SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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

November 2015

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EXECUTIVE SUMMARY

A key statewide program that air districts implement to address health risks from existing permitted facilities, called the Air Toxics Hot Spots Information and Assessment Act (AB2588), requires the South Coast Air Quality Management District (SCAQMD) to prepare an Annual Report of activities under that program. This report fulfills that requirement and also provides a summary of staff activities in relation to other toxic air contaminant programs in calendar year 2014.

In 2014, staff reviewed a variety of work products submitted by 10 different facilities as a requirement of AB2588. In particular, staff initiated reviews of three detailed Air Toxics Inventory Reports (ATIRs), nine Health Risk Assessments (HRAs), and two Risk Reduction Plans (RRPs). Comment letters were provided on three HRAs and one RRP. One ATIR was approved, no HRAs were approved, and one RRP was approved. A significant additional task that staff began in 2014 includes incorporating an analysis of onsite ambient air quality monitoring data into the HRAs for several different facilities. This monitoring data provides a new source of information on fugitive emissions of toxics that had previously been unquantified.

In addition to AB2588 activities, SCAQMD staff worked on a variety of other toxic programs in 2014. This included initiating rule development work on Rules 1401, 1401.1, and 1402, 212 in anticipation of the state Office of Environmental Health Hazard Assessment's (OEHHA's) update to its HRA guidance. This update takes into account children's greater risks from exposure to cancer causing compounds, and generally increases lifetime residential cancer risks by a factor of about three. Other rules worked on by staff include 1420, 1420.1, and 1420.2, all addressing lead emissions, and Rule 1430.1 addressing metal emissions from forging and grinding activities. Finally, staff continued its work on the Clean Communities Plan and published a draft of the fourth version of Multiple Air Toxics Exposure Study (MATES).

1.0 INTRODUCTION

The South Coast Air Quality Management District (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 thresholds and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources which implements various aspects of AB 2588. The SCAQMD's air toxic program also includes a series of source specific rules that address toxic air contaminants for specific industries or equipment categories. The 2010 Clean Communities Plan (CCP) also includes measures to reduce toxic air contaminants.

This report summarizes the SCAQMD's air toxics program activities in 2014, including Air Toxics "Hot Spots" Information and Assessment Act (or AB 2588) activities, rule development activities, and other air toxic related programs such as implementation of the Clean Communities Plan, Multiple Air Toxics Exposure Study (MATES), and source testing and air monitoring efforts in support of AB2588. This report also satisfies Section 44363 of the California Health and Safety Code that requires the SCAQMD to annually prepare and publish a status and forecast report of the AB 2588 activities.

The AB 2588 program, combined with implementation of Rule 1402, includes requirements for toxic emissions inventories, categorizing and prioritizing facilities, and reviewing and approving detailed Air Toxic Inventory Reports (ATIRs), Health Risk Assessments (HRAs), public notifications, and Risk Reduction Plans (RRPs).

1.1 Background

There are two broad classes of facilities within the AB 2588 program, 'Core' facilities, and facilities in an Industry-wide category. Industry-wide facilities are generally small businesses with relatively similar emission profiles (such as gas stations and dry cleaners using perchloroethylene). Facilities that are in an Industry-wide Source category have fewer requirements under AB 2588 than Core facilities and are discussed further beginning in Section 2.5 of this report. Core facilities must regularly report their toxic emissions, and conduct a HRA if their emissions exceed certain thresholds. If the HRA shows that risks are above thresholds set in Rule 1402, a Core facility must also conduct risk reduction activities and/or public notification. A summary of the requirements for a Core facility are illustrated in Figure 1. Historically, a total of 1,640 facilities have been in SCAQMD's Core AB2588 program, though currently there are only 361.

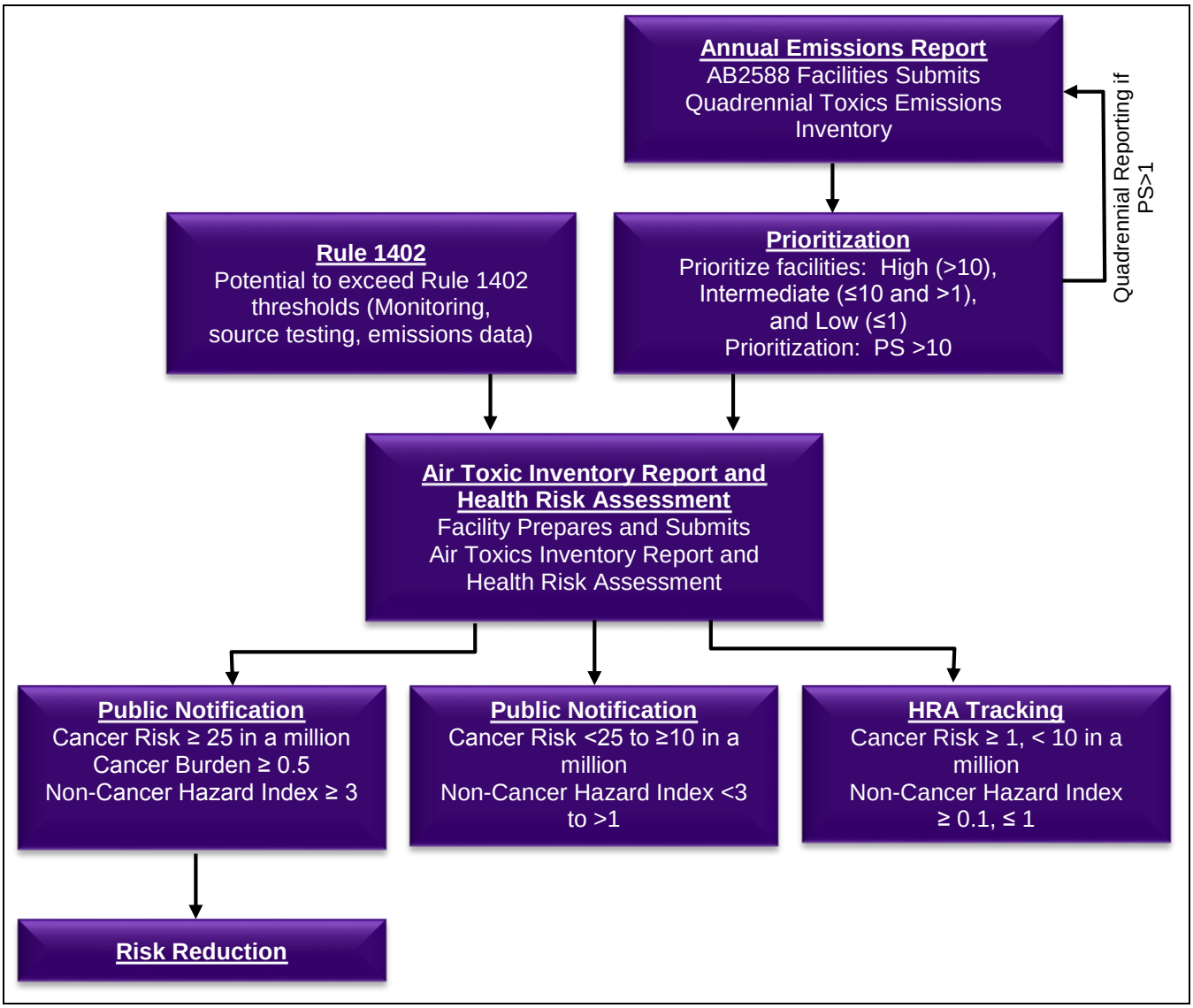

Figure 1. Overview of the AB 2588 Hot Spots Program

SCAQMD staff reviews HRAs to ensure they follow methodologies approved by the state Office of Environmental Health Hazard Assessment (OEHHA) and the state Air Resources Board (ARB). The health risk values presented in this Annual Report were calculated using the methodologies available at the time of HRA approval, and have not been recalculated based on more recent guidance.[I] OEHHA's most recent HRA guidance was approved in early 2015 and now 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

[I] The potential effect of the most recently revised HRA Guidance from OEHHA on the District 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.

that are about two to six times higher compared to the previous methodology. For a discussion of OEHHA's most recent update to its HRA guidance, see section 2.10.1.

As of the end of 2014, staff has reviewed and approved 335 Health Risk Assessments (HRAs) from 307 facilities. Of these facilities, 50 facilities were required to perform public notification activities and 24 facilities were required to implement risk reduction measures. As a result of the AB 2588 Program, about 95% of 1,640 Core facilities now have HRAs demonstrating that cancer risks are below ten in a million and acute and chronic non-cancer hazard indices are less than 1, or their emissions have been low enough to not require an HRA. The results from the 335 approved HRAs are illustrated in Figures 2, 3, and 4. Appendix A lists the Core facilities and the risks from their approved HRAs. Table A-1 lists the facilities in order of their cancer risks and Table A-2 is ordered by facility ID. Table A-3 lists facilities which have prepared risk reduction plans for the AB 2588 program and their corresponding risks [Section 44363(a) (2) and (3)]. Appendix B shows trends in ambient air toxics in the South Coast Air Basin and vicinity.

