUS | 17.0 | ND | 0.5 | 0.1 | 2000 |
| 11192 | A | HI-SHEAR CORPORATION | TORRANCE | 4.8 | ND | 0.0 | 0.0 | 2008 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 11435 | A | THE PQ CORP | SOUTH GATE | 3.0 | ND | 0.0 | 0.0 | 1998 |
| 11726 | A | GE ENGINE SERVICES | ONTARIO | 6.5 | ND | 0.1 | 0.6 | 1999 |
| 11818 | A | HIXSON METAL FINISHING | NEWPORT BEACH | 0.8 | ND | 0.04 | 0.006 | 2015 |
| 12493 | A | REMO INC | NORTH HOLLYWOO | 0.0 | ND | 0.0 | 0.0 | 1997 |
| 12660 | I | GOLDSHIELD FIBERGLASS, INC, PLANT #58 | FONTANA | 0.4 | ND | 0.0 | 0.0 | 1994 |
| 12879 | OB | CYTEC ENGINEERED MATERIALS, INC | SAUGUS | 0.0 | ND | 0.0 | 0.0 | 1994 |
| 13920 | A | ST. JOSPEH HOSPITAL | ORANGE | 7.7 | 0.004 | 0.8 | 0.3 | 2008 |
| 14146 | A | MAC GREGOR YACHT CORP | COSTA MESA | 5.5 | ND | 0.0 | 0.1 | 1998 |
| 14191 | I | NIKLOR CHEMICAL COMPANY INC | CARSON | 0.0 | ND | 0.0 | 0.0 | 2002 |
| 14217 | OB | MODERN FAUCET MFG COMPANY | LOS ANGELES | 0.0 | ND | 0.0 | 0.5 | 1996 |
| 14495 | A | VISTA METALS CORP | FONTANA | 19.8 | 0.06 | 0.0 | 0.3 | 2008 |
| 14502 | A | VERNON CITY, LIGHT & POWER DEPT | VERNON | 2.0 | 0.0004 | 0.0 | 0.0 | 2007 |
| 14544 | OB | SANTA FE ENAMELING & METAL FINISHING CO | SANTA FE SPRINGS | 0.8 | ND | 0.0 | 0.4 | 1999 |
| 15504 | A | SCHLOSSER FORGE CO | RANCHO CUCAMONGA | 9.5 | 0.067 | 1.59 | 1.11 | 2002 |
| 15647 | A | CUSTOM ENAMELERS INC | FOUNTAIN VALLEY | 0.6 | ND | 0.1 | 0.0 | 2000 |
| 15736 | A | HENRY CO | HUNTINGTON PARK | 8.5 | ND | 0.0 | 0.0 | 2000 |
| 16044 | I | SPECIALTY ORGANICS, INC. | IRWINDALE | 0.1 | ND | 0.0 | 0.2 | 1997 |
| 16264 | A | INTL COATINGS CO INC | CERRITOS | 0.2 | ND | 0.0 | 0.0 | 1999 |
| 16642 | A | ANHEUSER-BUSCH INC., (LA BREWERY) | VAN NUYS | 2.7 | ND | 0.0 | 0.1 | 1999 |
| 16660 | A | THE BOEING COMPANY | HUNTINGTO N BEACH | 6.39 | 0.02 | 0.01 | 0.08 | 2015 |
| 17301 | A | ORANGE, COUNTY OF - SANITATION DISTRICT | FOUNTAIN VALLEY | 6.6 | 0.001 | 0.4 | 0.3 | 2007 |
| 17325 | A | ACE CLEARWATER ENTER. | PARAMOUNT | 3.7 | ND | 0.0 | 0.0 | 2002 |
| 18294 | A | NORTHROP GRUMMAN CORP, AIRCRAFT DIV | EL SEGUNDO | 7.6 | ND | 0.13 | 0.05 | 1999 |
| 18378 | A | GRUBER SYS INC | VALENCIA | 0.8 | ND | 0.1 | 0.1 | 2004 |
| 18396 | A | SPRAYLAT CORP | LOS ANGELES | 3.2 | 0 | 0.7 | 0.0 | 2012 |
| 18439 | OB | ACE PLATING CO INC | LOS ANGELES | 4.1 | ND | 0.6 | 0.2 | 1998 |
| 18452 | A | UCLA (REGENTS OF UC) (c) | LOS ANGELES | 2.9 | ND | 0.0 | 0.1 | 1999 |
| 18508 | A | AIR PROD & CHEM INC | LOS ANGELES | 2.4 | ND | 0.1 | 0.8 | 1999 |
| 18648 | OB | CROWN CITY PLATING CO. | EL MONTE | 12.0 | ND | 0.4 | 0.1 | 2000 |
| 18931 | A | GERDAU | RANCHO CUCAMONGA | 8.7 | 0.25 | 0.49 | 0.61 | 2015 |
| 18989 | A | BOWMAN PLATING CO INC | COMPTON | 5.01 | 0.00102 | 0.0141 | 0.0115 | 2015 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 18990 | A | LIFE PAINT CO | SANTA FE SPRINGS | 0.4 | ND | 0.0 | 0.0 | 2001 |
| 19953 | OB | RISTON KELLER INC | IRVINE | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 19989 | OB | PARKER HANNIFIN AEROSPACE CORP | IRVINE | 0.3 | ND | 0.0 | 0.0 | 1999 |
| 20144 | OB | CANON BUSINESS MACHINES INC | COSTA MESA | 0.0 | ND | 0.0 | 0.1 | 1999 |
| 20197 | A | LAC/USC MEDICAL CENTER | LOS ANGELES | 7.5 | ND | 0.7 | 0.4 | 2007 |
| 20280 | A | METAL SURFACES INC | BELL GARDENS | 6.8 | 0 | 0.9 | 0.3 | 2011 |
| 20375 | A | PRUDENTIAL OVERALL SUPPLY | RIVERSIDE | 1.0 | ND | 0.0 | 0.1 | 1997 |
| 21544 | A | US GOVT, MARINE CORPS AIR STA @BLD | Tustin | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 21615 | OB | PERKINELMER OPTOELECTRONICS SC, INC | AZUSA | 8.1 | ND | 0.2 | 0.1 | 1998 |
| 21895 | A | AC PRODUCTS INC | PLACENTIA | 0.5 | ND | 0.0 | 0.0 | 2003 |
| 22092 | A | WESTERN TUBE & CONDUIT CORP | LONG BEACH | 0.0 | ND | 0.0 | 0.6 | 1997 |
| 22229 | A | PROCESSES BY MARTIN INC | LYNWOOD | 0.0 | ND | 0.0 | 0.0 | 2002 |
| 22373 | A | JEFFERSON SMURFIT CORPORATION (U.S.) | LOS ANGELES | 0.7 | ND | 0.0 | 0.0 | 1996 |
| 22410 | A | 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 |
| 22551 | A | THUMS LONG BEACH CO | SAN PEDRO | 1.2 | ND | 0.0 | 0.0 | 2000 |
| 22556 | A | THUMS LONG BEACH CO, UNIT NO.02 | SAN PEDRO | 0.8 | ND | 0.0 | 0.0 | 1996 |
| 22808 | I | PRICE PFISTER INC | PACOIMA | 0.9 | ND | 0.2 | 0.1 | 1996 |
| 22911 | A | CARLTON FORGE WORKS | PARAMOUNT | 15.4 | ND | 1.76 | 1.04 | 2006 |
| 23559 | OB | JOHNSON CONTROLS BATTERY GROUP INC | FULLERTON | 1.8 | ND | 0.0 | 0.1 | 2001 |
| 23907 | A | JOHNS MANVILLE CORP | CORONA | 13.0 | ND | 0.4 | 2.7 | 1999 |
| 24060 | A | TOMKINS INDUSTRIES INC-LASCO PRODS GROUP | ANAHEIM | 0.7 | ND | 0.0 | 0.0 | 1996 |
| 24118 | A | DEVOE COATINGS CO | RIVERSIDE | 0.1 | ND | 0.3 | 0.1 | 1999 |
| 24520 | A | LA CO, SANITATION DISTRICTS | ROLLING HILLS ESTATE | 0.3 | ND | 0.0 | 0.0 | 1998 |
| 24647 | A | J. B. I. INC | COMPTON | 0.0 | ND | 0.0 | 0.2 | 1999 |
| 24756 | A | CRANE CO, HYDRO-AIRE DIV | BURBANK | 0.6 | ND | 0.0 | 0.1 | 1997 |
| 24812 | A | FARMER BROS CO | TORRANCE | 0.1 | ND | 0.0 | 0.0 | 1999 |
| 25012 | A | AMADA MFG AMERICA, INC | LA MIRADA | 0.1 | ND | 0.0 | 0.0 | 2002 |
| 25070 | A | LA CO., SANITATION DISTRICT (c) | WHITTIER | 1.5 | 0.003 | 0.3 | 0.1 | 2009 |
| 25440 | A | ROBERTSHAW CONTROLS CO, GRAYSON CONTROLS | LONG BEACH | 2.7 | ND | 0.0 | 1.0 | 1998 |
| 25638 | A | BURBANK CITY, PUB SERV DEPT | BURBANK | 0.3 | ND | 0.3 | 0.0 | 1996 |
| 27343 | OB | CON AGRA INC, GILROY FOODS DBA | SANTA ANA | 7.1 | ND | 0.2 | 0.1 | 1995 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 27701 | A | CADDOCK ELECTRONIC | RIVERSIDE | 2.7 | ND | 0.0 | 0.1 | 2002 |
| 29110 | A | ORANGE, COUNTYOF - SANITATION DISTRICT (d) | HUNTINGTO N BEACH | 10.7 | ND | 1.8 | 0.5 | 2007 |
| 34764 | A | CADDOCK ELECTRONICS INC | RIVERSIDE | 6.5 | ND | 0.0 | 0.1 | 2002 |
| 35302 | A | OWENS CORNING (c) | COMPTON | 14.0 | 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 | 0.0 | 2010 |
| 37507 | A | TROJAN BATTERY COMPANY | SANTA FE SPRINGS | 2.6 | 0.001 | 1.1 | 1.3 | 2012 |
| 37603 | A | SGL TECHNIC INC, POLYCARBON DIVISION | VALENCIA | 7.8 | ND | 0.0 | 0.4 | 1998 |
| 38971 | A | RICOH ELECTRONICS INC | IRVINE | 5.6 | ND | 0.0 | 0.4 | 1995 |
| 39388 | A | THUMS LONG BEACH CO, UNIT NO.03 | SAN PEDRO | 0.5 | ND | 0.0 | 0.0 | 1996 |
| 40806 | A | NEW BASIS | RIVERSIDE | 0.0 | ND | 0.7 | 0.2 | 1997 |
| 40829 | A | HAWKER PACIFIC INC | SUN VALLEY | 2.1 | 0.0003 | 0.0 | 0.1 | 2009 |
| 41229 | A | LUBECO INC | LONG BEACH | 14.0 | ND | 0.0 | 0.1 | 2002 |
| 42514 | A | LA CO.,SANITATION DIST,CALABASAS LNDFILL | AGOURA | 1.1 | 0 | 0.1 | 0.0 | 2010 |
| 42633 | A | LA CO., SANITATION DIST | POMONA | 1.2 | ND | 0.0 | 0.0 | 1996 |
| 42676 | A | AES PLACERITA INC | NEWHALL | 0.1 | ND | 0.1 | 0.0 | 2003 |
| 42922 | OB | CMC PRINTED BAG INC | WHITTIER | 9.0 | ND | 0.0 | 0.0 | 1995 |
| 43201 | A | SNOW SUMMIT INC | BIG BEAR LAKE | 5.5 | ND | 0.2 | 0.0 | 2007 |
| 43436 | A | TST, INC. | FONTANA | 0.4 | 0.11 | 0.0 | 0.4 | 1997 |
| 44454 | A | STRUCTURAL COMPOSITES IND | POMONA | 8.6 | 0.001 | 0.0 | 0.2 | 2002 |
| 44577 | A | LONG BEACH CITY, SERRF PROJECT | LONG BEACH | 0.4 | 0 | 0.0 | 0.1 | 2011 |
| 45262 | A | LA CO, SANITATION DISTRICT UNIT NO.02 | GLENDALE | 6.2 | ND | 0.0 | 0.1 | 1998 |
