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Project Number
1690003769

Date
September 2018

**ANAPLEX AIR TOXICS HOT SPOTS
(AB2588) HEALTH RISK ASSESSMENT
SEPTEMBER 2018 REVISION
ANAPLEX CORPORATION
PARAMOUNT, CALIFORNIA**

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APPENDICES

- Appendix A: Anaplex 2016 Operating Information, Including Hourly Electricity, Discharge Water Records As Evidences In Support Of Anaplex's Operating Schedule, Manufacturer's Testing Data, and Revised ATIR - May [Records Provided Electronically]
- Appendix B: May 1, 2018 Memorandum: Responses to the SCAQMD's ATIR Comments [*Previously Provided Electronically in May 2018 Revision*]
- Appendix C: Emission Calculations [*Previously Provided Electronically in May 2018 Revision*]
- Appendix D: AERMOD Dispersion Modeling Files [*Provided Electronically*]
- Appendix E: HARP2 Files [*Provided Electronically*]
- Appendix F: Risk Characterization Files [*Provided Electronically*]

DEFINITIONS

Acute Health Impacts: non-cancer health impacts for short-term, one-hour peak exposures to potential Facility emissions. Acute Reference Exposure Levels (RELs), which are used to calculate acute non-cancer hazards, are developed so as to represent “an exposure that is not likely to cause adverse health effects in a human population, included sensitive subgroups, exposed to that concentration ... for the specified exposure duration on an intermittent basis” (OEHHA 2015).

Chronic Health Impacts: non-cancer health impacts from long-term exposure to potential Facility emissions. Chronic RELs, which are used to calculate chronic non-cancer hazards, are developed so as to represent the level “at or below which no adverse health effects are anticipated following long-term exposure. Long-term exposure for these purposes has been defined as 12% of a lifetime, or about eight years for humans.” (OEHHA 2015)

Cancer Health Impacts: carcinogenic risks estimated as the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to carcinogens potentially present in Facility emissions (USEPA 1989). Cancer inhalation and oral potency factors, which are used to calculate cancer risk, are “expressed as the upper bound of probability of developing cancer assuming continuous lifetime exposure to a substance at a dose of one milligram per kilogram of body weight It is assumed in cancer risk assessments that risk is directly proportional to dose and that there is no threshold for carcinogenesis. The derivation of carcinogenic inhalation and oral cancer potency factors takes into account the available information on pharmacokinetics and on the mechanism of carcinogenic action. These values are generally the 95% upper confidence limit (UCL) on the dose-response slope.” (OEHHA 2015)

ACRONYMS AND ABBREVIATIONS

AB:	Assembly Bill
ARB:	(California) Air Resources Board
AERMOD:	American Meteorological Society/Environmental Protection Agency regulatory air dispersion model
Cal/EPA:	California Environmental Protection Agency
Cr(VI):	Hexavalent chromium
CPF:	Cancer Potency Factor
GLC:	Ground-Level Concentration
HARP:	Hotspots Analysis and Reporting Program
HI:	Hazard Index
HQ:	Hazard Quotient
HRA:	Health Risk Assessment
MEIR:	Maximally Exposed Individual Resident
MEIW:	Maximally Exposed Individual Worker
MEISR:	Maximally Exposed Individual Sensitive Receptor
MSDS:	Material Safety Data Sheet
NED:	National Elevation Dataset
NWS:	National Weather Service
OEHHA:	Office of Environmental Health Hazard Assessment
PMI:	Point of Maximum Impact
REL:	Reference Exposure Levels
RRP:	Risk Reduction Plan
SCAQMD:	South Coast Air Quality Management District
TAC:	Toxic Air Contaminant
USEPA:	United States Environmental Protection Agency
USGS:	United States Geological Survey
UTM:	Universal Transverse Mercator

LIST OF UNITS

µg:	microgram
g:	gram
hr:	hour
L:	liter
Kg:	kilogram
km:	kilometer
m:	meter
m ³ :	cubic meter
mg:	milligram
s:	second
yr:	year

EXECUTIVE SUMMARY

In accordance with the California Air Toxics “Hot Spots” Act (AB2588), this report presents the human health risk assessment (HRA) for the 2016 facility emissions of Anaplex Corporation (Anaplex), located at 15547 Garfield Avenue, Paramount, California (South Coast Air Quality Management District [SCAQMD] Facility ID # 016951). ALG, Inc. (ALG) previously prepared an AB2588 HRA for Anaplex and submitted to SCAQMD on June 13, 2017 (referred to hereinafter as the “Original 2016 HRA”). Per the review comments on the Original 2016 HRA by SCAQMD in its letters to Anaplex dated December 8, 2017 and April 17, 2018, Ramboll Us Corporation (Ramboll) prepared a revised report (referred to hereinafter as “Revised 2016 HRA – May 2018”). It should be noted that SCAQMD required a much lower filter efficiency for the spray booths (90% vs. 95% modeled in the Original 2016 HRA vs. 98% certified by the manufacturer (with a manufacturer source test of 98.66%) for the Revised 2016 HRA – May 2018. This, and to some extent other SCAQMD comments, dramatically increased the maximum exposed individual resident cancer risk by 180%.