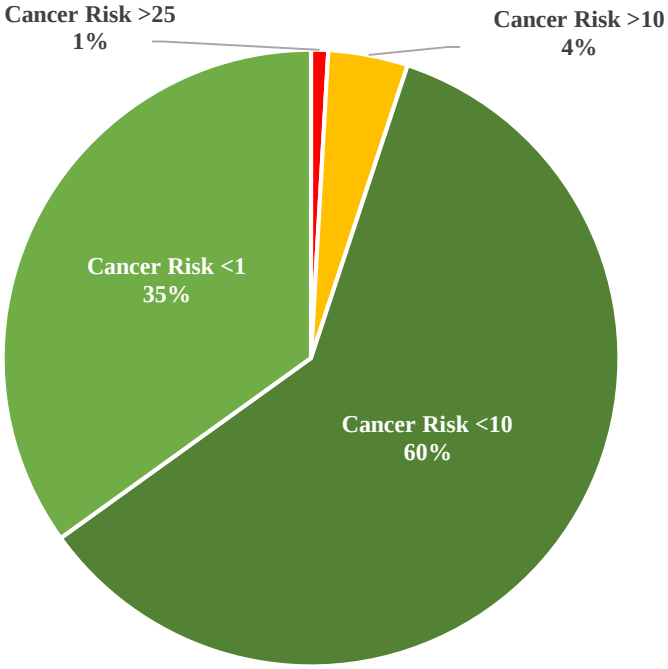

Figure 2. Distribution of Cancer Risks for AB 2588 Facilities that have an Approved HRA

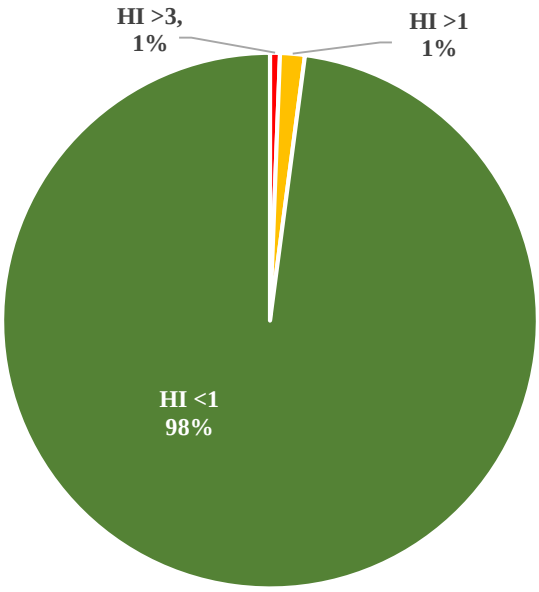

Figure 3. Distribution of Acute Hazard Indices for AB 2588 Facilities that have an Approved HRA

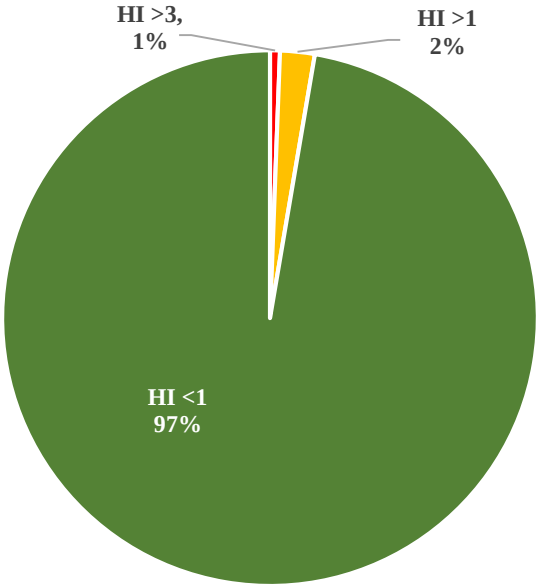

Figure 4. Distribution of Chronic Hazard Indices for AB 2588 Facilities that have an Approved HRA

2.0 2014 TOXICS ACTIVITIES

This section highlights SCAQMD staff's activities in 2014 for the AB 2588 Program, implementation of Rules 1402 and 1401, source-specific air toxic rule development efforts, development of industry-wide source category HRAs, and air monitoring and source testing projects done in conjunction with AB 2588 and Rule 1402.

2.1 Air Toxic Inventory Reports (ATIR) and Health Risk Assessments (HRAs)

Under the AB 2588 program, facilities are required to report their toxic emissions to the SCAQMD quadrennially (i.e., once every four years) through the web-based Annual Emissions Reporting (AER) Program in a streamlined reporting process to obtain a preliminary toxic inventory. Under this process, facilities report emissions of 177 toxic compounds along with the distance to the nearest residential and worker receptor to calculate priority scores for each facility. Every year, criteria and toxic emissions data for the previous calendar year is posted to the SCAQMD FIND website.[II] In 2014, 69 facilities submitted quadrennial toxic emissions inventory updates. Based on emissions inventory submittals, the SCAQMD staff calculates priority scores for each facility which takes into account potency, toxicity, and the amount of toxics released into the air, as well as the distance to workers, residents and sensitive receptors (such as hospitals, schools, and day care centers).

Upon initial prioritization of facilities, the 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 compounds. In addition, staff conducts further analyses to confirm the distance to the sensitive receptors and workers, and reviews emissions trends and facility changes such as new or modified permitted equipment or pollution controls. In the cases where the facility has a prior HRA, staff compares the priority score results with the last HRA submittal or Risk Reduction Plan, if applicable. This additional information obtained through priority score auditing will often negate the need to require a HRA. If, however, the prioritization score remains high, the facility is asked to prepare an ATIR and HRA.

There are two general paths in which a facility will be required to prepare an ATIR and HRA: 1) Audited quadrennial toxic inventory reporting shows that the facility has a priority score greater than 10 as explained above; and 2) The Executive Officer, based upon investigation, determines that emission levels from the facility could potentially cause

[II] http://www.aqmd.gov/home/tools/public/find

exceedance of the action risk thresholds of Rule 1402 (e.g., monitoring or source testing shows elevated levels of toxic air contaminants).

Facilities that prepare an ATIR and HRA must submit a detailed inventory of approximately 450 toxic compounds as well as provide stack parameters and locations using the latest CARB Hotspots Analysis and Reporting Program (HARP 2)[III]. HARP 2 replaces the prior version and incorporates the methodologies from the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual. HARP 2 also incorporates U.S. EPA's air quality dispersion model called AERMOD[IV] to estimate the concentration of pollutants in place of the previously used ISCST3 model. ISCST3 dispersion modeling is no longer allowed for determining TAC concentrations under Rule 1402. Meteorological data[V] for use in HARP 2 and AERMOD can be downloaded from the SCAQMD website.

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. SCAQMD source testing engineers are responsible for reviewing and approving source test protocols and reports submitted by facilities to determine air toxic emissions for the AB 2588 program, along with occasionally conducting or observing source tests. For example, in 2014, the SCAQMD staff conducted source testing and monitoring efforts on a variety of metal industries.

2.3 Summary of SCAQMD Staff Activities on Specific AB 2588 Facilities in 2014

In 2014, District staff worked on 10 facilities in various stages of the AB 2588 process. Specifically, staff initiated reviews of three detailed Air Toxics Inventory Reports (ATIRs), nine Health Risk Assessments (HRAs), and two Risk Reduction Plans (RRPs). Comment letters were provided on three HRAs and one RRP. One ATIR was approved, no HRAs were approved, and one RRP was approved. Table 1 presents a summary of key activities associated with each facility in 2014. A description of these key activities for each facility follows Table 1.

Table 1 - Disposition of AB 2588 Facilities

[III] CARB 2015. Hotspots Analysis and Reporting Program (HARP 2) can be found at: http://www.arb.ca.gov/toxics/harp/harp.htm.

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

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

Facility Name	ID #	ATIR			HRA			RRP			Public Notice	Source Testing	Air Monitoring
		R	C	A	R	C	A	R	C	A			
All American Asphalt	132954			x	x								
The Boeing Company	16660				xx								
Bowman Plating Company	18989				x								
Carlton Forge Works	22911	x			xx							x	x
Exide Technologies	124838							xx	x	x		x	x
Hixson Metal Finishing	11818	x			x							x	x
Kaiser Aluminum	16338	x											
Quemetco	8547				x	x						x	x
Gerdau	18931				x	xx							x
Tesoro Refining & Marketing	800436										x		

For ATIRs, HRAs, and RRPs: R=Report Received, and staff review initiated; C=Comment letter on report sent to facility; A=Report Approved. Multiple 'x' marks indicate that multiple reports were received or comments were sent.

2.4.1 All American Asphalt (ID 132954) – San Fernando

All American Asphalt located in San Fernando is a material production and construction company which provides grading, paving, concrete and grinding services to their customers. They also produce rubberized asphalt concrete. The facility was required to prepare and submit an ATIR and HRA. The facility's ATIR was approved in 2014 and they subsequently submitted their HRA which is under review. The SCAQMD staff conducted a site visit during 2014 as part of its HRA review and is updating the HRA to incorporate the new OEHHA guidance.

2.4.2 The Boeing Company (ID 16660) – Huntington Beach

The Boeing Company located in Huntington Beach is an aerospace research and development facility which manufactures metal parts either by processing them in chromic acid anodizing tanks and/or coating in spray booths or from composite materials. The facility was required to prepare an updated HRA to demonstrate compliance with Rule 1469.1 (d)(3)(C) based on a revised facility emission inventory that differed from the inventory used from a previously approved HRA (2006). The Boeing Company submitted the HRA in 2014 and the HRA is being updated to incorporate the new OEHHA guidance.