| 45489 | A | ABBOTT CARDIOVASCULAR SYSTEMS, INC. | TEMECULA | 3.8 | 0.01 | 1.3 | 0.0 | 2002 |
| 45938 | A | E.M.E. INC/ELECTRO MACHINE & ENGINEERING | COMPTON | 0.0 | ND | 0.0 | 0.0 | 1999 |
| 46268 | A | CALIFORNIA STEEL INDUSTRIES INC | FONTANA | 2.7 | 0.02 | 0.2 | 0.0 | 1995 |
| 47056 | OB | MYERS CONTAINER CORP, IMACC CORP DIV | HUNTINGTON PARK | 0.9 | ND | 0.2 | 2.0 | 2002 |
| 47459 | OB | JACUZZI WHIRLPOOL BATH | IRVINE | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 48274 | A | FENDER MUSICAL INST | CORONA | 2.8 | ND | 0.0 | 0.4 | 1997 |
| 48300 | A | PRECISION TUBE BENDING | SANTA FE SPRINGS | 0.2 | ND | 0.0 | 0.0 | 2002 |
| 48323 | A | SIGMA PLATING CO INC | LA PUENTE | 13.8 | 0.017 | 0.01 | 0.74 | 2001 |
| 49387 | A | UNIV CAL, RIVERSIDE | RIVERSIDE | 7.1 | ND | 0.0 | 0.0 | 1999 |
| 51620 | A | WHEELABRATOR NORWALK ENERGY CO INC | NORWALK | 0.0 | ND | 0.0 | 0.0 | 1996 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 51849 | A | ELIMINATOR CUSTOM BOATS | MIRA LOMA | 0.0 | ND | 0.0 | 0.0 | 1995 |
| 52517 | A | REXAM PLC, REXAM BEVERAGE CAN COMPANY | CHATSWORTH | 2.9 | 0.01 | 0.7 | 0.1 | 2009 |
| 54424 | A | L & L CUSTOM SHUTTERS | PLACENTIA | 5.5 | ND | 0.2 | 0.2 | 2001 |
| 54627 | A | HICKORY SPRINGS OF CAL INC | COMMERCE | 2.0 | ND | 0.0 | 0.5 | 1998 |
| 55711 | A | SUNLAW COGENERATION PARTNERS I | VERNON | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 55714 | A | SUNLAW COGENERATION PARTNERS I | VERNON | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 57094 | A | GS ROOFING PRODUCTS CO, INC/CERTAINTEED (c) | WILMINGTON | 7.0 | ND | 0.0 | 0.0 | 2000 |
| 57329 | OB | KWIKSET CORP | ANAHEIM | 3.4 | ND | 0.0 | 0.1 | 2000 |
| 61160 | A | GE ENGINE SERVICES | ONTARIO | 0.5 | ND | 0.7 | 0.01 | 2003 |
| 61209 | OB | AKZO NOBEL CHEM INC, FILTROL CORP SUB OF | LOS ANGELES | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 61743 | A | AMERON STEEL FABRICATION DIVISION | FONTANA | 0.0 | ND | 0.2 | 0.2 | 2000 |
| 62679 | A | KOP-COAT INC | VERNON | 1.3 | ND | 0.0 | 0.5 | 1997 |
| 62897 | OB | NORTHROP GRUMMAN CORP, MASD | PICO RIVERA | 9.4 | ND | 1.0 | 0.5 | 2000 |
| 65381 | A | SFPP, L.P. (NSR USE) | CARSON | 2.4 | ND | 0.0 | 0.1 | 1999 |
| 65382 | A | SFPP, L.P. | BLOOMINGTON | 5.8 | ND | 0.0 | 0.0 | 1996 |
| 70021 | A | XERXES CORP ( A DELAWARE CORP) | ANAHEIM | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 79682 | A | RAMCAR BATTERIES INC | COMMERCE | 2.4 | 1 | 0.0 | 0.2 | 1998 |
| 82512 | A | BREA CANON OIL CO | WILMINGTON | 1.7 | ND | 0.0 | 0.0 | 1996 |
| 82513 | A | BREA CANON OIL COMPANY INC | HARBOR CITY | 1.4 | ND | 0.0 | 0.0 | 1996 |
| 83102 | A | LIGHT METALS INC | INDUSTRY | 4.5 | 0.01 | 0.0 | 2.7 | 2002 |
| 90546 | OB | SORIN BIOMEDICAL INC | IRVINE | 2.3 | ND | 0.0 | 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 FIBERITE INC | ANAHEIM | 2.2 | 0.0004 | 0.0 | 0.2 | 2000 |
| 101380 | OB | GENERAL DYNAMICS OTS (DOWNEY) INC | DOWNEY | 9.8 | ND | 0.0 | 0.1 | 2000 |
| 101977 | A | SIGNAL HILL PETROLEUM INC | LONG BEACH | 4.7 | ND | 0.6 | 1.0 | 1998 |
| 103659 | OB | 4MC-BURBANK, INC. | BURBANK | 2.2 | ND | 0.6 | 0.0 | 2004 |
| 103888 | A | SARGENT FLETCHER INC | EL MONTE | 4.9 | ND | 0.2 | 0.0 | 1999 |
| 105598 | A | SENIOR FLEXONICS INC/STAINLESS STEEL DVN | BURBANK | 3.6 | ND | 1.0 | 0.5 | 2001 |
| 106009 | A | VENOCO INC. | BEVERLY HILLS | 1.2 | ND | 0.0 | 0.0 | 2005 |
| 106797 | OB | SAINT-GOBAIN CONTAINERS LLC | LOS ANGELES | 9.9 | ND | 0.0 | 0.1 | 2000 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 106838 | A | VALLEY-TODECO, INC | SYLMAR | 3.7 | ND | 0.2 | 0.2 | 2000 |
| 107149 | A | MARKLAND MANUFACTURING INC | SANTA ANA | 0.3 | ND | 0.1 | 0.1 | 2007 |
| 107168 | I | ADVANCED SPA DESIGNS | LA HABRA | 8.6 | ND | 0.0 | 0.0 | 1995 |
| 107350 | A | NATIONAL O-RINGS | DOWNEY | 1.5 | ND | 0.0 | 0.0 | 2001 |
| 108701 | A | SAINT-GOBAIN CONTAINERS LLC | EL MONTE | 7.3 | ND | 0.1 | 0.1 | 2000 |
| 109198 | A | TORCH OPERATING COMPANY | BREA | 5.0 | ND | 0.0 | 0.0 | 2001 |
| 110924 | A | WESTWAY TERMINAL COMPANY | SAN PEDRO | 8.0 | ND | 0.3 | 0.5 | 1997 |
| 111110 | A | BRISTOL FIBERLITE INDUSTRIES, INC | SANTA ANA | 0.1 | ND | 0.0 | 0.0 | 1995 |
| 111415 | A | VAN CAN COMPANY | FONTANA | 0.8 | ND | 0.0 | 0.1 | 1996 |
| 112192 | OB | CONSOLIDATED DRUM RECONDITIONING CO INC | SOUTH GATE | 0.3 | ND | 0.0 | 0.0 | 1997 |
| 113170 | A | SANTA MONICA - UCLA MEDICAL CENTER (b) | SANTA MONICA | 7.6 | 0.14 | 0.2 | 0.0 | 1997 |
| 113676 | A | VICKERS | LOS ANGELES | 3.0 | ND | 0.0 | 0.0 | 1995 |
| 114801 | A | RHODIA INC. | LONG BEACH | 0.1 | ND | 0.0 | 0.1 | 2006 |
| 115389 | A | AES HUNTINGTON BEACH, LLC | HUNTINGTO N BEACH | 0.1 | ND | 0.0 | 0.0 | 1999 |
| 115394 | A | AES ALAMITOS, LLC | LONG BEACH | 0.6 | ND | 0.0 | 0.0 | 1999 |
| 115536 | A | AES REDONDO BEACH, LLC | REDONDO BEACH | 0.4 | ND | 0.0 | 0.0 | 1998 |
| 115586 | A | SUNDANCE SPAS, INC | CHINO | 0.0 | ND | 0.0 | 0.4 | 1996 |
| 115663 | A | EL SEGUNDO POWER, LLC | EL SEGUNDO | 0.3 | ND | 0.0 | 0.0 | 2000 |
| 116868 | A | EQUILON ENT LLC/RIALTO TERMINAL | BLOOMINGTON | 2.9 | ND | 0.0 | 0.0 | 1999 |
| 117560 | A | EQUILON ENTER, LLC-SHELL OIL PROD. US | WILMINGTON | 7.3 | ND | 0.0 | 0.1 | 1998 |
| 117785 | A | BALL METAL BEVERAGE CONTAINER CORP. | TORRANCE | 0.0 | ND | 0.2 | 0.9 | 2001 |
| 118406 | A | CARSON COGENERATION COMPANY | CARSON | 0.8 | ND | 0.2 | 0.0 | 2007 |
| 118998 | OB | CYTEC FIBERITE INC | CULVER CITY | 6.6 | ND | 0.0 | 0.2 | 1997 |
| 119127 | A | PRC-DE SOTO INTERNATIONAL | GLENDALE | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 119907 | A | BERRY PETROLEUM COMPANY | SANTA CLARITA | 1.6 | ND | 0.2 | 0.7 | 1999 |
| 119920 | A | PECHINEY CAST PLATE INC | VERNON | 1.6 | ND | 0.3 | 0.3 | 1996 |
| 120088 | A | BREITBURN ENERGY COMPANY, LLC | SANTA FE SPRINGS | 0.8 | ND | 0.0 | 0.0 | 1998 |
| 122295 | A | FALCON FOAM, A DIV OF ATLAS ROOFING CORP | LOS ANGELES | 0.4 | ND | 0.0 | 0.0 | 1999 |
| 122300 | A | BASF CORPORATION | COLTON | 0.3 | ND | 0.6 | 0.0 | 2002 |
| 122822 | I | CONSOLIDATED FILM INDUSTRIES | HOLLYWOOD | 21.0 | ND | 0.1 | 0.4 | 2000 |
| 124016 | A | OAKLITE PRODUCTS (BRENT AMERICA, INC./ LEEDER ARDOX) | LA MIRADA | 0.0 | ND | 0.1 | 0.1 | 2000 |
| 124506 | A | BOEING ELECTRON DYNAMIC DEVICES INC | TORRANCE | 4.2 | ND | 0.5 | 0.1 | 1995 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 124805 | A | EXIDE TECHNOLOGIES | COMMERCE | 0.3 | ND | 0.0 | 0.0 | 2000 |
| 124806 | OB | EXIDE TECHNOLOGIES | INDUSTRY | 1.0 | ND | 0.0 | 0.0 | 1999 |
| 124838 | OB | EXIDE TECHNOLOGIES | LOS ANGELES | 0 | ND | 0 | 0 | 2013 |
| 125281 | OB | MODERN PLATING, ALCO CAD-NICKEL PLATING | LOS ANGELES | 8.2 | ND | 0.1 | 0.0 | 1995 |
| 126060 | A | STERIGENICS US, LLC | ONTARIO | 3.8 | 0 | 0.0 | 0.0 | 2007 |
| 126191 | A | STERIGENICS US, INC. | LOS ANGELES | 3.3 | ND | 0.0 | 0.0 | 1996 |
| 126197 | A | STERIGENICS US, INC. | LOS ANGELES | 3.6 | ND | 0.0 | 0.0 | 1996 |
| 126536 | A | CONSOLIDATED FOUNDRIES - POMONA | POMONA | 1.5 | ND | 0.0 | 0.0 | 1999 |
| 126544 | A | PAC FOUNDRIES-INDUSTRY | INDUSTRY | 1.3 | ND | 0.6 | 0.1 | 1996 |
| 126964 | A | EDWARDS LIFESCIENCES LLC | IRVINE | 0.8 | ND | 0.0 | 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 | 0.0 | ND | 0.2 | 0.7 | 1997 |