In late July 2018, SCAQMD staff contacted Anaplex and stated that the 2016 HRA should model the facility’s emissions as if they were evenly distributed (i.e., 24/7/365 operations) unless continuous emissions monitor system (CEMS) or similar data for individual Anaplex operations. This type of monitoring is neither required nor possible for historical Anaplex operations, which generally involve tank-based plating and anodizing and/or spray painting of parts. SCAQMD staff requested, and Anaplex complied, modeling of operations over a 24/7/365 schedule. Anaplex stated that they did not operate on a 24/7/365 schedule and never have; they noted that they have operated the same 1-shift per weekday plating/anodizing/painting schedule they have operated under for over 40 years, with office, minor maintenance and sometimes masking operations for some Saturday hours. In August, Anaplex submitted ampere-hour records, water discharge records, and hour electrical usage data from Southern California Edison (SCE) in support of their 2016 operating schedule. These records are described and summarized in Appendix A and are consistent with Anaplex’s routine and predictable operations.

Upon further review of these records, SCAQMD directed the Facility to model their 2016 emissions using the following operating schedule [SCAQMD Operating Schedule]

- Monday through Thursday: 1am to 8pm (19 hours per day)
- Friday: 1am to 7pm (18 hours per day)
- Saturday: 1am to 4pm (15 hours per day)
- Sunday: no operation

This schedule presumes plating/anodizing/painting operations with little or no facility lighting and ventilation during the earliest hours of the morning (i.e., 1am to 6am) from Monday through Saturday, which is not based on the “routine and predictable” operations of Anaplex, as required by Office of Environmental Health Hazard Assessment (OEHHA) guidance. Anaplex has never operated in this fashion in any of its 40+ years of operations. Despite the fact this schedule does not represent how the facility actual operating schedule in 2016, at the SCAMD’s explicit direction and command, this revised HRA report (Revised 2016 HRA - September 2018) includes an analysis and AB2588 summary based on the SCAQMD’s operating schedule. Simply altering Anaplex’s operating schedule dramatically increased the maximum exposed individual resident cancer risk estimate over 180% (compared to the May 2018 revision) and over 630% (with a 95% spray booth filter control efficiency, per the manufacturer).

Ramboll prepared this HRA following the OEHHA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment (OEHHA, 2015), the latest toxicity values published by OEHHA,

the SCAQMD's Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (SCAQMD, 2016), and the United States Environmental Protection Agency (USEPA) Guidelines on Air Quality Models (USEPA, 2005). However, as mentioned above, the operating schedule modeled in Revised 2016 HRA – September 2018 deviates from the 2015 OEHHA guidance. As stated in the Section 4.2.1.3 of the 2015 OEHHA guidance, "For AB2588 purposes, emissions should be reported based on routine and predictable operations. Weekly or seasonal emission patterns may vary and should be discussed. This is especially important in a refined HRA. Diurnal emission patterns should be simulated in the air dispersion model because of diurnal nature of meteorological observations. Diurnal evaluations are important to include since diurnal weather patterns and emission releases may cause significant differences in the concentration at a receptor of interest.". The operating schedule modeled in this revised HRA is at the SCAQMD's direction, and it does not depict the Facility's operation in 2016 (or any other operating year).

As discussed in the companion September 2018 Revised RRP, Anaplex has implemented or is implementing multiple risk reduction measures. We note that almost all of the risk reduction measures (those that did not require permitting, such as discontinued spraying paints containing chromium compounds until a high efficiency filtration system can be installed, discontinued using Methyl Ethyl Ketone (MEK) as a solvent cleaner, covered the majority of chrome containing tanks at the facility when not in use, switched tank solutions for several tanks to non-chrome based solutions, took several tanks out of service permanently, added polyballs to multiple chrome containing tanks, and reduced the temperature in Tank 22) occurred by the end of February 2017 and account for the overwhelming majority of risk reduction described in the September 2018 RRP. ***Most importantly, Anaplex's risk reduction measures reduce modeled cancer risks for both residents and workers to well below the SCAQMD Rule 1402 Action Risk Levels, regardless of operating schedule (SCAQMD's schedule, 24/7/365 operations, or Anaplex's operating schedule).*** The maximum chronic hazard index (HI), and maximum acute HI are also below the SCAQMD Rule 1402 Action Risk Levels, regardless of operating schedule.

Anaplex performs metal finishing operations (electroplating and anodizing) primarily for the aerospace industry. Metals finished at this location include aluminum, stainless steel, steel, copper, brass, titanium, and magnesium. Potential onsite sources of emissions include the anodizing and plating tanks, curing and drying ovens, paint spray booths, and miscellaneous natural gas sources such as boilers.