2.4.3 Bowman Plating Company, Inc. (ID 18989) – Unincorporated LA County

Bowman Plating Company located near Compton, provides metal finishing and non-destructive testing, and processes all materials including aluminum, titanium, composite, steel, and stainless steel for aerospace and related industries. The facility's most recent approved HRA from 2007 showed a maximum cancer risk of 14.2 in a million, mainly due to hexavalent chromium (Cr+6) emissions from paint spraying operation. The SCAQMD staff compared the facility's 2010 quadrennial inventory update priority score risk drivers with the 2007 approved HRA which resulted in similar risk numbers. However, the AERs submitted by the facility for calendar years 2011 through 2013 present increased usages of Cr+6 containing spray paints and lower control efficiencies, and consequently, the 2007 HRA (using 2006 emissions inventory year) is no longer representative of the facility's current health risks. As a result, SCAQMD required Bowman Plating Company to submit an updated HRA using the 2013 emission inventory. The HRA was submitted in late 2014 and is being updated to incorporate the new OEHHA guidance.

2.4.4 Carlton Forge Works (ID 22911) - Paramount[VI]

Carlton Forge Works (CFW) manufactures forged high-temperature alloy rings for aerospace, gas turbine, and other industries, using principal alloy metals such as nickel, titanium, aluminum, cobalt, zirconium, niobium, and iron, as well as other high temperature metals with special properties. The facility is located in a mixed residential/industrial area of Paramount, CA.

Complaints of burning metallic odors reported by local community members led SCAQMD to supplement ongoing complaint investigations, inspections and surveillance activities with preliminary air sampling in February, April and May of 2013 to investigate potential health impacts from exposure to gaseous and particulate pollutants emitted by CFW operations. Because the major activities at CFW are forging, abrasive blasting, coating, and grinding, particular attention was given to the monitoring of the metallic components of particle emissions to better characterize the emissions and determine ambient levels of potential exposure off-site and in the community.

A series of source tests was conducted in the summer of 2013 to better assess the locations and levels of emissions. Starting in August 2013, based on the preliminary air and soil sampling results, SCAQMD began ambient field measurements for the monitoring of the metallic components of particle emissions at two nearby sites downwind. Nickel and Cr+6 were identified as the two primary pollutants of initial concern. One of the monitoring sites was relocated to a location slightly farther away in November 2013 to collect gradient

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[VI] A web page with additional details regarding CFW can be found on SCAQMD's web page here: http://www.aqmd.gov/home/library/public-information/2014-news-archives/carlton-forge-works-information

information. Reductions in ambient levels have been observed since sampling began due to improvements at the facility.

Based on elevated levels of metals found in nearby monitors and preliminary risk estimates using CFW's February 4, 2014 draft Air Toxics Inventory Report, on March 21, 2014, CFW was asked to prepare an ATIR, and HRA and begin work on a RRP pursuant to SCAQMD Rule 1402. In August 2014, CFW provided a revised ATIR and a draft HRA. Subsequently, on October 28, 2014 CFW provided a revised HRA that corrected an error in the dispersion modeling of the August 2014 HRA. Both draft HRAs demonstrated that a RRP was not required because all risks were below SCAQMD Rule 1402 thresholds. SCAQMD staff is continuing to review the draft HRA and ATIR in conjunction with the nearby monitoring to ensure that the HRA appropriately analyzes all emissions from CFW. In addition, the HRA is being updated to incorporate the updated OEHHA guidance.

In addition, in 2014 the SCAQMD staff initiated rule development to address potential toxic emissions from forging and grinding operations. More information regarding toxic rule development activities in 2014 are discussed in the section titled, "Rule Making".

2.4.5 Exide Technologies (ID 124838) – Vernon[VII]

Exide Technologies is a secondary lead smelting facility which recovers lead from recycled automotive batteries, and had been in operation since 1922. The facility has permanently ceased operation and is in the process of closure. Equipment used in the battery recycling process included machines to break batteries apart and separate different materials, furnaces and kettles to melt metals, and miscellaneous equipment including storage tanks, conveying equipment, and engines. Assuming that emissions from 2010-2012 persisted for a worker's entire career, the facility posed a cancer risk of up to 156 in a million, primarily from arsenic. SCAQMD source testing staff has reviewed numerous source testing protocols and reports related to the facility's HRA and subsequent efforts to reduce emissions. Staff conducted several series of source tests at the facility, and observed other tests conducted by the facility and third party contractors. Further, air monitoring for lead which began in 2007 was expanded in 2013 to include analysis for arsenic.

Based on the results of the approved HRA, the facility was subject to the risk reduction requirements of Rule 1402. Exide submitted a RRP on August 28, 2013 that was subsequently rejected by staff. Exide submitted a revised RRP on January 17, 2014 which was approved on March 19, 2014. Furthermore, pursuant to SCAQMD Rule 1402 (p)(1), Exide is required to provide annual public notice in addition to annual progress reports

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[VII] A web page with additional details regarding Exide can be found on SCAQMD's web page here: http://www.aqmd.gov/home/regulations/compliance/exide-updates

until the Rule 1402 Action Risk Levels are met. In 2015, Exide notified SCAQMD that it was shutting down its facility and would initiate a closure and cleanup process.

2.4.6 Hixson Metal Finishing (ID 11818) - Newport Beach[VIII]

Hixson Metal Finishing located in 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, waste water treatment system and miscellaneous natural gas combustion sources. The major source of concern with Hixson's operation is fugitive dust containing hexavalent chromium (Cr+6). As a result of a basin wide air toxics monitoring program and Multiple Air Toxics Exposure Study (MATES III) study conducted by SCAQMD, higher than average levels of Cr+6 were detected in the general area around Hixson's facility. SCAQMD staff conducted investigations into the specific source and cause, including materials analysis on site and several shorter term intensive monitoring campaigns with higher frequency and collection of more numerous air samples. Results of short-term intensive monitoring on site in late 2013-early 2014 confirmed Hixson as the source of Cr+6. The SCAQMD staff performed emission source tests and installed five (5) additional ambient monitoring stations inside the Hixson facility to better identify the sources of Cr+6 emissions at Hixson. As a result, in April 2014 SCAQMD staff required Hixson to prepare and submit an AB 2588 HRA and RRP, in conjunction with a stipulated order of Abatement approved by the SCAQMD Hearing Board that limited Hixson's activities. Hixson submitted their HRA to SCAQMD in November 2014 and the first draft of their RRP in February 2015.

2.4.7 Kaiser Aluminum Fabricated Products, LLC (ID 16338) – Los Angeles

Kaiser Aluminum Fabricated Products located in 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 the facility's quadrennial emissions inventory which resulted in a facility priority score greater than 10. SCAQMD staff conducted a site visit in October 2014 to verify the sources of emissions identified in the ATIR and is continuing to review the facility's emissions profile.

2.4.8 Quemetco (ID 8547) – City of Industry

Quemetco operates a battery recycling and lead recovery facility. At this facility, used batteries are received, fragmented and the lead-containing materials are recovered and

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[VIII] A web page with additional details regarding Exide can be found on SCAQMD's web page here: http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/hixson-metal-finishing

purified. The primary pollutants of concern for this facility are arsenic, lead, and 1,3-butadiene.

Multiple AB2588 HRAs have been approved for Quemetco in the past, most recently in 2010. In October and November 2013, the 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, in 2013, SCAQMD staff requested that Quemetco prepare and submit a HRA pursuant to Rule 1402. In 2014, SCAQMD staff conducted additional testing for Rule 1420.1 compliance in response to a Quemetco permit application to increase their feed rate. The 2014 tests showed elevated levels of benzene. SCAQMD staff has commented on and asked for multiple revisions of the draft HRA. SCAQMD staff is continuing to review the draft HRA in conjunction with the nearby monitoring to ensure that the HRA appropriately analyzes all emissions from Quemetco. In addition, the HRA is being updated to incorporate the updated OEHHA guidance.

2.4.9 R J Noble (ID 19167) – Orange

R.J. Noble Company located in Orange produces, manufactures, and recycles asphalt, asphalt rubber, RAP, rock, sand, and concrete products. They also produce products including: Aggregate Base, Recrush Base, Sand Products, Gravel Products, Recycled Asphalt (RAP), and more. Based on the facility's 2013 quadrennial air toxic emissions report, District staff calculated a priority score greater than 10 and as a result, the facility was required to prepare and submit an ATIR. The submitted ATIR is currently under review by District staff.

2.4.10 Gerdau (ID 18931) - Rancho Cucamonga

Gerdau North America acquired the TAMCO Rancho Cucamonga steel mini mill in October, 2010. The company produces steel reinforcing bars that are commonly used in construction. The ferrous steel scrap is recycled and delivered to the Mill by trucks and rail, and then melted in an Electric Arc Furnace (EAF) to produce steel billets. The billets are reheated in a reheat furnace to form concrete reinforcing bar (rebar). The primary pollutants of concern for this facility are Cr+6, nickel, manganese, mercury, and arsenic.

SCAQMD staff conducted inspections of the facility and conducted source tests of the bag house exhaust. SCAQMD ambient monitoring for lead and select particulate metals (Mn, Ni, and Cr+6) began at and around the facility in 2012 at two locations and continued through 2014. In April 2013, Gerdau was required to prepare and submit a HRA and SCAQMD staff has asked for revisions prior to approval. An amended HRA was submitted by Gerdau on April 2014. On November 20, 2014, SCAQMD staff asked Gerdau to revise its HRA again to evaluate the facility's impact relative to the lead National Ambient Air Quality Standard, among other changes. This revised HRA was submitted in early 2015. In 2014, staff conducted a site visit and implemented a one-month demonstration program at Gerdau using a multi-metals ambient air monitor to measure ambient air concentrations of lead, arsenic and other metals on a continuous near-real time basis.