| 132954 | A | ALL AMERICAN ASPHALT | SAN FERNANDO | 1.6 | <0.02 | 0.4 | 0.3 | 2017 |
| 133405 | A | BODYCOTE INC/BODYCOTE THERMAL PROCESSING | LOS ANGELES | 2.4 | ND | 0.0 | 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 | ALCOA GLOBAL FASTENERS, INC. | FULLERTON | 0.6 | ND | 1.90 | 0.02 | 1997 |
| 134943 | A | ALCOA GLOBAL FASTENERS, INC. SOUTH BAY | TORRANCE | 2.6 | ND | 0.6 | 0.0 | 2008 |
| 136148 | A | E/M COATING SERVICES | NORTH HOLLYWOO | 5.8 | ND | 0.3 | 0.6 | 1998 |
| 137517 | A | PACIFIC TERMINALS LLC | ETIWANDA | 2.7 | ND | 0.0 | 0.2 | 2000 |
| 140499 | A | AMERESCO HUNTINGTON BEACH, L.L.C. | HUNTINGTO N BEACH | 7.0 | ND | 0.0 | 0.0 | 1995 |
| 140811 | A | DUCOMMUN AEROSTRUCTURES INC | MONROVIA | 3.5 | 0.01 | 0.0 | 0.0 | 2002 |
| 140961 | A | GKN AEROSPACE TRANSPARENCY SYS INC | GARDEN GROVE | 6.0 | ND | 0.0 | 0.5 | 1996 |
| 142267 | A | FS PRECISION TECH LLC | RANCHO DOMINGUE | 2.0 | ND | 0.1 | 0.2 | 2001 |
| 144677 | A | PRATT & WHITNEY ROCKETDYNE/RUBY ACQ ENT | CANOGA PARK | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 146570 | A | ROHM AND HAAS CHEMICALS LLC | LA MIRADA | 6.2 | ND | 0.5 | 0.8 | 1999 |
| 148925 | A | CHERRY AEROSPACE LLC | SANTA ANA | 9.7 | ND | 0.1 | 0.2 | 1999 |
| 149241 | A | REGAL CULTURED MARBLE | POMONA | 0.0 | ND | 0.0 | 0.2 | 1995 |
| 151415 | A | LINN WESTERN OPERATING, INC | BREA | 3.4 | ND | 0.0 | 0.0 | 1999 |
| 151798 | A | TESORO REFINING AND MARKETING CO | CARSON | 2.8 | ND | 0.1 | 0.0 | 1999 |
| 151899 | A | VINTAGE PRODUCTION CALIFORNIA LLC | NEWHALL | 3.5 | ND | 0.0 | 0.2 | 2000 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 152054 | A | LINN WESTERN OPERATING INC | BREA | 1.1 | ND | 0.0 | 0.1 | 1996 |
| 152501 | A | PRECISION SPECIALTY METALS INC | LOS ANGELES | 0.5 | ND | 0.4 | 0.2 | 2001 |
| 153546 | A | HUCK INTL INC. DBA ALCOA FASTENING SYS. | CARSON | 3.3 | ND | 0.0 | 0.0 | 1999 |
| 155828 | A | GARRETT AVIATION SVCS. LLC DBA STANDARD | LOS ANGELES | 9.3 | ND | 0.19 | 0.25 | 2002 |
| 156741 | A | HARBOR COGENERATION CO | WILMINGTON | 0.1 | ND | 0.0 | 0.0 | 2002 |
| 157451 | A | VERNON MACHINE CORP, BENDER US DBA | VERNON | 4.4 | 0.001 | 1.0 | 0.0 | 2002 |
| 160150 | A | ERGON ASPHALT & EMULSIONS, INC. | FONTANA | 0.0 | ND | 0.3 | 0.0 | 1999 |
| 160437 | A | SOUTHERN CALIFORNIA EDISON | SAN BERNARDINO | 2.3 | <0.01 | <0.01 | <0.01 | 2013 |
| 160916 | A | FOAMEX INNOVATIONS, INC. | ORANGE | 0.0 | ND | 0.4 | 0.4 | 1994 |
| 161142 | A | FOAMEX INNOVATIONS, INC. | COMPTON | 0.3 | 0 | 0.0 | 0.0 | 2010 |
| 161300 | A | SAPA EXTRUDER, INC | INDUSTRY | 1.3 | ND | 0.0 | 0.0 | 1999 |
| 164864 | A | ARROWHEAD BRASS & PLUMBING | LOS ANGELES | 5.7 | ND | 0.3 | 0.0 | 1995 |
| 165192 | A | TRIUMPH AEROSTRUCTURES, LLC (b) | HAWTHORNE | 19.7 | ND | 0.64 | 0.24 | 1999 |
| 167981 | A | TESORO LOGISTICS OPERATIONS LLC | WILMINGTON | 2.8 | ND | 0.0 | 0.0 | 2000 |
| 168088 | A | PCCR USA | LYNWOOD | 6.5 | ND | 0.1 | 1.6 | 1995 |
| 169990 | A | SPS TECHNOLOGIES, LLC | GARDENA | 8.9 | ND | 0.1 | 0.1 | 1999 |
| 171107 | A | PHILLIPS 66 CO/LA REFINERY WILMINGTON PL | WILMINGTON | 23.2 | 0.29 | 0.1 | 0.7 | 2013 |
| 171109 | A | PHILLIPS 66 COMPANY/LOS ANGELES REFINERY | CARSON | 6.6 | 0.11 | 0.0 | 0.3 | 2011 |
| 172878 | A | TESORO LOGISTICS OPERATIONS LLC LONG BEA | LONG BEACH | 2.4 | ND | 0.0 | 0.0 | 1999 |
| 173913 | A | TRIUMPH PROCESSING, EMBEE DIV, INC. | SANTA ANA | 6.6 | ND | 0.21 | 0.58 | 2000 |
| 174591 | A | TESORO REFINING & MARKETING CO LLC, CAL (c) | WILMINGTON | 4.3 | ND | 0.1 | 0.2 | 1995 |
| 174655 | A | TESORO REFINING & MARKETING CO, LLC | CARSON | 7.3 | ND | 0.3 | 0.1 | 2000 |
| 174703 | A | TESORO REFINING & MARKETING CO LLC CARSO | CARSON | 3.0 | ND | 0.0 | 0.0 | 1994 |
| 174710 | A | TESORO LOGISTICS OP LLC, VINVALE MARKETI | SOUTH GATE | 9.0 | ND | 0.0 | 0.0 | 1994 |
| 175124 | A | AEROJET ROCKETDYNE OF DE, INC. | CANOGA PARK | 8.7 | ND | 0.0 | 0.0 | 1995 |
| 175191 | A | FREEPORT-MCMORAN OIL & GAS | LOS ANGELES | 2.7 | ND | 0.0 | 0.1 | 1997 |
| 176967 | A | GAS RECOVERY SYSTEMS, INC | IRVINE | 20.1 | 0.18 | 0.6 | 0.3 | 2009 |
| 177042 | A | SOLVAY USA, INC | LONG BEACH | 4.3 | ND | 0.3 | 0.0 | 2001 |
| 800003 | A | HONEYWELL INTERNATIONAL INC | TORRANCE | 1.8 | ND | 0.0 | 0.0 | 1999 |
| 800007 | OB | ALLIED SIGNAL INC (NSR USE ONLY) | EL SEGUNDO | 3.6 | ND | 0.0 | 0.5 | 2000 |
| 800022 | A | CALNEV PIPE LINE CO (NSR USE) | BLOOMINGTON | 5.9 | ND | 0.0 | 0.1 | 1999 |
| 800026 | A | ULTRAMAR INC (NSR USE ONLY) | WILMINGTON | 7.2 | 0.18 | 0.7 | 0.2 | 2012 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 800030 | A | CHEVRON PRODUCTS CO. | EL SEGUNDO | 2.7 | 0.28 | 0.3 | 0.1 | 2001 |
| 800032 | A | CHEVRON U.S.A. INC (EIS USE) | MONTEBELLO | 7.5 | 0.14 | 0.0 | 0.2 | 1999 |
| 800035 | A | CONTINENTAL AIRLINES INC (NSR USE ONLY) | LOS ANGELES | 2.8 | ND | 0.0 | 0.1 | 1995 |
| 800037 | A | DEMENNO/KERDOON | COMPTON | 4.9 | 0.01 | 0.01 | 0.02 | 2009 |
| 800038 | A | THE BOEING COMPANY - C17 PROGRAM | LONG BEACH | 4.8 | ND | 0.2 | 0.1 | 1999 |
| 800039 | I | DOUGLAS PRODUCTS DIVISION | TORRANCE | 2.4 | ND | 0.0 | 0.0 | 1996 |
| 800041 | A | DOW CHEM U.S.A. (NSR USE) | TORRANCE | 4.4 | ND | 0.1 | 0.0 | 2000 |
| 800047 | I | FLETCHER OIL & REF CO | CARSON | 5.9 | ND | 0.0 | 0.0 | 1998 |
| 800056 | A | KINDER MORGAN LIQUIDS TERMINALS, LLC | WILMINGTON | 2.3 | 0.01 | 0.0 | 0.0 | 1997 |
| 800057 | A | KINDER MORGAN LIQUIDS TERMINALS, LLC | CARSON | 8.5 | ND | 0.0 | 0.1 | 1999 |
| 800063 | A | GROVER PROD. CO (EIS USE) | LOS ANGELES | 3.3 | 0.039 | 0.88 | 0.07 | 2001 |
| 800066 | A | HITCO CARBON COMPOSITES INC | GARDENA | 6.4 | ND | 0.3 | 0.0 | 1995 |
| 800067 | A | BOEING SATELLITE SYSTEMS INC | EL SEGUNDO | 6.2 | ND | 0.0 | 0.1 | 2000 |
| 800074 | A | LA CITY, DWP HAYNES GENERATING STATION | LONG BEACH | 0.2 | ND | 0.0 | 0.0 | 2000 |
| 800075 | A | LA CITY, DWP SCATTERGOOD GENERATING STA | PLAYA DEL REY | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 800079 | A | PETRO DIAMOND TERMINAL CO | LONG BEACH | 8.3 | ND | 0.0 | 0.2 | 1998 |
| 800087 | A | MENASCO MFG CO (EIS USE) | BURBANK | 0.0 | ND | 0.0 | 0.0 | 1997 |
| 800089 | A | EXXONMOBIL OIL CORPORATION | TORRANCE | 7.7 | 0.15 | 0.2 | 0.5 | 2013 |
| 800091 | A | MOBIL OIL CORP (NSR USE ONLY) | ANAHEIM | 0.7 | ND | 0.0 | 0.0 | 1999 |
| 800111 | OB | THE BOEING COMPANY | DOWNEY | 2.3 | ND | 0.0 | 0.1 | 1996 |
| 800113 | A | ROHR,INC | RIVERSIDE | 7.2 | 0.01 | 0.9 | 0.0 | 2007 |
| 800127 | A | SO CAL GAS CO (EIS USE) | MONTEBELLO | 1.0 | 0 | 0.0 | 0.0 | 2009 |
| 800149 | A | US BORAX INC | WILMINGTON | 9.5 | ND | 0.0 | 0.0 | 2000 |
| 800150 | A | US GOVT, AF DEPT, MARCH AFB (NSR USE) | RIVERSIDE | 7.4 | 0.02 | 0.3 | 0.0 | 2008 |
| 800168 | A | PASADENA CITY, DWP (EIS USE) | PASADENA | 0.2 | ND | 0.7 | 0.0 | 1996 |
| 800171 | A | EXXONMOBIL OIL CORPORATION | VERNON | 5.3 | ND | 0.1 | 0.0 | 1997 |
| 800181 | A | CALIFORNIA PORTLAND CEMENT CO (c) | COLTON | 2.0 | ND | 0.0 | 0.4 | 1996 |
| 800182 | A | RIVERSIDE CEMENT CO (c) | RIVERSIDE | 7.8 | 0.11 | 0.1 | 0.1 | 2001 |
| 800183 | A | PARAMOUNT PETR CORP (EIS USE) | PARAMOUNT | 9.6 | ND | 0.0 | 0.0 | 2002 |
| 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 | 0.0 | 1999 |