Ramboll conducted the AB2588 HRA in four steps:

- The first step in the HRA was to identify the toxic air contaminants (TACs) of concern, sources of those contaminants, and to estimate the emissions from each source. This process is called "hazard identification."
- The second step, called "exposure assessment," was to quantify the amount of TACs that people are exposed to during a specific time period, as well as the total number of people exposed. Ramboll used USEPA AERMOD Executable Version 18081 to perform the air dispersion modeling for this Revised 2016 HRA – September 2018 and to estimate the ground level air concentrations of the TACs.
- The third step is called "dose-response assessment." Dose is the amount of a chemical that enters the human body (or reaches a target organ); response is the resulting health effect from the level of the dose. Ramboll used the Hot Spots Analysis and Reporting Program (HARP) software to perform the calculations for this step as well as for the last

step. Exposure pathways evaluated in the HRA include inhalation, dermal absorption, soil ingestion, homegrown produce, and mother's milk for the residential scenario and inhalation, dermal absorption, and soil ingestion for the worker scenario.

- The last step of the risk assessment process is called "risk characterization." Risk characterization ties together the above three processes to describe the type and magnitude of any increased health risks as a result of the exposure to the toxic air emissions from a facility.

This Revised 2016 HRA – September 2018 retains the same annual emission rates used in the Revised 2016 HRA – May 2018. Ramboll final responses to SCAQMD's comments on the emissions used in Original 2016 HRA (see Appendix B) describe how some emissions used in the Original 2016 HRA were revised for the Revised 2016 HRA – May 2018. In discussion with SCAQMD staff concerning comments on the emissions used in the Original 2016 HRA, one major technical issue was not resolved concerning Spray Booth #2 and the efficiency of its filter. Ramboll and Anaplex submitted information (see Appendix B), including filter manufacture testing data, supporting 95% filter efficiency or higher. AQMD insisted that in the absence of a SCAQMD approved source test to substantiate the 95% filter control efficiency, Anaplex can only the use of 90% control efficiency in the ATIR and HRA. In addition, Anaplex has stated that it ceased using chrome-containing paints in Spray Booth #2 by the end of April 2016, in response to SCAQMD direction. However, the activity records are not sufficient to demonstrate the lower actual paint usage for the purposes of an AB2588 HRA– therefore, as in the Original 2016 HRA, the Revised 2016 HRA – May 2018, and Revised 2016 HRA - September 2018 were based on paint purchase records rather than activity information and the filter control efficiency of 90%. This Revised 2016 HRA – September 2018, however, is based on SCAQMD directed operating schedule in lieu of the actual operating schedule in 2016. Ramboll performed this Revised 2016 HRA – September 2018 per SCAQMD direction and SCAQMD operating schedule, the Revised 2016 HRA – May 2018 following SCAQMD direction and Anaplex operating schedule, as well as two alternate HRA analyses which best represent the actual operating conditions in 2016, as summarized below.

Four sets of results are presented in this report.

1. SCAQMD-directed Spray Booth #2 filter control efficiency of 90% and chromate containing paint usage based on 2016 purchase records (although Anaplex has stated it ceased use of chromate-containing paint on April 20, 2016) and the operating schedule directed by the SCAQMD
2. SCAQMD-directed Spray Booth #2 filter control efficiency of 90% and chromate containing paint usage based on 2016 purchase records (although Anaplex has stated it ceased use of chromate-containing paint on April 20, 2016) and the 2016 actual operating schedule
3. Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on purchase records and the 2016 actual operating schedule
4. Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate-containing paint usage based on halt in late April 2016 and the 2016 actual operating schedule

Table ES-1 summarizes the results of the two AB2588 HRA and the two alternate HRA cancer risk analyses.

Table ES-1: Revised 2016 HRA Summary

Location	AB2588 HRA1	AB2588 HRA2	Alternate HRA3	Alternate HRA4	Receptor Number
	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Filter control efficiency = 90% SCAQMD Operating Schedule	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Filter control efficiency = 90% Anaplex Operating Schedule	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Manufacturer filter control efficiency = 95% Anaplex Operating Schedule	Spray Booth #2 Actual Chromate-Containing Paint Usage Manufacturer filter control efficiency = 95% Anaplex Operating Schedule	
<i>Cancer Risk (per million exposed)</i>					
Point of Maximum Impact (PMI)	161,320	93,625	31,499	15,971	6
Maximally Exposed Individual Resident (MEIR)	931	356	127	69	1567 (AB2588 HRA1) 2115 (Other HRAs)
Maximally Exposed Individual Worker (MEIW)	2,836	5,133	1,730	879	1391
Maximally Exposed Individual Sensitive Receptor (MEISR)	114	39	14	8	6728
<i>Chronic Hazard Index</i>					
Point of Maximum Impact (PMI)	8.4	6.88	-	-	3
Maximally Exposed Individual Resident (MEIR)	0.06	0.03	-	-	2115
Maximally Exposed Individual Worker (MEIW)	2.02	1.46	-	-	1659 (AB2588 HRA1) 1660 (AB2588 HRA2)