2.4.11 Tesoro Refining and Marketing (ID 800436) - Wilmington

Tesoro Refining and Marketing Company operates a refinery in the city of Wilmington that extends over 300 acres. The facility processes various crude stocks into a variety of petroleum-based products and by-products including gasoline, jet fuel, and diesel. The facility's approved HRA showed a maximum cancer risk of 10.8 in a million mainly from diesel particulate matter (DPM), 1,3-butadiene, benzene, hexavalent chromium, and arsenic emissions from refining processes. Based on the results of the approved HRA, the facility was subject to the public notification requirements of AB 2588, and a public notification meeting was held on February 4, 2014. Due to special circumstances regarding the nature and location of the impacted community, a second public notification meeting was held on February 27, 2014 to accommodate the individuals not able to attend the first meeting.

2.5 Industry-Wide Category Sources

Industry-wide category sources are facilities that share the same Standard Industrial Classification (SIC) code, for the most part are small businesses that would suffer severe economic hardships by individual compliance, and can be easily and generically characterized. To date, the SCAQMD has identified seven Industry-wide categories:

- Retail Gasoline Dispensing,
- Perchloroethylene Dry Cleaning,
- Auto Body Shops,
- Fiberglass Molding,
- Printing,
- Metal Plating, and
- Wood Stripping / Refinishing.

The advantage to an Industry-wide category is that compliance may be handled collectively. Health and Safety Code Section 44323 states that a district may prepare an industry-wide emission inventory and health risk assessment for the IWS facilities. The California Air Pollution Control Officers Association's (CAPCOA) Toxics Committee has been tasked with developing statewide emission inventory and risk assessment guidelines for several of these Industry-wide categories. The guidelines provide a cost-effective and uniform method for calculating facility emissions and estimating toxic risks for these facilities under the SCAQMD's jurisdiction.

Eventually industry-wide risk assessments will be prepared for all the categories listed above. To date, risk assessments are available for Retail Gas Stations and Perc Dry Cleaners. Detailed maps of estimated cancer risks from these facilities can be found on

SCAQMD's website.[IX] In 2014, no HRAs were developed for any additional Industry-wide categories.

2.6 Pilot Study for Multi-Metals In-Stack and Ambient Continuous Monitors

SCAQMD staff initiated a pilot study for continuous in-stack monitors and continuous ambient monitors for multi-metals in 2014. Contracts with Cooper Environmental Services, the only manufacturer of these types of continuous monitors, were initiated in 2014 to implement the study. The pilot study was conducted at Quemetco and Gerdau for a period of two months. SCAQMD staff continued this pilot test in 2015.

2.7 Rule 1401 Permitting and HRA Modeling Projects

Under Rule 1401, any new, relocated, and 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 hazard index (HI). In 2014, SCAQMD staff processed approximately 2,800 Rule 1401 applications for ~1,770 facilities. Under Rule 1401, the SCAQMD staff also conducts and air dispersion modeling to confirm that new and modified permits do not exceed the health risk thresholds. In 2014, SCAQMD staff reviewed and approved 21 HRA modeling projects for permitting.

2.8 Multiple Air Toxics Exposure Study (MATES)

MATES IV[X] is the fourth in a series of urban toxics monitoring and evaluation studies conducted in the Basin and is part of the SCAQMD Governing Board Environmental Justice Initiative. The study is a follow up to previous studies which took place in 1985-86, 1998-99, and 2004-06. MATES IV consists of several elements including a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize Basin risk. The study focuses on the carcinogenic risk from exposure to air toxics. The measurement of ultrafine particle concentrations is a new focus for MATES IV. In addition, shorter-term measurements were conducted at various locations, such as airports, freeways, rail yards, and busy intersections near warehouse operations to assess exposures to ultrafine particles and black carbon. Sampling began in June 2012 and concluded June 2013, providing a full year of ambient data.

[IX] http://www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=e25b31a1-f9dc-48d4-8ce2-86e13a835583

[X] The MATES studies are available here: http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies

A draft MATES IV report was released on October 3, 2014 in addition to an interactive map of the Basin to identify the estimated modeled carcinogenic risk from air toxics by geographic location which is available on the SCAQMD web site.[XI]

The study shows that compared to past MATES studies of air toxics in the Basin, diesel particulate exposure was substantially reduced, but still unacceptably high, especially near sources of toxic emissions such as the ports and transportation corridors. The results confirm the need for a continued focus on the reduction of toxic emissions, particularly from diesel exhaust.

2.9 National-Scale Air Toxics Assessment (NATA) Support

Every three years, beginning in 1996, the U.S. EPA prepares a National-Scale Air Toxics Assessment (NATA).[XII] NATA is analogous to the modeling component of SCAQMD's Multiple Air Toxic Exposure Study (MATES). Whereas MATES looks at population risks in the four county jurisdiction of the SCAQMD, all 50 states are addressed in NATA. The purpose of NATA is to: (1) identify and prioritize the toxic air contaminants of greatest concern, (2) determine the risk contribution from each of the major source categories (i.e., on-road, off-road, point, and area), and (3) identify local areas (i.e., census tracts) with elevated risks. In 2014, AB 2588 staff analyzed and reviewed approximately 40 high risk facilities listed in the final version of the 2011 NATA for verification and accuracy of their data.

2.10 Rule Development

2.10.1 Assessment of OEHHA Revised Air Toxics Hot Spots Program Risk Assessment Guidelines (2015) and Development of Amendments to Rules 1401, 1401.1, 1402, and 212

AB 2588 requires that OEHHA develop health risk assessment guidelines for implementation of the Hot Spots Program. In 2003, OEHHA developed and approved the Health Risk Assessment Guidance. [XIII] Since the adoption of the 2003 Guidelines, new scientific information has shown that early-life exposures to air toxics contribute to an increased estimated lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. Based on this information, OEHHA developed and released a draft of its new Air Toxics Hot Spots Program Guidance Manual for Preparation of Risk Assessments (Revised OEHHA Guidelines) in October, 2014. The

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[XI] The MATES IV Carcinogenic Risk interactive map is available at: http://www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=73f55d6b-82cc-4c41-b779-4c48c9a8b15b.

[XII] The U.S. EPA's web portal to NATA is at: http://www.epa.gov/ttn/atw/natamain/.

[XIII] OEHHA. 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. The document is available at http://www.oehha.org/air/hot_spots/HRAguidefinal.html.

final Revised OEHHA Guidelines document was approved by OEHHA on March 6, 2015.[XIV] The Revised OEHHA Guidelines incorporate age sensitivity factors which will increase cancer risk estimates to residential and sensitive receptors, based on the change in methodology. Under the Revised OEHHA Guidelines, even though the toxic emissions from a facility have not increased, estimated cancer risk to a residential receptor will increase due to the change in methodology. Cancer risks for off-site worker receptors are similar between the existing and revised methodology because the methodology for adulthood exposures remains relatively unchanged. In 2014, staff worked with OEHHA and CARB as this guidance was being developed to evaluate its potential impact on SCAQMD programs, and to provide feedback on the proposed methodologies.

The SCAQMD's permitting program, AB 2588 Hot Spots program, existing regulatory program, and CEQA guidelines rely on OEHHA's guidelines for assessing health risks. As such, implementing the Revised Guidelines will have a variety of implications for SCAQMD's air toxics program. In 2014, AB 2588 staff started performing detailed assessment of the resource impacts and impacts on the regulated community from implementation of the Revised OEHHA guidelines. This work supported the amendments to Rules 1401, 1401.1, 1402, and 212 adopted in June, 2015.

2.10.2 Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-acid Battery Recycling Facilities (January 10, 2014 and March 7, 2014)

This rule applies to lead-acid battery recycling facilities that have processed more than 50,000 tons of lead per year in any one of the five calendar years prior to November 5, 2010, or annually thereafter. The purpose of Rule 1420.1 is to protect public health by reducing exposure and emissions of lead, arsenic, benzene, and 1,3-butadiene from large lead-acid battery recycling facilities, and to help ensure attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) for Lead. In January 2014, Rule 1420.1 was amended to establish requirements for owners or operators of large lead-acid battery recycling facilities to reduce arsenic emissions and other key toxic air contaminant emissions. Amendments included requirements for ambient air concentration limits for arsenic, as well as hourly emission limits of arsenic, benzene, and 1,3-butadiene. Other amendments also contain additional administrative, monitoring and source testing requirements for stack emissions. The SCAQMD Board deferred the multi-metals continuous emission monitoring system (CEMS) provision of Amended Rule 1420.1 to its March 7, 2014 Board meeting. Facilities provided funding and participated in a multi-metals CEMS demonstration program.

[XIV] OEHHA. 2015. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. The document is available at: http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

2.11 Clean Communities Plan

The centerpiece of the 2010 Clean Communities Plan is a pilot study where the SCAQMD staff works with community stakeholders to identify and develop community-specific solutions to air quality issues in two communities. These two communities are the City of San Bernardino and Boyle Heights and the surrounding areas. On June 24 and 25, 2014, SCAQMD staff held the 8th and 9th Working Group Meetings for San Bernardino and Boyle Heights CCP Pilot Study working group meeting with stakeholders, interested parties, and the public. Upon completion of the two pilot studies, the SCAQMD staff will develop guidance that other communities can use to address air quality issues specific to their community.