## Table A-2 (cont'd)

## Health Risks from Facilities with an Approved HRA

(Listed by Facility ID)

| Facility ID | Facility Status (a) | Facility Name | City | Cancer Risk (per million) | Cancer Burden (f) | Non-Cancer Acute Hazard Index | Non-Cancer Chronic Hazard Index | HRA Approval Year (e) |
|---|---|---|---|---|---|---|---|---|
| 800196 | A | AMERICAN AIRLINES INC (EIS USE) | LOS ANGELES | 5.4 | 0.190 | 0.86 | 0.08 | 2002 |
| 800198 | A | ULTRAMAR INC (NSR USE ONLY) | WILMINGTON | 5.9 | ND | 0.0 | 0.1 | 1999 |
| 800202 | A | UNIVERSAL STUDIOS INC (EIS USE) | UNIVERSAL CITY | 2.4 | ND | 0.0 | 0.0 | 1996 |
| 800204 | OB | SIMPSON PAPER CO | POMONA | 3.4 | ND | 0.0 | 0.0 | 1996 |
| 800209 | A | BKK CORPORATION, LANDFILL DIVISION GNRL | WEST COVINA | 6.9 | ND | 0.0 | 0.1 | 2000 |
| 800214 | A | LA CITY, SANITATION BUREAU (c) | PLAYA DEL REY | 7.6 | ND | 0.1 | 0.0 | 1999 |
| 800236 | A | LA CO. SANITATION DIST | CARSON | 7.2 | ND | 0.2 | 0.1 | 2007 |
| 800264 | A | EDGINGTON OIL COMPANY | LONG BEACH | 4.8 | 0.001 | 0.0 | 0.0 | 2002 |
| 800267 | A | TRIUMPH PROCESSING, INC. | LYNWOOD | 0.5 | 0 | 0.1 | 0.4 | 2012 |
| 800273 | OB | CHEMOIL REF CORP (NSR USE ONLY) | SIGNAL HILL | 0.0 | ND | 0.0 | 0.0 | 2000 |
| 800279 | A | SFPP, L.P. | ORANGE | 5.9 | ND | 0.0 | 0.2 | 1999 |
| 800288 | A | UNIV CAL IRVINE (NSR USE ONLY) | IRVINE | 5.6 | ND | 0.0 | 0.1 | 1996 |
| 800318 | A | GRISWOLD INDUSTRIES | COSTA MESA | 9.5 | 0.01 | 0.1 | 0.0 | 2001 |
| 800320 | A | AMVAC CHEMICAL CORP | LOS ANGELES | 0.0 | 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 | 0.6 | ND | 0.0 | 0.0 | 1999 |
| 800337 | OB | CHEVRON U.S.A., INC (NSR USE) | LA HABRA | 0.0 | ND | 0.0 | 0.0 | 1996 |
| 800343 | A | BOEING SATELLITE SYSTEMS, INC | EL SEGUNDO | 0.3 | ND | 0.0 | 0.2 | 1996 |
| 800372 | A | EQUILON ENTER. LLC, SHELL OIL PROD. US | CARSON | 6.9 | ND | 0.4 | 0.1 | 2001 |
| 800373 | I | CENCO REFINING COMPANY | SANTA FE SPRINGS | 9.7 | ND | 0.3 | 0.1 | 2000 |
| 800387 | A | CAL INST OF TECH | PASADENA | 2.4 | ND | 0.1 | 0.0 | 2007 |
| 800408 | A | NORTHROP GRUMMAN SPACE & MISSION SYSTEMS | MANHATTA N BEACH | 1.4 | ND | 0.9 | 0.1 | 1998 |
| 800409 | A | NORTHROP GRUMMAN SPACE & MISSION SYSTEMS | REDONDO BEACH | 5.5 | ND | 0.5 | 0.2 | 1998 |
| 800436 | A | TESORO REFINING AND MARKETING CO | WILMINGTON | 10.7 | 0.37 | 0.3 | 0.4 | 2013 |

Notes:

a) A = Active (note that facilities with "Active" status within SCAQMD's database might not be in operation currently); I = Inactive; OB = Out of Business
b) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated or minimized.
c) SCAQMD staff has requested these facilities to update their HRAs.
d) This includes risk attributable to the emergency DICE. The total facility risks excluding the emergency DICE are less than 10 in a million.
e) All HRAs with HRA Approval Year dated 2015 and later have used the 2015 OEHHA HRA Guidelines for preparation of their HRA.
f) ND = Not Determined