Location	AB2588 HRA1	AB2588 HRA2	Alternate HRA3	Alternate HRA4	Receptor Number
	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Filter control efficiency = 90% SCAQMD Operating Schedule	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Filter control efficiency = 90% Anaplex Operating Schedule	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Manufacturer filter control efficiency = 95% Anaplex Operating Schedule	Spray Booth #2 Actual Chromate-Containing Paint Usage Manufacturer filter control efficiency = 95% Anaplex Operating Schedule	
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.009	0.004	-	-	6728
<i>8-Hour Chronic Hazard Index</i>					
Point of Maximum Impact (PMI)	0.51	0.27	-	-	6
Maximally Exposed Individual Resident (MEIR)	0.004	0.001	-	-	1567(AB2588 HRA1) 2115 (AB2588 HRA2)
Maximally Exposed Individual Worker (MEIW)	0.11	0.07	-	-	1391
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.0005	0.0002	-	-	6728
<i>Acute Hazard Index</i>					
Point of Maximum Impact (PMI)	24	24	-	-	17
Maximally Exposed Individual Resident (MEIR)	0.07	0.07	-	-	2115

Location	AB2588 HRA1	AB2588 HRA2	Alternate HRA3	Alternate HRA4	Receptor Number
	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Filter control efficiency = 90% SCAQMD Operating Schedule	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Filter control efficiency = 90% Anaplex Operating Schedule	Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records Manufacturer filter control efficiency = 95% Anaplex Operating Schedule	Spray Booth #2 Actual Chromate-Containing Paint Usage Manufacturer filter control efficiency = 95% Anaplex Operating Schedule	
Maximally Exposed Individual Worker (MEIW)	24	24	-	-	17
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.014	0.014	-	-	6728

The SCAQMD's public notification thresholds are as follows:

- ≥ 10 in a million maximum individual (lifetime) cancer risk (MICR), or
- > 1.0 HIA, or
- > 1.0 HIC.

The SCAQMD Rule 1402 action risk levels for a risk reduction plan are as follows:

- Cancer risk (MICR): 25 in one million, or
- Cancer burden: 0.5, or
- HIA: 3.0, or
- HIC: 3.0.

SCAQMD Rule 1402 also establishes the risk reduction significant risk levels:

- MICR of 100 in one million (1.0×10^{-4}), or
- HIA or HIC of five (5.0) for any target organ system at any receptor location.

AB2588 HRA Results Based on SCAQMD Direction and SCAQMD Operating Schedule

For the SCAQMD operating schedule and other directions, the estimated incremental cancer risk for the maximally exposed individual resident (MEIR) is 931 in a million, and for the maximally exposed individual worker (MEIW) is 2,836 in a million. The maximally exposed sensitive receptor is Gaines Elementary School located at 7340 E. Jackson Street, Paramount, CA 90723; this receptor has an estimated cancer risk of 114 in one million, based on a 30-year residential exposure assumption. Strontium chromate from Spray Booth #2 is the primary contributor to the cancer risk. Detailed discussions on the locations of the Maximum Impact (PMI), MEIR, MEIW, and maximally exposed individual sensitive receptor (MEISR) for cancer and non-cancer risks and 30-year one-in-a-million cancer risk "zone of impact" are all included in Section 5. The excess cancer burden for the total population within the zone of impact is 9.7.

The chronic hazard index (HIC) is 0.06 at the MEIR, and is 2.02 at the MEIW, not accounting for any background concentrations. The highest HIC among the sensitive receptors is 0.009 at the Gaines Elementary School. Sulfuric acid, chromium trioxide, strontium chromate, nickel & compounds, hydrogen chloride, phosphoric acid, and MDI are the primary contributors to the highest HIC. Respiratory system is the primary target organ.

The acute hazard index (HIA) at the MEIR is 0.07 and at the MEIW is 24. The highest HIA for the sensitive receptors is 0.01 at Gaines Elementary School in Paramount. Methyl ethyl ketone is the primary contributor to the highest HIA. Respiratory system is the primary target organ.

The AB2588 HRA results (September 2018 Revision) indicate that the cancer risk of 2,836 in a million at the MEIW and of 931 in a million at the MEIR, and the HIA (24) at the MEIW exceed the SCAQMD Rule 1402 significant risk reduction threshold of 100 and 5.0, respectively. The cancer burden (9.7) exceeds the SCAQMD action risk level of one half (0.5). Therefore, a risk reduction plan is required for Anaplex, as well as expedited actions based on the significant risk level threshold.