3.0 FUTURE ACTIVITIES

3.1 AB 2588 Activities

In 2015, staff will prioritize about 85 facilities and notify those with high priority scores to prepare detailed Air Toxics Inventory Reports (ATIRs) and HRAs. About 10 facility HRAs and 10 detailed ATIRs will be reviewed. Public notification will also occur for multiple facilities including Hixson Metal Finishing (ID 11818), Gerdau (ID 18931), and potentially others.

3.2 Model-Monitor Reconciliation

In response to community concerns regarding fugitive emissions and difficulties quantifying those emissions, SCAQMD staff will continue to investigate options regarding model-monitor reconciliation. Often, modeling analysis predicts concentrations that are substantially lower than those found in the monitoring results. This difference is usually due to fugitive emissions that are not captured in traditional emission inventories. SCAQMD staff intends to prepare an RFP to conduct a study to develop a standard methodology for reconciliation of modeling and monitoring data.

3.3 Implementation of OEHHA Revised Air Toxics Hot Spots Program Risk Assessment Guidelines (2015)

The SCAQMD's air toxics program relies on OEHHA's health risk assessment guidelines in all aspects of its toxics regulatory program. At the Special Governing Board Meeting on May 16, 2014, staff presented Potential Impacts of the New OEHHA Risk Guidelines on SCAQMD Programs. To begin implementing the Revised OEHHA Guidelines, amendments to key rules, Rule 1401 – New Source Review of Toxic Air Contaminants, Rule 212 – Standards for Approving Permits and Issuing Public Notice, and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, was recommended. SCAQMD Staff presented a generalized work plan and schedule for implementation of the Revised OEHHA Guidelines at the March 2015 Governing Board Meeting.

Significant AB 2588 resources have been dedicated in 2015 to the implementation of the Revised OEHHA guidelines in all aspects of SCAQMD toxics programs including outreach, rule development, guideline revisions, and training.

3.4 Rulemaking

Rule 1156 - *Further Reductions of Particulate Emissions from Cement Manufacturing Facilities* requires cement manufacturing facilities to comply with specific requirements applicable to various operations, as well as materials handling and transport at the facilities. The proposed amended rule will ensure hexavalent chromium (Cr+6) emissions from cement manufacturing operations and the property after facility closure are minimized, while streamlining Cr+6 monitoring requirements.

Rules 1401, 1401.1, 1402, and 212 - Rule 1401 – New Source Review of Toxic Air Contaminants, Rule 1401.1 – Requirements for New and Relocated Facilities Near Schools, and Rule 1402 – Control of Toxic Air Contaminants from Existing Sources previously relied on the prior OEHHA Risk Assessment Guidelines to calculate health risks. In March 2015, the Office of Environmental Health Hazard Assessment (OEHHA) approved revisions to their Air Toxics Hot Spots Program Risk Assessment Guidelines. The amendments reference the Revised OEHHA Guidelines and amend specific provisions to harmonize with the Revised OEHHA Guidelines.

Rule 1402 - *Control of Toxic Air Contaminants from Existing Sources* applies to any facility subject to the AB 2588 Hot Spots Act and to any facility for which the impact of total facility emissions exceeds any significant or action risk level. Staff is working with stakeholders to incentivize early risk reductions beyond those required under Rule 1402, to assess current public notification procedures, and to explore alternatives for such facilities willing to do early risk reduction. Additionally, proposed amendments to the rule will address procedural changes and clarifications.

Rule 1420 – *Emissions Standard for Lead* applies to all non-vehicular sources of lead emissions and contains requirements for emission levels, controls, housekeeping, and monitoring. On October 15, 2008, U.S.EPA lowered the lead National Ambient Air Quality Standard (NAAQS) from 1.5 to 0.15 ug/m^3. Proposed amendments will reassess the current requirements and realign them to ensure compliance with the revised lead standard. Proposed amendments to the rule may also include general housekeeping provisions and enclosure requirements to control fugitive lead emissions.

Rule 1420.2 – *Emission Standards for Lead from Metal Melting Processes* is a new rule that reduces exposure to lead emissions from facilities that conduct metal melting processes such as lead-acid battery manufacturing facilities and foundries. In addition to meeting an ambient air quality concentration standard of 0.15 µg/m^3 averaged over 30 days, the rule may establish requirements to meet a total facility lead emission rate and total enclosures of areas used in the metal melting process. Other requirements such as ambient air monitoring and housekeeping practices to control fugitive lead-dust emissions may be

proposed. The public process began in 2014 and is scheduled for a Public Hearing in October 2015.

Rule 1430.1 – C*ontrol of Toxic Air Contaminants from Metal Forging and Grinding* is a new rule which will establish requirements to control toxic air contaminants from metal forging and grinding operations. SCAQMD staff has identified 21 facilities in the South Coast Air Basin that conduct metal forging and grinding operations. SCAQMD staff is currently investigating regulatory requirements that would ensure affected facilities employ the best means available to minimize toxic air contaminants not adequately addressed by existing regulations. Rule requirements currently under consideration by SCAQMD staff range from housekeeping provisions to source specific limitations such as grinding enclosures, curtains, ventilation requirements and air pollution control equipment. The SCAQMD staff will continue to review and analyze all emission reduction strategies available for this source category.

Appendix A

Health Risk from Facilities with an Approved Health Risk Assessment (HRA)

The tables in Appendix A lists the facilities and the current risks as reviewed and approved by staff. Risks presented in this table were calculated based on guidance that was available from the state Office of Environmental Health Hazard Assessment (OEHHA) at the time of HRA approval. For example, the risks presented in this appendix do not include the recent updated health risk calculation methodologies (OEHHA, 2015) that place greater emphasis on children's heightened cancer risk in comparison to adults.

Table A-1 lists the facilities in order of their cancer risks and Table A-2 is ordered by facility ID. In most instances, the listed risks are from an approved HRA. However, in some instances, the risks are from after the implementation of a risk reduction plan. Table A-3 lists the status of the facility's risk reduction plan 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 risk including emergency DICEs. It also provides current status of each facility as follows:

- A – Active
- I – Inactive
- OB – Out of business (with the year in which the facility went 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. Staff realizes that facilities that have gone through change of ownership could have different name and facility ID numbers. The following risk levels are identified in SCAQMD Rule 1402 – Control of Toxic Air Contaminants from Existing Sources:

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

APPENDIX 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	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
11818	A	HIXSON METAL FINISHING	NEWPORT BEACH	1502.0	1.09	0.2	0.1	2015
124838	OB	EXIDE TECHNOLOGIES	LOS ANGELES	156.0	10.00	3.8	63.0	2013
18931	A	GERDAU	RANCHO CUCAMONGA	52.7	3.08	3.0	3.2	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	0.6	0.2	1999
11142	OB	KEYSOR-CENTURY CORP	SAUGUS	17.0	ND	0.5	0.1	2000
18989	A	BOWMAN PLATING CO INC	COMPTON	14.2	0.002	0.0	0.0	2007
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	ND	0.0	0.7	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	<10	0.001	0.2	0.3	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	ND	1.6	1.1	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
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

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	0.1	0.1	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
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	0.00	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	0.2	0.6	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

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	6.50		0.03	0.11	
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
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
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	0.7	0.4	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	ND	0.9	0.1	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	0.0	0.0	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

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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
8547	A	QUEMETCO INC (c)	INDUSTRY	4.4	0.02	0.1	0.7	2010
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		1.28	0.14	
18439	OB	ACE PLATING CO INC	LOS ANGELES	4.1	ND	0.6	0.2	1998
16660	A	THE BOEING COMPANY	HUNTINGTON BEACH	3.8	0.01	0.2	0.0	1999
45489	A	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	TEMECULA	3.8	0.01	1.3	0.0	2002
126060	A	STERIGENICS US, LLC	ONTARIO	3.8	0.00	0.0	0.0	2007
8820	A	REULAND ELECTRIC CO, H.BRITTON LEES	INDUSTRY	3.7	ND	0.0	0.0	1996
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	0.02	0.0	0.1	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	0.6	0.8	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	ND	0.9	0.1	2001

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
800189	A	DISNEYLAND RESORT	ANAHEIM	3.3	0.03	0.1	0.1	2009
18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0.00	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
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	1.00	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	A-OB	MICROSEMI CORP	SANTA ANA	2.3	ND	0.0	0.0	2001

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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
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
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

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	0.00	0.1	0.0	2010
124806	OB	EXIDE TECHNOLOGIES	INDUSTRY	1.0	ND	0.0	0.0	1999
6670	A	TRU CUT INC	LOS ANGELES	<1	ND	0.0	0.0	2002
800127	A	SO CAL GAS CO (EIS USE)	MONTEBELLO	1.0	0.00	0.0	0.0	2009
7730	A	CARPENTER CO	RIVERSIDE	1.0	ND	0.0	1.3	2003
20375	A	PRUDENTIAL OVERALL SUPPLY	RIVERSIDE	1.0	ND	0.0	0.1	1997
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	1.9	0.0	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	0.0	2003
800267	A	TRIUMPH PROCESSING, INC.	LYNWOOD	0.5	0.00	0.1	0.4	2012
152501	A	PRECISION SPECIALTY METALS INC	LOS ANGELES	0.5	ND	0.4	0.2	2001

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
43436	A	TST, INC.	FONTANA	0.4	0.11	0.0	0.4	1997
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	0.00	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	SANATA ANA	0.3	ND	0.1	0.1	2007
161142	A	FOAMEX INNOVATIONS, INC.	COMPTON	0.3	0.00	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	0.00	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
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

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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
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

Appendix A-1. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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; I = Inactive; OB = Out of Business (with the year in which the facility went 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.