## Table A-3 – Status of Risk Reduction Plans

| Facility ID | Facility Name | Submitted | Approved | Implemented | Residual Risk | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cancer Risk | Chronic HI | Acute HI | Cancer Burden |
| 7427 | Owens-Brockway Glass | Yes | Yes | Yes | 3.60 | 0.01 | 0.06 | 0.000 |
| 7730 | E.R. Carpenter | Yes | Yes | Yes | 0.96 | 0.03 | 1.34 | 0.000 |
| 8015 | Anadite Inc. | Yes | Yes | Yes | 3.5 | 0.63 | 0.78 | N/A |
| 8547 | Quemetco | Yes | Yes | Yes | 7.1 | 0.09 | 0.69 | 0.45 |
| 11818 | Hixson Metal Finishing | Yes | Yes | No | 0.8 | 0.04 | 0.006 | N/A |
| 14191 | Nicklor Chemical Co. **(a)** | Yes | Yes | Yes | N/A | N/A | N/A | N/A |
| 15504 | Schlosser Forge Co. | Yes | Yes | Yes | 9.5 | 1.59 | 1.11 | 0.067 |
| 16951 | Anaplex Corp | Yes | In Progress | In Progress | TBD | TBD | TBD | TBD |
| 18294 | Northrop-Grumman | Yes | Yes | Yes | 7.6 | 0.13 | 0.05 | N/A |
| 18931 | Gerdau | Yes | Yes | In Progress | 8.7 | 0.49 | 0.61 | 0.25 |
| 18989 | Bowman Plating Co. Inc. | Yes | Yes | In Progress | 5.01 | 0.0141 | 0.0115 | 0.00102 |
| 22410 | Palace Plating **(b)** | Yes | Yes | Yes | 5.6 | 0.73 | 0.38 | N/A |
| 23752 | Aerocraft Heat Treating Co Inc | Yes | In Progress | In Progress | TBD | TBD | TBD | TBD |
| 25012 | Amanda Manufacturing America, Inc. | Yes | Yes | Yes | <0.1 | 0.00 | 0.00 | 0.000 |
| 41229 | Lubeco, Inc. **(e)** | Yes | In Progress | In Progress | TBD | TBD | TBD | TBD |
| 45938 | E.M.E. Inc. | Yes | Yes | Yes | <0.1 | 0.00 | <0.01 | 0.000 |
| 48323 | Sigma Plating Co. | Yes | Yes | Yes | 13.8 | 0.01 | 0.74 | 0.017 |
| 61160 | GE Engine Services | Yes | Yes | Yes | 0.50 | 0.7 | 0.01 | 0.000 |
| 119127 | PRC DeSoto International **(a)** | Yes | Yes | Yes | N/A | N/A | N/A | N/A |
| 124838 | Exide Technologies **(d)** | Yes | Yes | *(See Note)* | N/A | N/A | N/A | N/A |
| 134931 | Alcoa Global Fasteners, Inc. | Yes | Yes | Yes | 0.6 | 1.90 | 0.02 | 0.000 |
| 155828 | Garrett Aviation Services, LLC | Yes | Yes | Yes | 9.3 | 0.19 | 0.25 | N/A |
| 165192 | Triumph Aerostructures, LLC. **(c)** | Yes | Yes | Yes | 19.7 | 0.64 | 0.24 | N/A |
| 173913 | Triumph Processing, Embee Div, Inc. | Yes | Yes | Yes | 6.6 | 0.21 | 0.58 | N/A |
| 800037 | DeMenno/Kerdoon | Yes | Yes | Yes | 4.9 | <0.01 | 0.02 | 0.01 |
| 800063 | Grover Products Co. | Yes | Yes | Yes | 3.3 | 0.88 | 0.07 | 0.039 |
| 800196 | American Airlines, Inc. | Yes | Yes | Yes | 5.4 | 0.86 | 0.08 | 0.190 |

Notes:

(a) Facility has left the Basin, resulting risks are zero.
(b) Facility has shut down, resulting risks are zero.
(c) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated.
(d) Facility undergoing closure and is no longer operating.
(e) Represents previously approved HRA and RRP values. New HRA and RRP review is in progress.

## APPENDIX B - TRENDS IN AMBIENT AIR TOXICS IN THE SOUTH COAST AIR BASIN

In addition to SCAQMD's periodic Multiple Air Toxics Exposure Studies (MATES), CARB has maintained a long-term continuous toxics monitoring network since the late 1980's.[19] In this appendix, trends in cancer risks are illustrated for sites in the Basin. Health risk levels for the most recent three-year period (i.e., 2014 to 2016) are also shown for the air toxics which are monitored. CARB's monitoring network does not include DPM, which contributes significantly to cancer risks in the Basin. Since this is ambient air quality data, both mobile and stationary emission sources are captured in the health risk levels provided here. Looking at this historical data set illustrates the benefits of past regulatory control efforts.

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

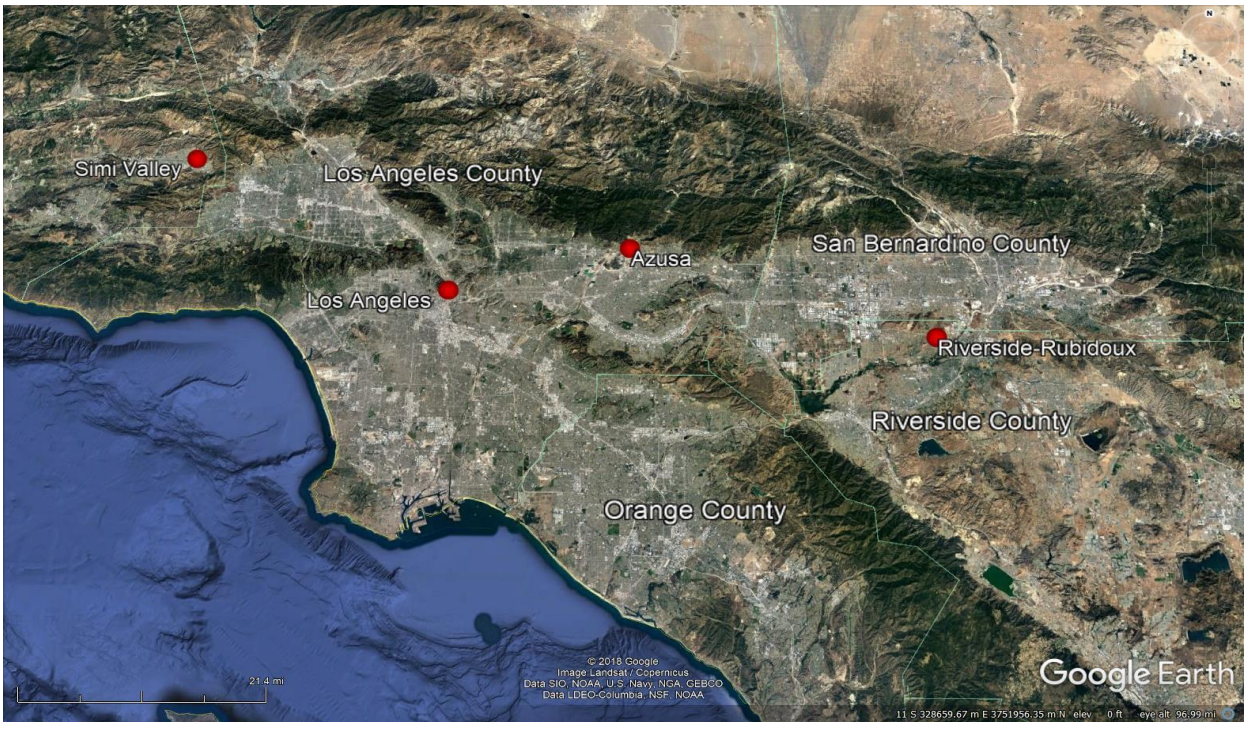


**Figure B-1 –** CARB toxic monitoring sites in the South Coast Air Basin

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

**Table B-1 – Toxic Air Contaminants Monitored**

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

* carcinogen

The 2015 OEHHA HRA Guidelines[20] incorporates age sensitivity and exposure factors which increase cancer health risk estimates to residential and sensitive receptors by approximately three times, and more than three times in some cases depending on whether the toxic air contaminant has multiple pathways of exposure in addition to the inhalation pathway. Under the 2015 OEHHA HRA Guidelines, even though the toxic pollutant concentrations may not have increased, the estimated cancer risk to a residential receptor will increase.

Figure B-2a presents health risk trends using the 2015 OEHHA HRA Guidelines. Inhalation cancer health risks have decreased significantly at all stations since 1990. Cancer risks have decreased by 44, 81, and 76 percent at Riverside, Los Angeles, and Simi Valley, respectively[21]. Azusa station shows a decrease in cancer risk by 35 percent since 2000.

Note that the Riverside station shows an increase in cancer risk for 2016. This is solely due to higher measured concentrations of methylene chloride for 2016, which were more than 30 times higher than the previous year. The current available readings for 2017 have dropped to a level that is consistent with 2015 and earlier data. Figure B-2c shows the monitored methylene chloride concentrations at the Riverside station from 2000 to 2017, averaged by quarter.

Nevertheless, the 2016 concentrations have not been invalidated and are therefore included in the estimation of inhalation cancer risk in Figure B-2a. The inhalation cancer risk shown is estimated based on a 30-year exposure. Given that 2017 concentrations of methylene chloride have returned to the levels consistent with earlier years, Figure B-2b shows the trends in cancer risk excluding those measured in 2016. Figures B-2a and B-2b are provided below to show the effect of the 2016 Riverside methylene chloride measurements on the inhalation cancer risk.