Anaplex has already submitted and substantially implemented a Risk Reduction Plan (RRP), per the Rule 1402 significant risk level requirements. An Early Risk Reduction Plan was submitted on March 13, 2017. The original RRP was submitted in June 13, 2017 and demonstrated that maximum cancer risk levels for workers and residents will be well below 10 in million. A revised RRP was submitted in May 17, 2018 and it also demonstrated that post-reduction risk levels will be below action risk levels. Another revised RRP is being submitted that will reflect the results of this Revised 2016 HRA – September 2018 and clarifications requested by AQMD.

AB2588 HRA Results Based on SCAQMD Direction and Anaplex Operating Schedule

The estimated incremental cancer risk for the maximally exposed individual resident (MEIR) is 356 in a million, and for the maximally exposed individual worker (MEIW) is 5,133 in a million. The maximally exposed sensitive receptor is Gaines Elementary School located at 7340 E. Jackson Street, Paramount, CA 90723; this receptor has an estimated cancer risk of 39.2 in one million, based on a 30-year residential exposure assumption. Strontium chromate from Spray Booth #2 is the primary contributor to the cancer risk. Detailed discussions on the locations of the Maximum Impact (PMI), MEIR, MEIW, and maximally exposed individual sensitive receptor (MEISR) for cancer and non-cancer risks and 30-year one-in-a-million cancer risk “zone of impact” are all included in Section 12. The excess cancer burden for the total population within the zone of impact is 12.1.5.

The chronic hazard index (HIC) is 0.03 at the MEIR, and is 1.5 at the MEIW, not accounting for any background concentrations. The highest HIC among the sensitive receptors is 0.004 at the Gaines Elementary School. Sulfuric acid, chromium trioxide, strontium chromate, nickel & compounds, hydrogen chloride, phosphoric acid, and MDI are the primary contributors to the highest HIC. Respiratory system is the primary target organ.

The acute hazard index (HIA) at the MEIR is 0.07 and at the MEIW is 24. The highest HIA for the sensitive receptors is 0.01 at Gaines Elementary School in Paramount. Methyl ethyl ketone is the primary contributor to the highest HIA. Respiratory system is the primary target organ.

The AB2588 HRA results indicate that the cancer risk of 5,133 in a million at the MEIW and of 356 in a million at the MEIR, and the HIA (24) at the MEIW exceed the SCAQMD Rule 1402 significant risk reduction threshold of 100 and 5.0, respectively. The cancer burden (3.6) exceeds the SCAQMD action risk level of one half (0.5). Therefore, a risk reduction plan is required for Anaplex, as well as expedited actions based on the significant risk level threshold.

Anaplex has already submitted and substantially implemented a Risk Reduction Plan (RRP), per the Rule 1402 significant risk level requirements. An Early Risk Reduction Plan was submitted on March 13, 2017. The original RRP was submitted in June 13, 2017 and demonstrated that maximum cancer risk levels for workers and residents will be well below 10 in million. A revised RRP is being submitted that will reflect the results of this Revised HRA and clarifications requested by AQMD.

Alternate HRA Results

Ramboll performed the alternate HRA analyses to account for the higher spray booth filter control efficiency at Anaplex during 2016 based on the manufacturer’s testing results and, in an additional analysis, also reflect paint usage in 2016 consistent with no longer using chromate-containing paints after April 2016 (pursuant to a SCAQMD directive, spraying of chromate-containing paints was halted on April 20, 2016). After that date, Anaplex has stated that chromate-containing paints were either

disposed of as waste or sent to other facilities permitted to use them. The alternate HRA analyses use both purchase records and 1/3rd of purchase records in calculating risk levels. Table ES-1 summarizes the results of the alternate HRA (#3 and #4 above). The results for the alternate HRA analyses focus on cancer risk only because it results in the largest zone of impact compared to the non-cancer risk results.