APPENDIX 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	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	A-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
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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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
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 HOLLYWOOD	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	0.02	0.0	0.1	1999
7533	A	HUGO NEU-PROLER CO	TERMINAL ISLAND	4.10		1.28	0.14	
7730	A	CARPENTER CO	RIVERSIDE	1.0	ND	0.0	1.3	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	0.6	0.8	1998
8309	A	CAMBRO MANUFACTURING CO	HUNTINGTON BEACH	1.7	ND	0.0	0.1	2000
8547	A	QUEMETCO INC (c)	INDUSTRY	4.4	0.02	0.1	0.7	2010
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
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	1502.0	1.09	0.2	0.1	2015
12493	A	REMO INC	NORTH HOLLYWOOD	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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	ND	1.6	1.1	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	HUNTINGTON BEACH	3.8	0.01	0.2	0.0	1999
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	0.1	0.1	1999
18378	A	GRUBER SYS INC	VALENCIA	0.8	ND	0.1	0.1	2004
18396	A	SPRAYLAT CORP	LOS ANGELES	3.2	0.00	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	52.7	3.08	3.0	3.2	2015
18989	A	BOWMAN PLATING CO INC	COMPTON	14.2	0.002	0.0	0.0	2007
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	0.00	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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
22410	A	PALACE PLATING	LOS ANGELES	5.6	ND	0.7	0.4	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
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
27701	A	CADDOCK ELECTRONIC	RIVERSIDE	2.7	ND	0.0	0.1	2002
29110	A	ORANGE, COUNTYOF - SANITATION DISTRICT (d)	HUNTINGTON BEACH	10.7	ND	1.8	0.5	2007
34764	A	CADDOCK ELECTRONICS INC	RIVERSIDE	6.50		0.03	0.11	
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	0.00	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	0.00	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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	0.00	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	ND	0.0	0.7	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
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	0.0	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	1.00	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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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
106838	A	VALLEY-TODECO, INC	SYLMAR	3.7	ND	0.2	0.2	2000
107149	A	MARKLAND MANUFACTURING INC	SANATA 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	HUNTINGTON 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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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
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	156.0	10.00	3.8	63.0	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	0.00	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
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	1.9	0.0	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 HOLLYWOOD	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.	HUNTINGTON 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 DOMINGUEZ	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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	<10	0.001	0.2	0.3	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	0.00	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	0.6	0.2	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	0.2	0.6	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
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	0.0	0.0	2009

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
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	ND	0.9	0.1	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	0.00	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
800196	A	AMERICAN AIRLINES INC (EIS USE)	LOS ANGELES	5.4	ND	0.9	0.1	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

Appendix A-2. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk (per million)	Cancer Burden	Non-Cancer Acute Hazard Index	Non-Cancer Chronic Hazard Index	HRA Approval Date
800267	A	TRIUMPH PROCESSING, INC.	LYNWOOD	0.5	0.00	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	MANHATTAN 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; I = Inactive; OB = Out of Business (with the year in which the facility went 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.

Appendix A-3. Status of Risk Reduction Plans

Fac. ID	Facility Name	Submitted	Approved	Implemented	Residual Risk
7427	Owens-Brockway Glass	Yes	Yes	Yes	Cancer: 3.60
					Acute HI: 0.01
					Chronic HI: 0.06
					Can. Burden: 0.000
7730	E.R. Carpenter	Yes	Yes	Yes	Cancer: 0.96
					Acute HI: 0.03
					Chronic HI: 1.34
					Can. Burden: 0.000
8015	Anadite Inc.	Yes	Yes	Yes	Cancer: 3.5
					Acute HI: 0.63
					Chronic HI: 0.78
					Can. Burden: n/a
8547	Quemetco *A new HRA is being prepared using post-RRP emissions.*	Yes	Yes	Yes	Cancer: 4.4 **(d)**
					Acute HI: 0.086
					Chronic HI: 0.74
					Can. Burden 0.023
8570	Embee Inc.	Yes	Yes	Yes	Cancer: 6.6
					Acute HI: 0.21
					Chronic HI: 0.58
					Can. Burden: n/a
11818	Hixson Metal Finishing	Yes	Yes	In Progress	Cancer:
					Acute HI:
					Chronic HI:
					Can. Burden:
14191	Nicklor Chemical Co.	Yes	Yes	Yes	Cancer: 0.00
					Acute HI: 0 **(a)**
					Chronic HI: 0 **(a)**
					Can. Burden: 0.000
15504	Schlosser Forge Co.	Yes	Yes	Yes	Cancer: 9.5
					Acute HI: 1.59
					Chronic HI: 1.11
					Can. Burden: 0.067
18294	Northrop-Grumman	Yes	Yes	Yes	Cancer: 7.6
					Acute HI: 0.13
					Chronic HI: 0.05
					Can. Burden: n/a
22410	Palace Plating	Yes	Yes	Yes	Cancer: 5.6 **(b)**
					Acute HI: 0.73
					Chronic HI: 0.38
					Can. Burden: n/a
25012	Amada Manufacturing America, Inc.	Yes	Yes	Yes	Cancer: <0.1
					Acute HI: 0.00
					Chronic HI: 0.00
					Can. Burden: 0.000
41229	Lubeco, Inc.	Yes	Yes	Yes	Cancer: 14.0
					Acute HI: 0.00
					Chronic HI: 0.12
					Can. Burden: n/a

Appendix A-3. Concluded

Fac. ID	Facility Name	Submitted	Approved	Implemented	Residual Risk
45938	E.M.E. Inc.	Yes	Yes	Yes	Cancer: <0.1
					Acute HI: 0.00
					Chronic HI: < 0.01
					Can. Burden: 0.000
48323	Sigma Plating Co.	Yes	Yes	Yes	Cancer: 13.8
					Acute HI: 0.01
					Chronic HI: 0.74
					Can. Burden: 0.017
61160	GE Engine Services	Yes	Yes	Yes	Cancer: 0.50
					Acute HI: 0.7
					Chronic HI: 0.01
					Can. Burden: 0.000
116459	GE Engine Services	Yes	Yes	Yes	Cancer: 9.3
					Acute HI: 0.19
					Chronic HI: 0.25
					Can. Burden: n/a
119127	PRC DeSoto Inernational	Yes	Yes	Yes	Cancer: 0 **(a)**
					Acute HI: < 0.01
					Chronic HI: < 0.01
					Can. Burden: 0.000
124838	Exide Technologies	Yes	Yes	In Progress	Cancer:
					Acute HI:
					Chronic HI:
					Can. Burden:
126501	Vought Aircraft Industries, Inc.	Yes	Yes	Yes	Cancer: 19.7 **(c)**
					Acute HI: 0.64
					Chronic HI: 0.24
					Can. Burden: n/a
134931	Alcoa Global Fasteners, Inc.	Yes	Yes	Yes	Cancer: 0.6
					Acute HI: 1.90
					Chronic HI: 0.02
					Can. Burden: 0.000
800037	DeMenno/Kerdoon	Yes	Yes	Yes	Cancer: 4.9
					Acute HI: < 0.01
					Chronic HI: 0.02
					Can. Burden: 0.01
800063	Grover Products Co.	Yes	Yes	Yes	Cancer: 3.3
					Acute HI: 0.88
					Chronic HI: 0.07
					Can. Burden: 0.039
800196	American Airlines, Inc.	Yes	Yes	Yes	Cancer: 5.4
					Acute HI: 0.86
					Chronic HI: 0.08
					Can. Burden: 0.190

(a) Facility left the South Coast Air Basin so their risks are zero.
(b) Facility is shutdown so their risks are zero.
(c) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated.
(d) Staff is reviewing an updated HRA conducted since the RRP was approved and implemented (see section 2.4.8 of this Annual Report).

Appendix B

Trends in Ambient Air Toxics in the South Coast Air Basin and Vicinity

The California Air Resources Board (CARB) has maintained toxics monitoring network since the late 1980's.[XV] In this appendix, trends in cancer risks are illustrated for sites in the South Coast Air Basin (Basin) and vicinity. Health risk levels for the most recent three-year period (i.e., 2011 to 2013) are also shown for the air toxics which are monitored. The CARB monitoring network does not include diesel particulate matter, 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 and also shows the way for future control strategies.