[20] OEHHA, Air Toxics "Hot Spots" Program Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, February 2015, adopted March 2015, https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

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

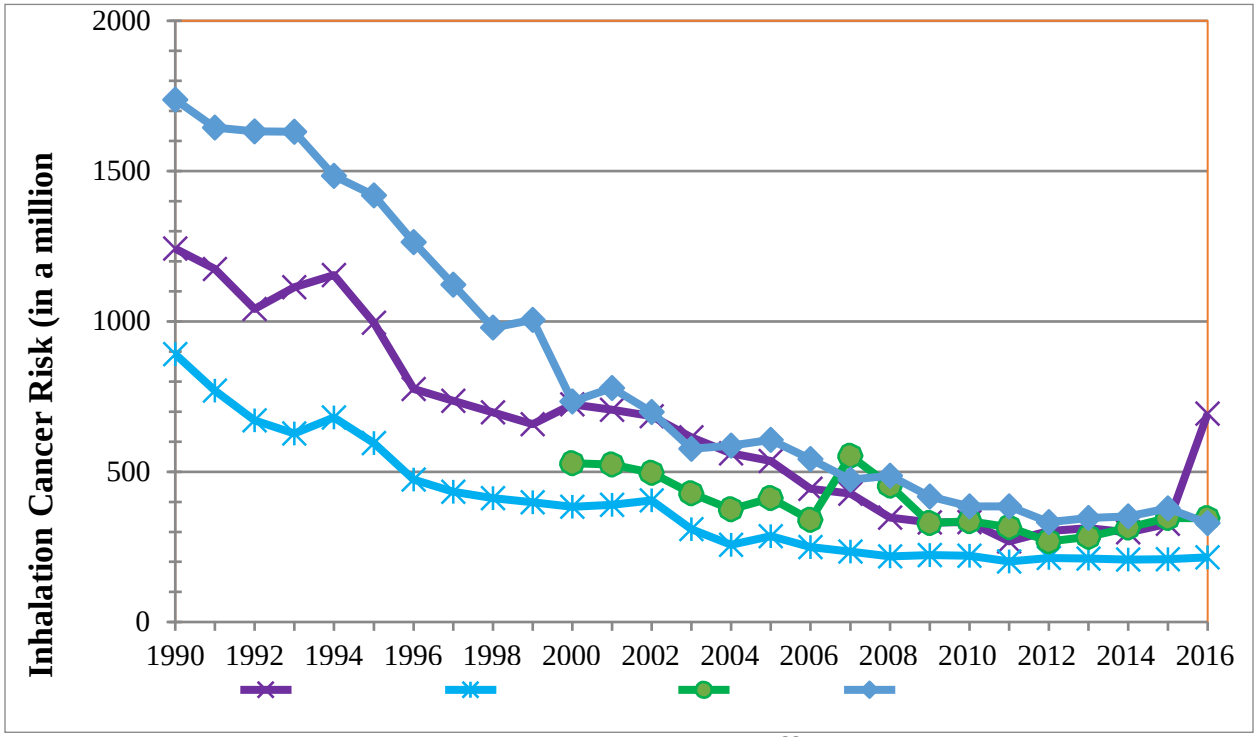


**Figure B-2a - Trends in Inhalation Cancer Risks[22] in the Basin (1990-2016)**

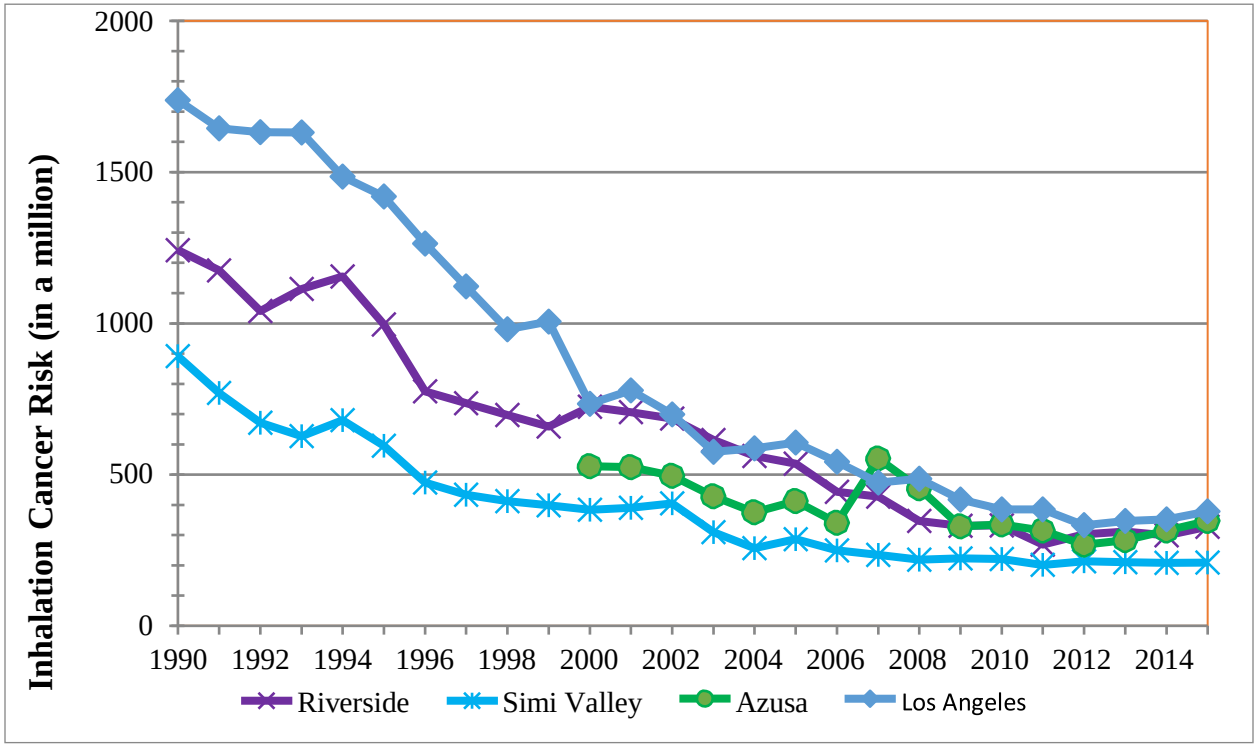


**Figure B-2b - Trends in Inhalation Cancer Risks in the Basin (1990-2015)**

[22] Calculated with 2015 OEHHA HRA Guidelines, excluding cancer risks from DPM.

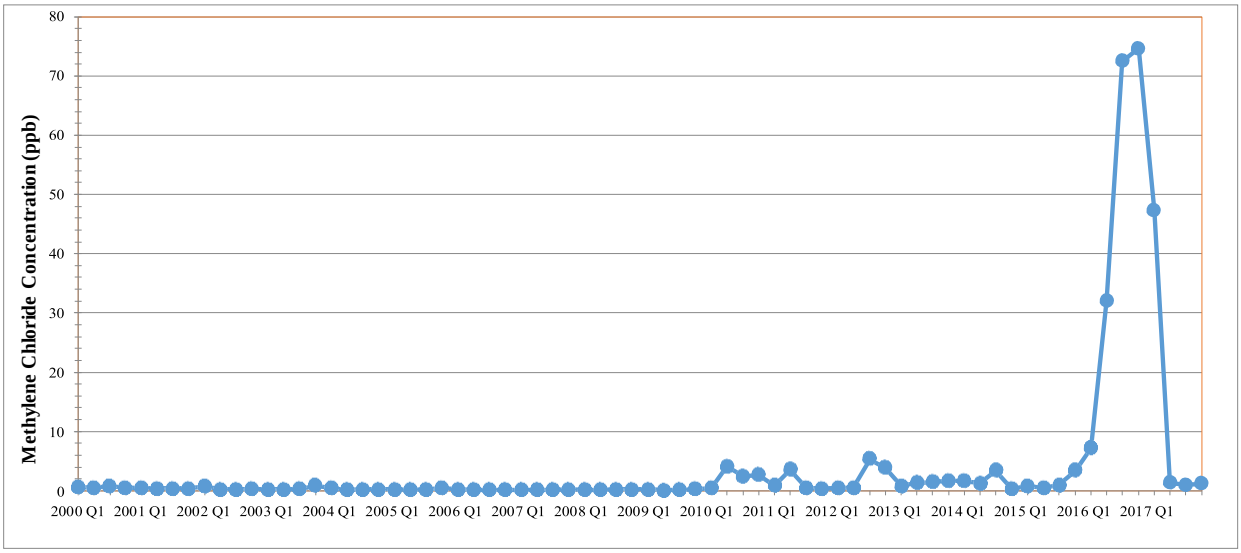


**Figure B-2c – Methylene Chloride Monitored Concentrations at Riverside Station, Averaged by Quarter (2000 to 2017)**

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

The reduction in cancer risk at the Azusa station is primarily from reductions in ambient concentrations of benzene and 1,3-butadiene. Benzene accounts for 50 percent of the cancer risk reduction and 1,3-butadiene accounts for 46 percent of the cancer risk reduction.

The cancer risk reductions shown in Figure B-2a occurred despite significant increases in population and vehicle activity. As shown in Table B-2, the population increased by 38 percent since 1990 and daily vehicle miles traveled (VMT), vehicle population, and daily fuel consumption increased by 43, 54, and 31 percent, respectively.

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

| Activity Variable | 1990 | 2017 | Percentage Increase |
|---|---|---|---|
| Population | 13,083,594 | 18,098,716 | 38.3% |
| Daily Vehicle Miles Traveled (1,000 mile per day) | 282,561 | 403,020 | 42.6% |
| Vehicle Population | 7,547,354 | 11,582,730 | 53.5% |
| Daily Fuel Consumption (1,000 gal per day) | 18,338 | 24,067 | 31.2% |

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

The relative importance of each of the toxics at the four monitoring stations is illustrated in Figure B-3a below. These ranges do not represent all potential exposures, and some areas near facilities with toxic air contaminant emissions may have higher cancer risks. The range of cancer risks for the four sites analyzed here are shown for the most recently available three-year period (2014 to 2016). As mentioned previously, the inhalation cancer risk estimated for 2016 includes the high measurements for methylene chloride at the Riverside station that are inconsistent with all other readings taken at this station. To better demonstrate the effect of the 2016 Riverside methylene chloride measurements on the inhalation cancer risks, Figure B-3b is provided to show the three-year period before 2016 (2013 to 2015).