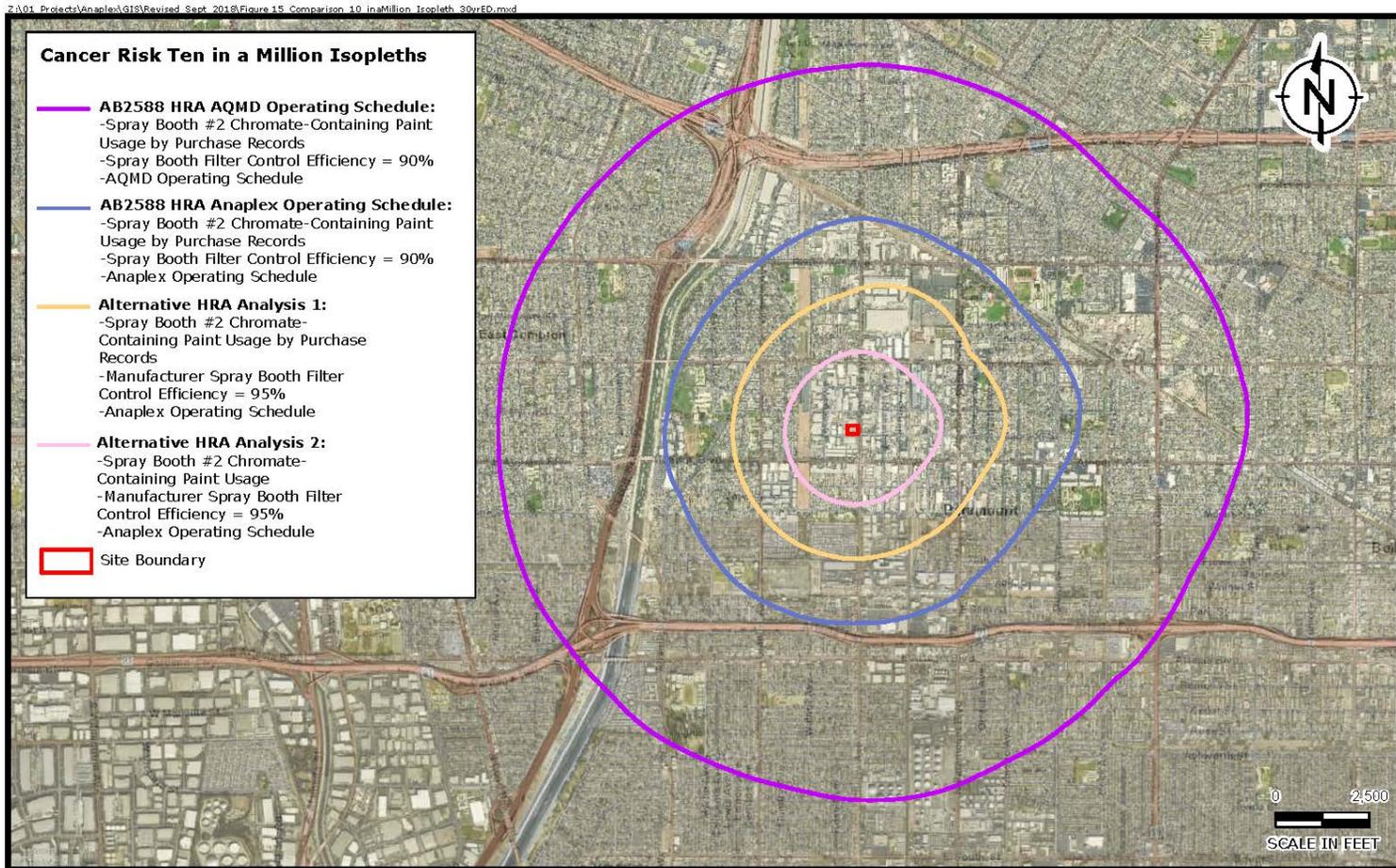
Spray Booth #2 filter control efficiency of 95% per manufacturer testing data, chromate containing paint usage based on purchase records, and actual operating schedule

Ramboll revised the Spray Booth #2 TAC emissions using Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on purchase records in this alternate HRA. As summarized in Table ES-1, the estimated incremental cancer risk for the maximally exposed individual resident (MEIR) is 127 in a million, and for the maximally exposed individual worker (MEIW) is 1,730 in a million. The locations of the PMI, MEIR, MEIW, and MEISR for cancer risk are the same as those in the Revised 2016 HRAs, with the exception of cancer risk MEIR and worker chronic HI MEIW for Revised 2016 HRA- September 2018.

Spray Booth #2 filter control efficiency of 95% per manufacturer testing data, chromate containing paint usage based on actual usage, and actual operating schedule