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

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

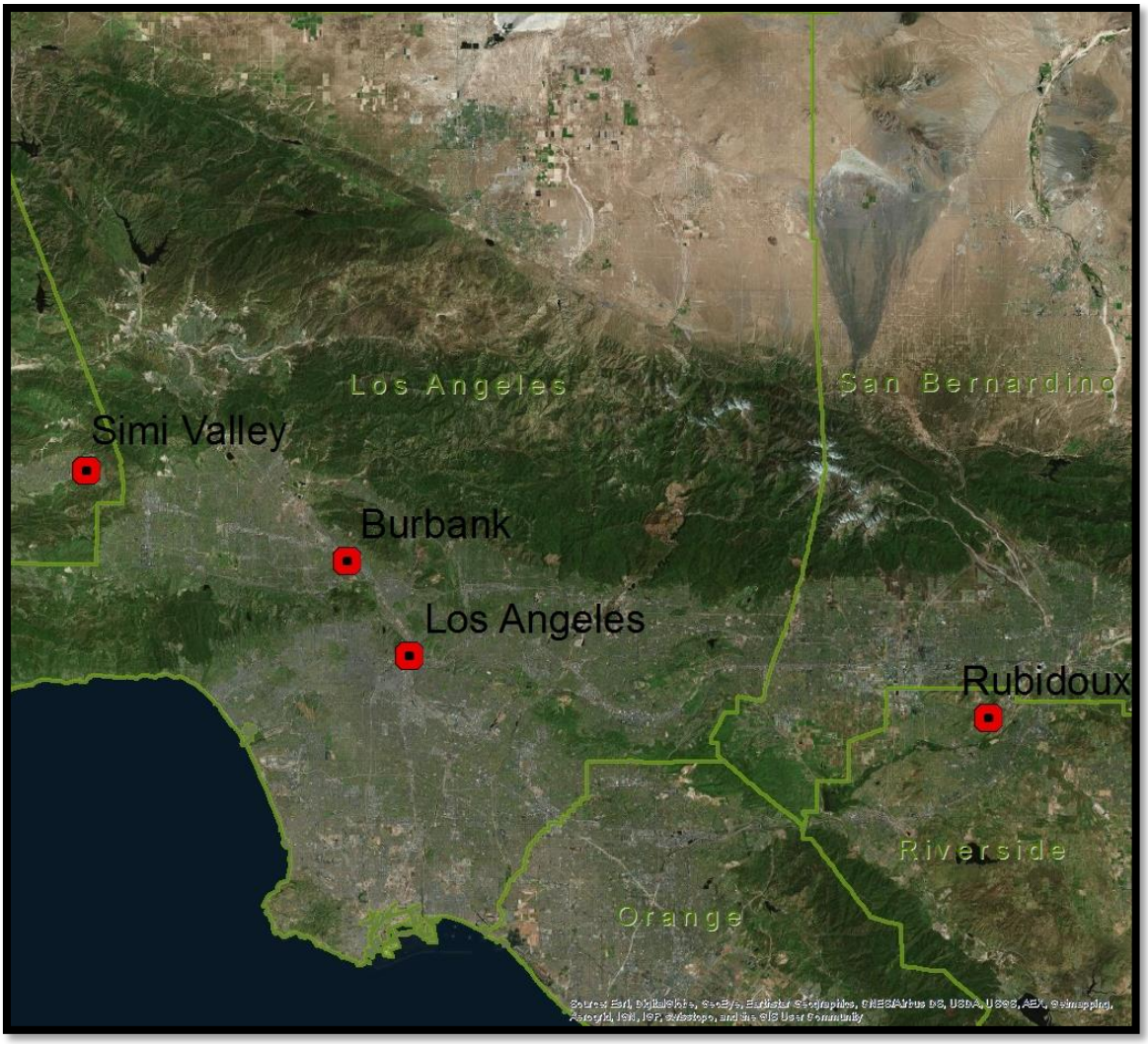

Figure B-1. ARB toxic monitoring sites in the South Coast Air Basin and vicinity

Table B-1. Toxic Air Contaminants Considered

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

Inhalation cancer risks[XVI] have decreased significantly at all stations since 1990 as shown in Figure B-2. Specifically, risks have decreased by 84, 80, 75, and 77 percent at Burbank, Los Angeles, Riverside, and Simi Valley, respectively. The improvement is primarily from reductions in ambient concentrations of benzene (88 to 91 percent) and 1,3-butadiene (81 to 89 percent) and secondarily from decreases in hexavalent chromium (67 to 93 percent) and perchloroethylene (85 to 96 percent) concentrations.

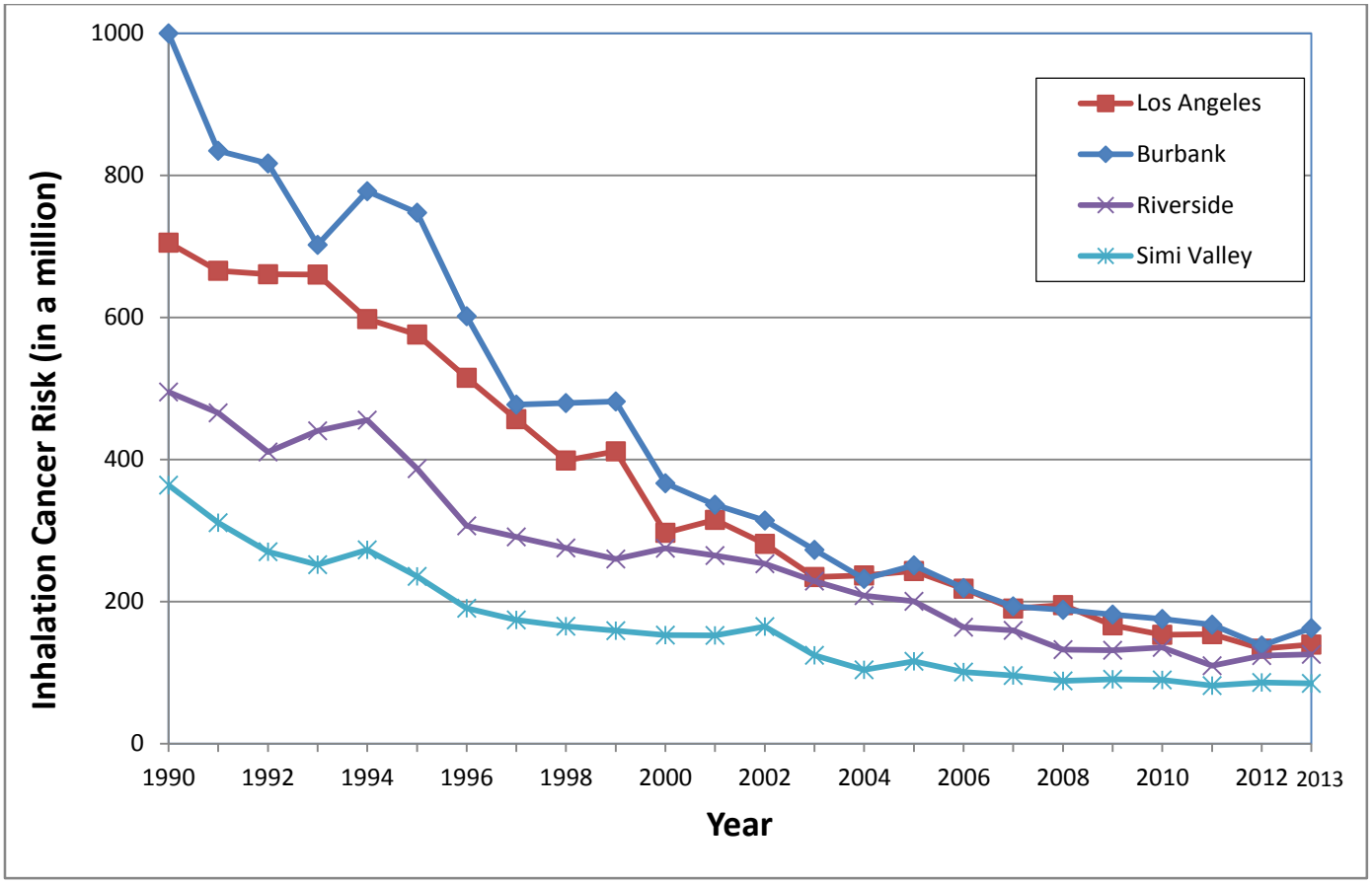

Figure B-2. Trends in inhalation cancer risks in the South Coast Air Basin and vicinity (excluding cancer risks from diesel particulate matter)

The risk reductions shown in Figure B-2 occurred in spite of significant increases in population and vehicle activity. As shown in Table B-2, population increased by 32.8 percent since 1990 and daily VMT, vehicle population, and daily fuel consumption increased by 38.0, 46.1, and 25.8 percent, respectively.

[XVI] The risks presented in this appendix do not take into account the new OEHHA HRA guidance approved in 2015.

Table B-2. Change in Population and Vehicle Activity in the SCAQMD Since 1990

Activity Variable	1990	2013	% Increase
Population	13,083,594	17,378,940	32.8
Daily VMT (in thousands of miles per day)	282,561	389,892	38.0
Vehicle Population	7,547,354	11,023,000	46.1
Daily Fuel Consumption (in thousands of gallons per day)	18,338	23,069	25.8

Source: http://www.arb.ca.gov/app/emsinv/trends/ems_trends.php.
VMT = vehicle miles travelled.