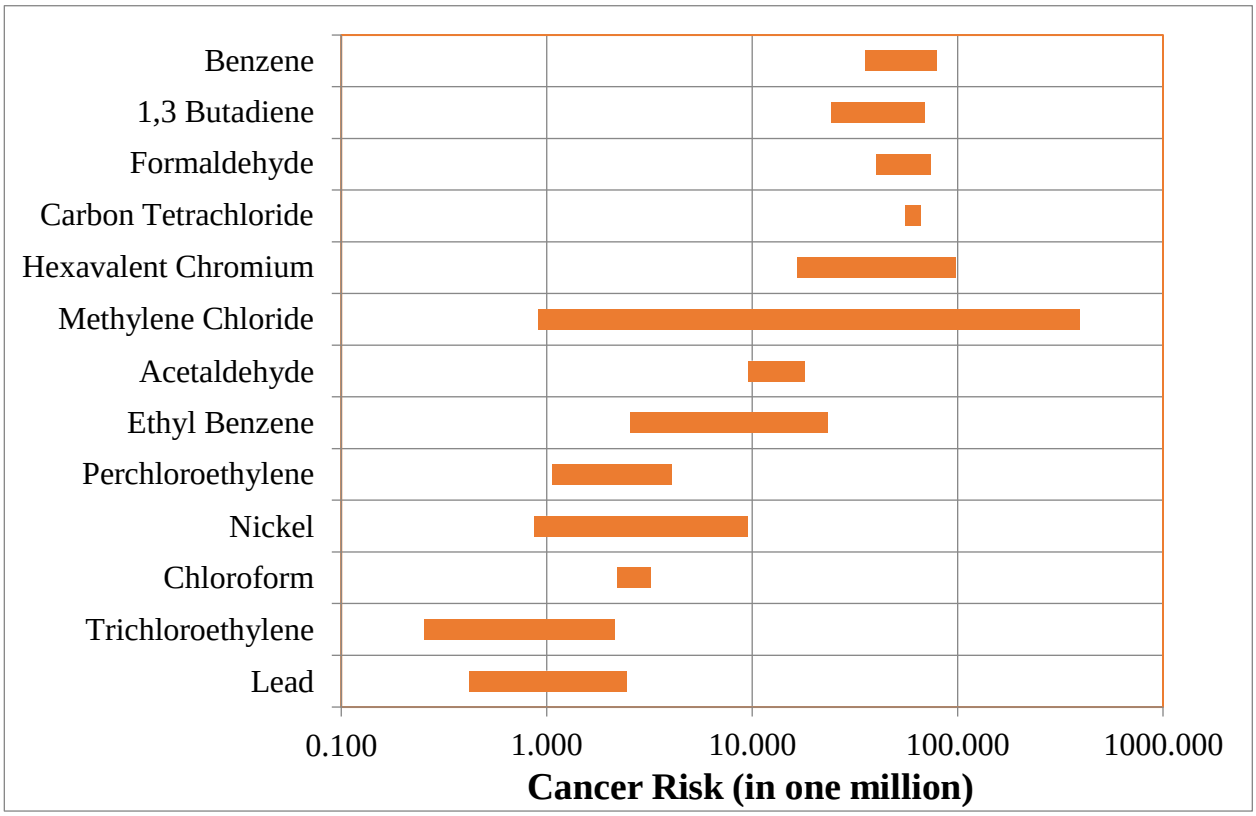


**Figure B-3a - Inhalation Cancer Risks in the Basin (2014 to 2016) (excluding DPM)**

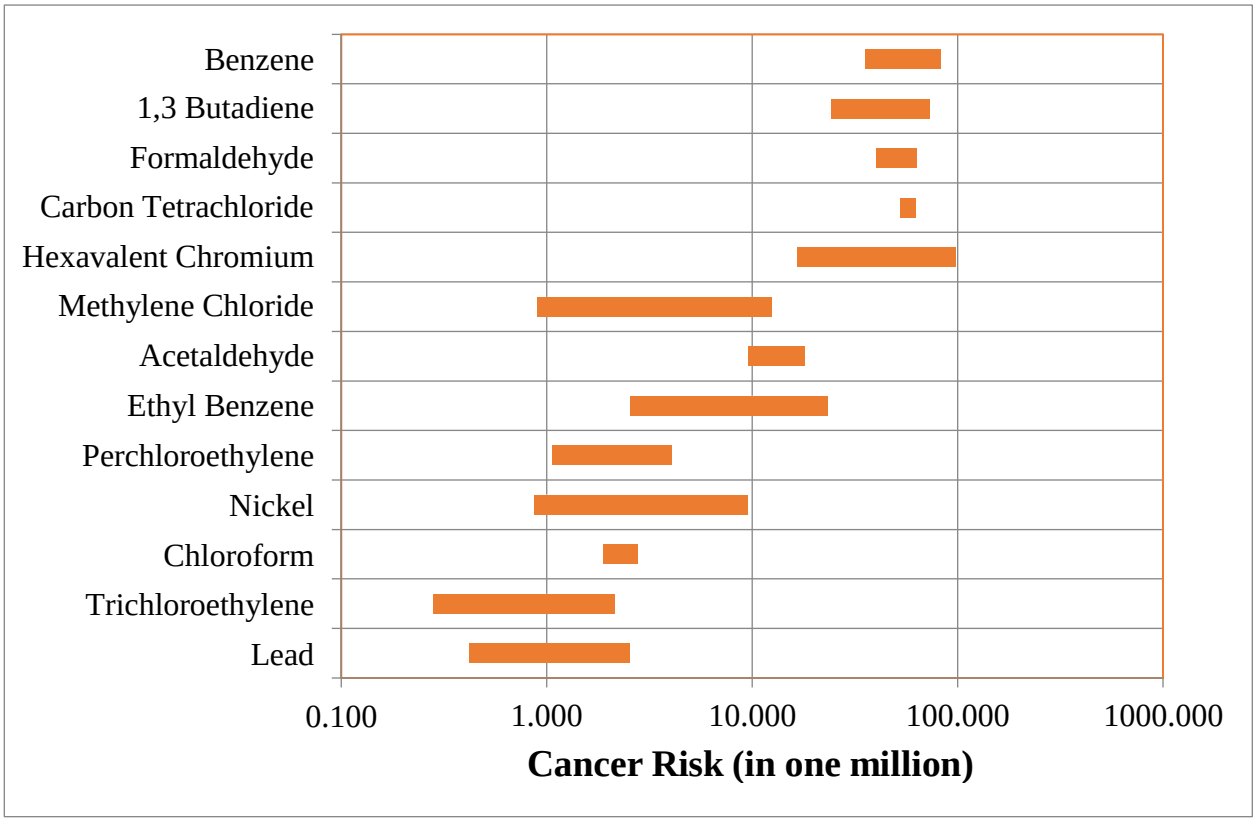


**Figure B-3b - Inhalation Cancer Risks in the Basin (2013-2015) (excluding DPM)**

Benzene, 1,3-butadiene, formaldehyde, carbon tetrachloride, hexavalent chromium, methylene chloride, acetaldehyde, and ethyl benzene are the largest contributors to the inhalation cancer risks, contributing individually from approximately 0.9 to 396 in a million. The ambient carbon tetrachloride concentrations observed in the Basin are not from a local source of emissions but represent background conditions. Note that there is little variability in cancer risks attributable to carbon tetrachloride as indicated by its short bar in Figure B-3a. In fact, there is little variability statewide in carbon tetrachloride concentrations, with concentrations varying by less than ten percent. Perchloroethylene, chloroform, and nickel each contribute between approximately 0.9 and 9.5 in a million and trichloroethylene and lead contribute on average about two in a million to the inhalation cancer risks.

As demonstrated in the series of MATES conducted by SCAQMD staff, DPM is by far the largest contributor to inhalation cancer risks observed in the Basin. The MATES IV study attributed about 68 percent of the inhalation cancer risks to DPM based on emissions from 2012,[23] compared to 84 percent in MATES III based on emissions in 2005.[24] The total cancer risks shown in Figures B-2 and B-3 therefore represent only about 32 percent of the population weighted inhalation cancer risks found in the MATES IV study.

The range of non-cancer chronic risks for the four sites analyzed here are shown in Figure B-4a for the most recently available three-year period (2014 to 2016). For each toxic air contaminant, the ratio of the observed concentration to the pollutant's chronic REL is shown. Ratios less than one indicate that the observed concentrations are less than OEHHA's defined RELs, and are not anticipated to result in adverse non-cancer health effects in the general population, including sensitive subpopulations. Ratios greater than one indicate the potential for adverse health effects.

Figure B-4b shows the non-cancer chronic risks for the years 2013 to 2015, which excludes the unusually high 2016 Riverside methylene chloride measurements. The range for non-cancer chronic risks for methylene chloride is noticeably smaller in Figure B-4b than in Figure B-4a.

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

[24] See page ES-3 of the Executive Summary which is available at: http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii/mates-iii-final-report