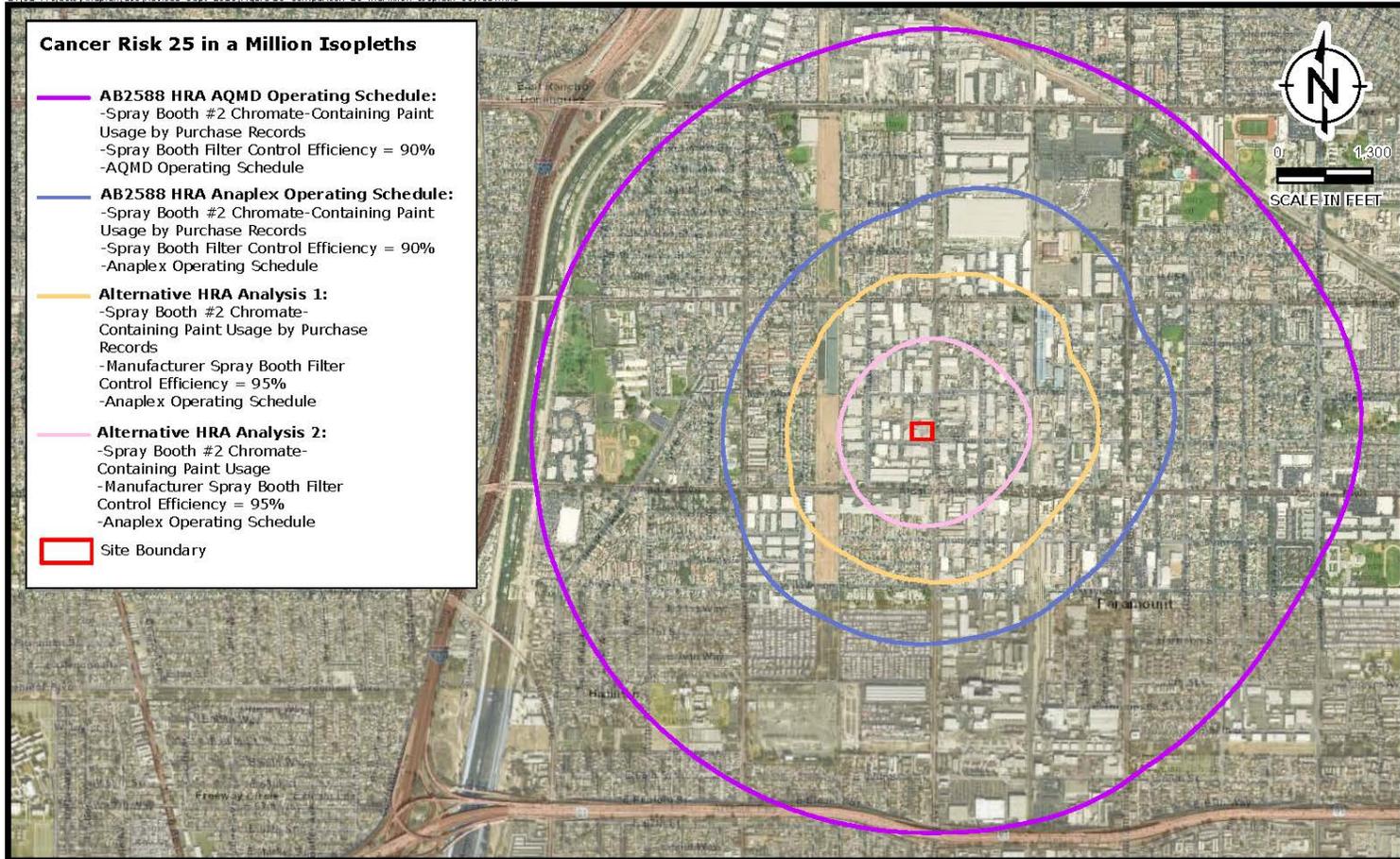
Ramboll revised the Spray Booth #2 TAC emissions using Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on chromate containing paint usage curtailed after April 2016 in this alternate HRA. As presented in Table ES-1, the estimated incremental cancer risk for the maximally exposed individual resident (MEIR) is 69 in a million, and for the maximally exposed individual worker (MEIW) is 879 in a million. The locations of the PMI, MEIR, MEIW, and MEISR for cancer risk are the same as those presented in the Revised 2016 HRAs, with the exception of cancer risk MEIR and worker chronic HI MEIW for Revised 2016 HRA- September 2018.

Figures ES-1 and ES-2 at the end of this Executive Summary show cancer results for AB2588 HRAs as well as the alternate HRA analyses; ten-in-a-million and twenty-five-in-a-million cancer risk isopleths for all three sets of the HRA results based on the 30-year residential exposure assumptions are presented, respectively. 10-in-a-million risk level corresponds to the public notification level, while 25-in-a million represents the higher risk levels that triggered risk reduction planning. As shown in Figures ES-1, although all four sets of the results show cancer risk exceeds the public notification level, the alternate HRA results using the manufacturer's filter control efficiency and actual 2016 operating conditions in terms of emissions and operating hours at Anaplex would have resulted in a much smaller public notification area. The results of these AB288 HRAs contain conservative assumptions (i.e., use of SCAQMD's operating schedule, use of maximum TAC weight percentage in paints and solvent, use of 2016 purchase records, use of filter control efficiency of 90%) would over-report emissions and therefore risk levels.