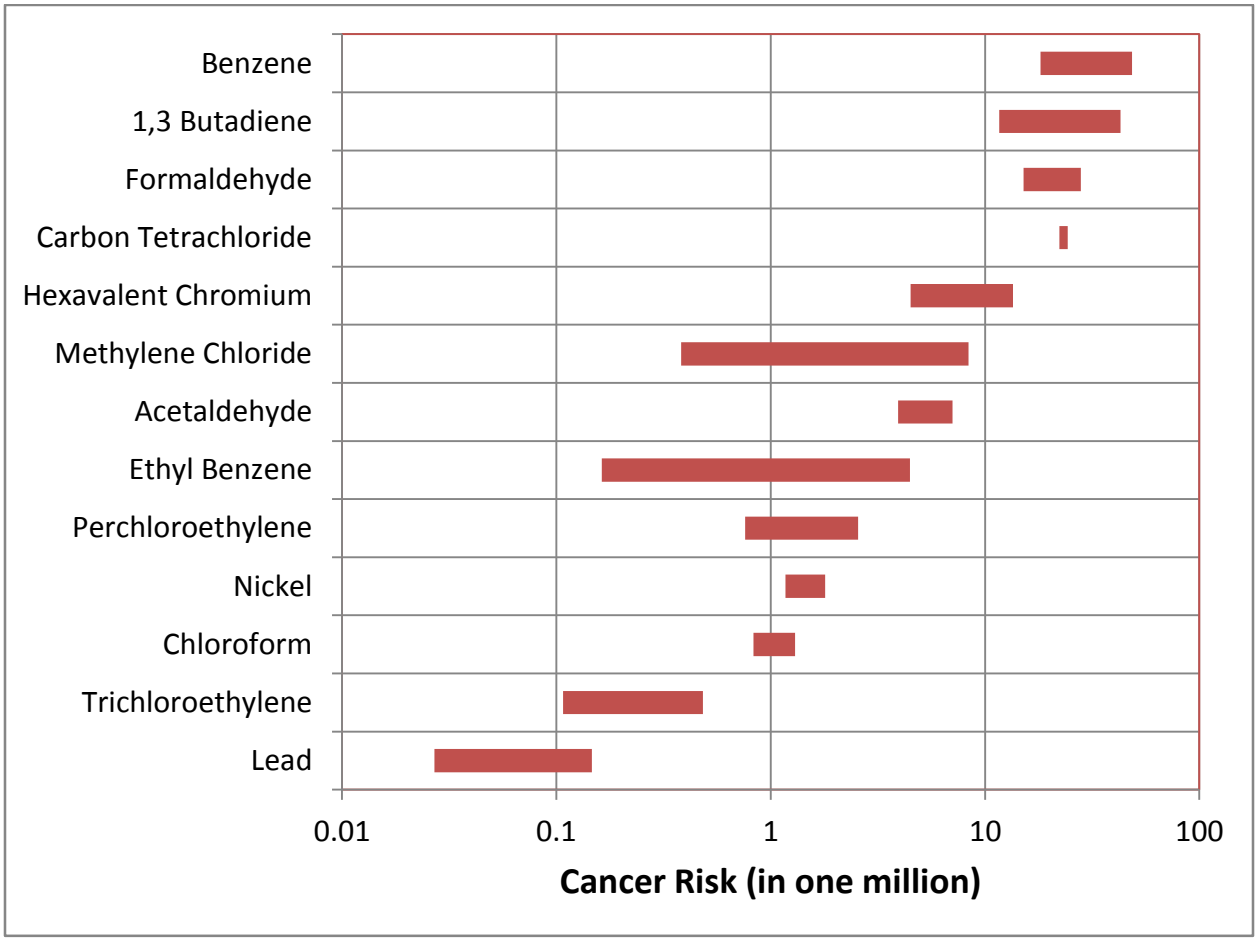

Figure B-3. Inhalation cancer risks in the Basin and vicinity over the period, 2011 to 2013 (excluding diesel particulate matter)

The relative importance of each of the toxics is illustrated in the Figure B-3 above. The range of cancer risks for the four sites analyzed here are shown for the most recently available three-year period (2011 to 2013). Benzene, 1,3-butadiene, formaldehyde, carbon tetrachloride, and hexavalent chromium are the largest contributors to the inhalation cancer risks, contributing individually from 5 to around 49 in a million. The ambient carbon tetrachloride concentrations observed in the Basin are not from a local source of emissions but represent a background condition. Note that there is little variability in cancer risks attributable to carbon tetrachloride as indicated by its short bar in Figure B-3. In fact, there is little variability statewide in carbon tetrachloride concentrations, with concentrations varying by less than ten percent. Methylene chloride, acetaldehyde, ethyl benzene, perchloroethylene, chloroform, and nickel each contribute between 1 and 10 in a million and trichloroethylene and lead contribute less than 1 in a million to the inhalation cancer risks.

As demonstrated in the series of Multiple Air Toxics Exposure Studies (MATES) conducted by the SCAQMD, diesel particulate matter (DPM) is by far the largest contributor to inhalation cancer risks observed in the Basin. MATES IV attributed about 68 percent of the inhalation cancer risks to DPM based on emissions from 2012,[XVII] compared to 84% in MATES III based on emissions in 2005.[XVIII] The total cancer risks shown in Figures B-2 and B-3 therefore represent only about 35 percent of the population weighted inhalation cancer risks found in the MATES IV study.

[XVII] 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.

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

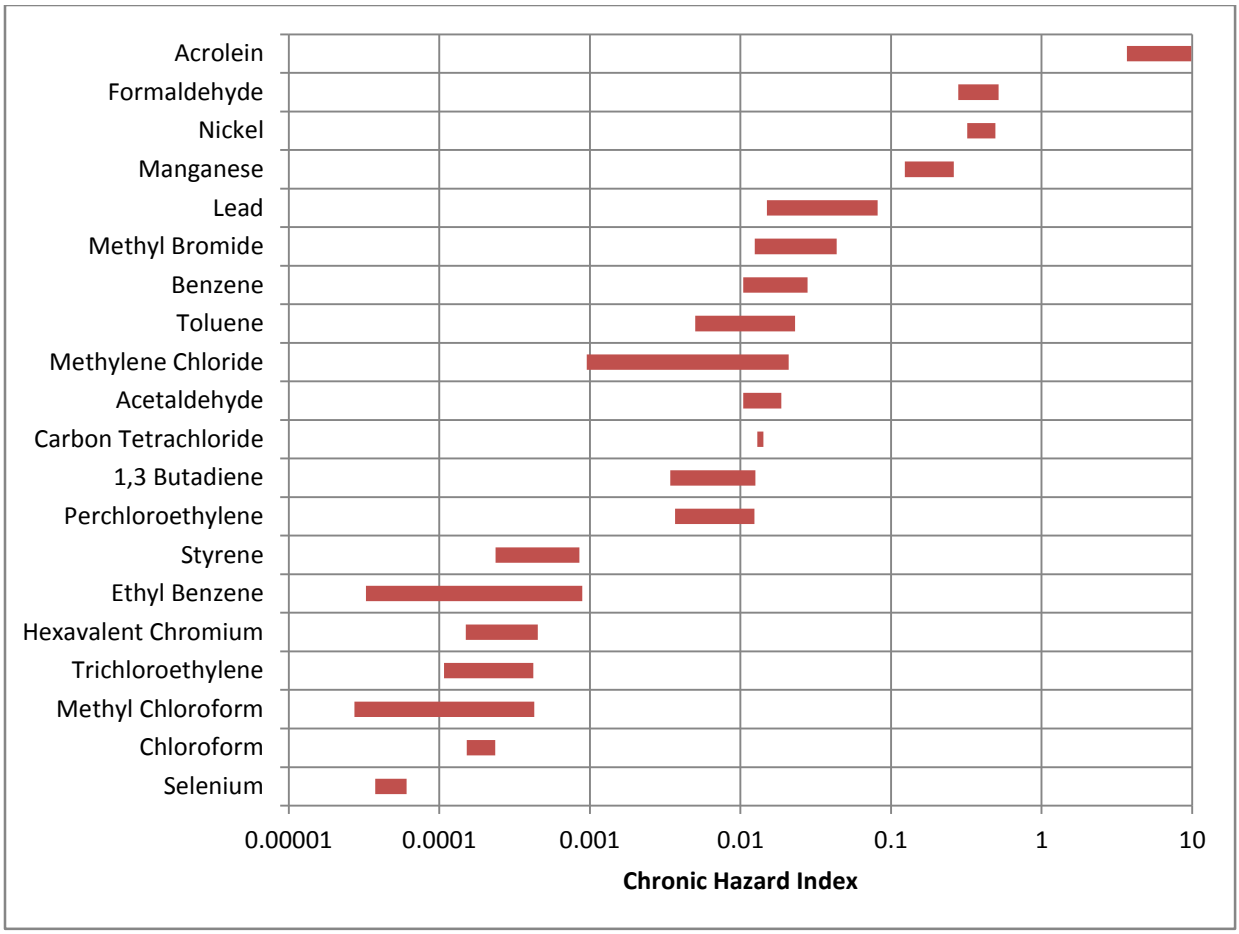

Figure B-4. Non-cancer chronic risks in the Basin and vicinity over the period, 2011 to 2013

The range of chronic non-cancer risks for the four sites analyzed here are shown above in Figure B-4 for the most recently available three-year period (2011 to 2013). For each toxic, the ratio of the observed concentration to the pollutant's chronic reference exposure level (REL)[XIX] is shown. Ratios greater than one indicate the potential for adverse health effects. Note that acrolein, a respiratory irritant, is the only toxic 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.

[XIX] The REL is an exposure level at or below which no non-cancer adverse health is anticipated to occur in a human population for a specific duration. This definition is taken directly from: OEHHA, 2003 - *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.*