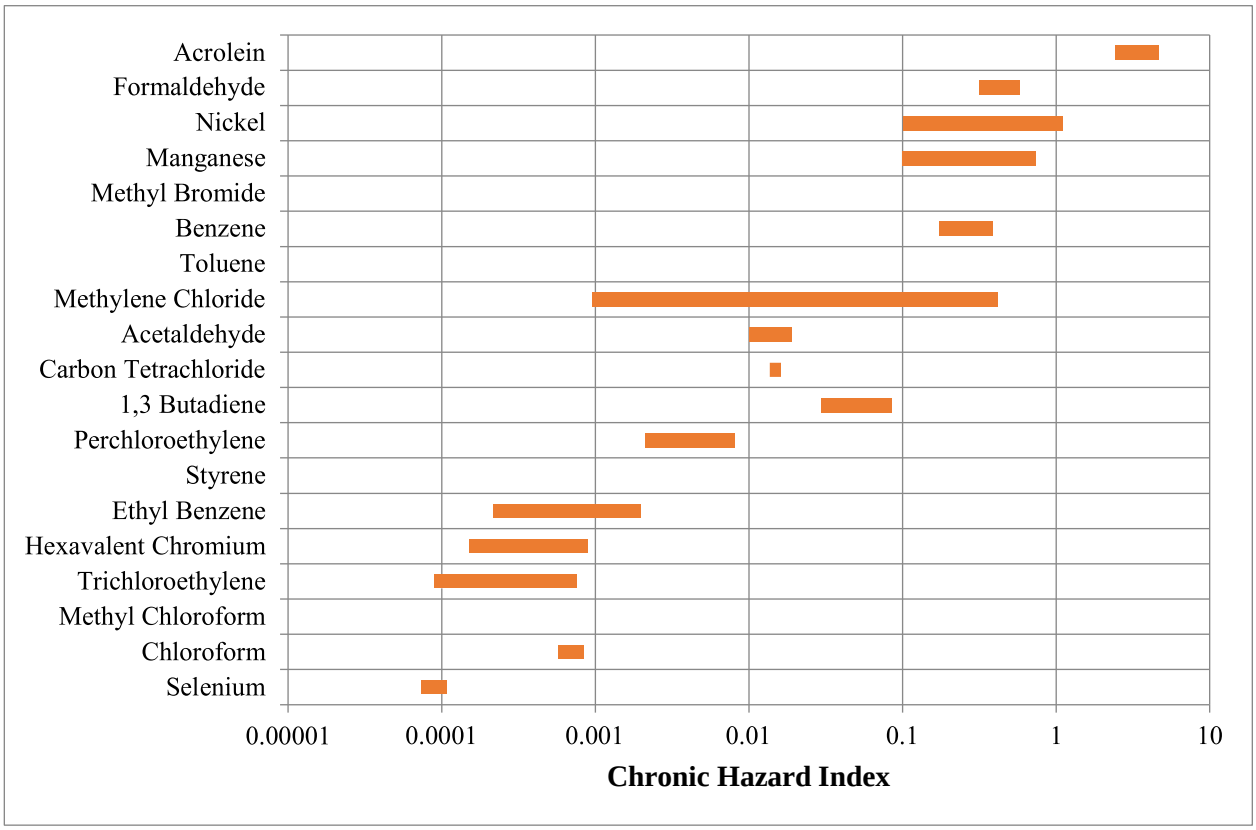


**Figure B-4a - Non-cancer Chronic Risks in the Basin (2014-2016)**

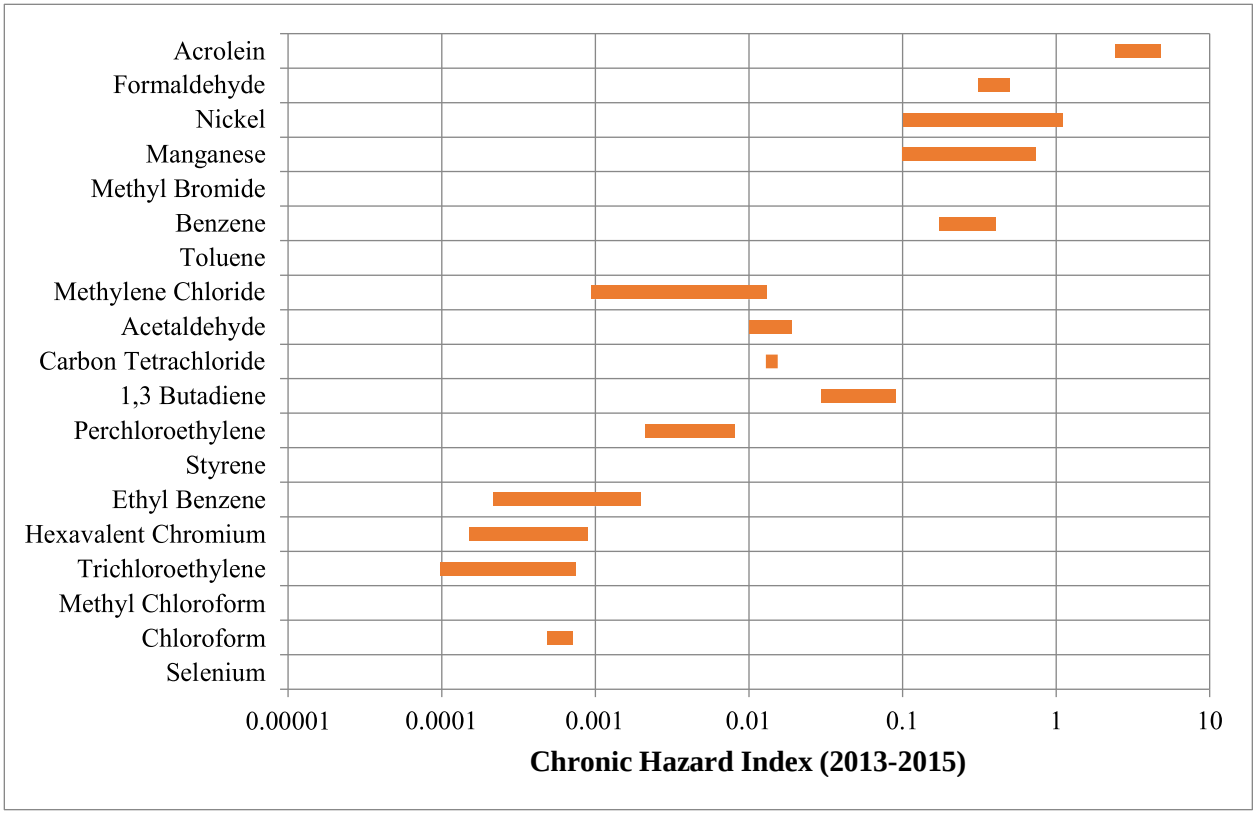


**Figure B-4b - Non-cancer Chronic Risks in the Basin (2013-2015)**

Note that acrolein, a respiratory irritant, is the only toxic air contaminant in which ambient concentrations are above its REL throughout the state and thus may partially reflect general background conditions. However, it should be noted that acrolein is well known to be difficult to measure with current techniques, and therefore, there is considerable uncertainty and data quality issues associated with these measurements.[25] At best, acrolein monitoring data should be considered as a rough indicator, not accurate enough to be compared to health benchmarks. Acrolein emissions can better be estimated using computer modeling methods.

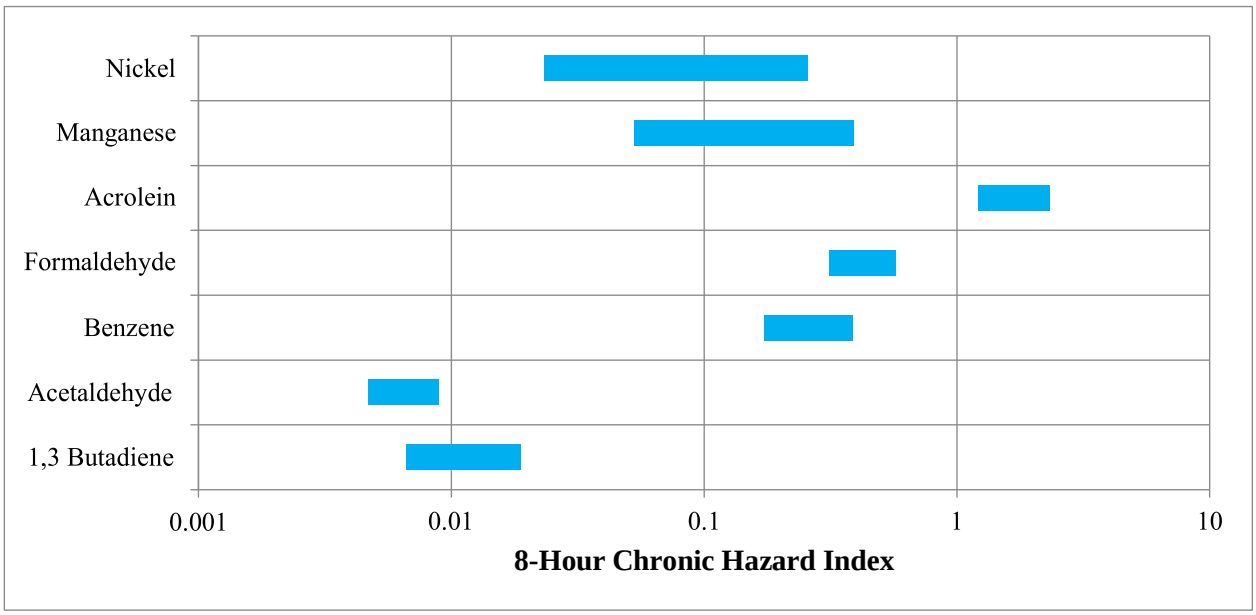


**Figure B-5 - Non-cancer 8-Hour Chronic Risks in the Basin 2014 to 2016**

The 2015 OEHHA HRA Guidelines includes methodology for estimating an 8-hour chronic HI using 8-hour REL developed for this purpose. The 8-hour RELs were developed only for repeated, chronic daily 8-hour exposures (e.g. a typical worker or resident exposed to a facility that operates equal to or more than 8 hours per day and 5 days per week). The 8-hour chronic HI is based upon the daily average 8-hour exposure only for those chemicals with 8-hour chronic RELs. The range of non-cancer 8-hour chronic health risks for the four sites analyzed here are shown above in Figure B-5 for the most recently available three-year period (2014 to 2016). Methylene chloride does not have an 8-hour REL as defined by OEHHA and does not affect the 8-hour chronic hazard index.

For each toxic air contaminant, the ratio of the observed concentration to the pollutant's chronic REL is shown. Ratios less than one indicate that the observed concentrations are less than

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

OEHHA's defined RELs, and are not anticipated to result in non-cancer health effects in the general population, including sensitive subpopulations. Ratios greater than one indicate the potential for adverse health effects. As stated above, acrolein is the only toxic air contaminant in which ambient concentrations are above its REL. It should be noted that the ambient concentrations of acrolein are above its REL throughout the state and thus may partially reflect general background conditions.

## APPENDIX C - LIST OF ACRONYMS AND ABBREVIATIONS

| Acronym | Description |
|---|---|
| AB 2588 | Air Toxics "Hot Spots" Information and Assessment Act |
| AER | Annual Emissions Reporting |
| ATIR | Air Toxics Inventory Report |
| CARB | California Air Resources Board |
| CCP | Clean Communities Plan |
| CEMS | Continuous Emissions Monitoring System |
| CEQA | California Environmental Quality Act |
| DPM | Diesel Particulate Matter |
| EIM | Emission Inventory Module |
| EIR | Environmental Impact Report |
| H&S | Health and Safety |
| HARP | Hotspots Analysis and Reporting Program |
| HI | Hazard Index |
| HRA | Health Risk Assessment |
| MATES | Multiple Air Toxics Exposure Study |
| MICR | Maximum Individual Cancer Risk |
| NAAQS | National Ambient Air Quality Standard |
| NATA | National Air Toxics Assessment |
| OEHHA | Office of Environmental Health Hazard Assessment |
| PAMS | Photochemical Assessment Monitoring Stations |
| REL | Reference Exposure Levels |
| RRP | Risk Reduction Plan |
| SCAQMD | South Coast Air Quality Management District |
| U.S. EPA | United States Environmental Protection Agency |
| VRRP | Voluntary Risk Reduction Plan |