	Comparison of Residential Cancer Risk Ten in a Million Isopleths 30-year Exposure Anaplex Corporation 15547 Garfield Ave, Paramount, California	FIGURE ES-1
	DRAFTED BY: MG DATE: 9/21/2018	PROJECT: 1690003769

Z:\01_Projects\Anaplex\GIS\Revised Sept. 2018\Figure 16 Comparison 25 in a Million Isopleth 30yrED.mxd



	Comparison of Residential Cancer Risk 25 in a Million Isopleths 30-year Exposure	FIGURE ES-2
	Anaplex Corporation 15547 Garfield Ave, Paramount, California	PROJECT: 1690003769
DRAFTED BY: MG	DATE: 9/21/2018	

**HEALTH RISK ASSESSMENT SUMMARY FORM FOR AB2588 HRA1:
SCAQMD DIRECTION AND SCAQMD OPERATING SCHEDULE**



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

HEALTH RISK ASSESSMENT SUMMARY FORM

Facility Name : ANAPLEX Corporation (ID: 016951)
Facility Address: 15547 Garfield Ave. Paramount, CA 90723
Type of Business: Metal Plating
Inventory Year : **2016 Revised HRA** (Sept 2018 Submittal)

* SCAQMD Operating Schedule
* 90% S/B filter eff * 16 Sources (9 points, 6 volumes & 1 area) *
Solvent Bath modeled as Continuous Area source * 6847 Receptors
with 20-meter space imported from Anaplex modeling file * WAF of
1.54 applied for worker due to noncontinuous emissions from 13
sources per facility operating schedule * NED terrain

A. Cancer Risk

(One in a million means one chance in a million of getting cancer from being constantly exposed to a certain level of a chemical over a period of time)

- Maximum Cancer Risk to Receptors : (Offsite and residence = 30-year exposure, worker = 25-year exposure)

a. Offsite	<u>161,320</u>	in a million	Location:	<u>#6 (391889.30E, 3750691.10N, Fenceline)</u>
b. Residence	<u>931</u>	in a million	Location:	<u>#1567 (392200E, 3750720N, Northwest of Illinois and Madison)</u>
c. Worker	<u>2,836</u>	in a million	Location:	<u>#1391 (391880E, 3750660N, 30 m south facility)</u>
- Substances Accounting for 90% of Worker Cancer Risk: Strontium Chromate (97.0%)
Processes Accounting for 90% of Worker Cancer Risk: Painting in spray booths (per purchase order not usage records)
- Estimated Population Exposed to Specific Risk Levels for a 70-year exposure

a. 1 to <10 in a million	<u>2,120,397</u>	
b. 10 to <100 in a million	<u>150,356</u>	
c. >100 in a million	<u>6,541</u>	
d. Total >= 1 in a million	<u>2,277,294</u>	

* 31,358 Census tracks from HARP (approx 15-30 km Radius from 391870E; 3750725N)
- Cancer Burden: 9.73 *Cancer Burden = (cancer risk) x (no. of people exposed to specific cancer risk)*
- Maximum Distance to Edge of 70-year, 1×10^{-6} Cancer Risk Isoleth (meters) 17,137

B. Hazard Indices

[Long Term Effects (chronic) and Short Term Effects (acute)]
(non-carcinogenic impacts are estimated by comparing calculated concentration to identified reference exposure levels, and expressing this comparison in terms of a "Hazard Index")

- Maximum Chronic Hazard Indices:

a. Residence HI:	<u>0.056</u>	Location:	<u>#2115 (392040E, 3750920N)</u>	
b. Worker HI :	<u>2.022</u>	Location:	<u>#1659 (391880E, 3750760N)</u>	toxicological endpoint: <u>RESP</u>
- Substances Accounting for 90% of Chronic HI: Sulfuric Acid (60%), Chromium Trioxide (9%), Nickel (8%), Strontium Chromate (6%), Hydrochloric acid (4%), MDI (3%)
- Maximum 8-hour Chronic Hazard Index:

8-Hr Chronic HI:	<u>0.509</u>	Location:	<u>#6 (391889E, 3750691N)</u>	toxicological endpoint: <u>RESP</u>
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- Substances Accounting for 90% of 8-hr Chronic HI: MDI (67%), Nickel (13%), Formaldehyde (11%)
- Maximum Acute Hazard Index:

PMI:	<u>23.8</u>	Location:	<u>#17 (391872.70E, 3750758.40N, Fenceline)</u>
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- Substances Accounting for 90% of Acute HI: MEK (98%) toxicological endpoint: RESP

C. Public Notification and Risk Reduction

- Public Notification Required? Yes No
a. If 'Yes', estimated population within the notification area. _____
- Risk Reduction Required? Yes No

**HEALTH RISK ASSESSMENT SUMMARY FORM FOR AB2588 HRA2:
SCAQMD DIRECTION AND ANAPLEX OPERATING SCHEDULE**



South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

HEALTH RISK ASSESSMENT SUMMARY FORM

(Required in Executive Summary of HRA)

Facility Name :	Anaplex Corporation	* Anaplex Operating Schedule * 90% S/B filter eff * 16 Sources (9 points, 6 volumes & 1 area) * Solvent Bath modeled as Area source * 6847 Receptors with 20-meter space imported from Anaplex modeling file * WAF (4.2) applied for worker due to annualized emissions except for 24-7 operations
Facility Address:	15547 Garfield Ave	
Type of Business:	Paramount, CA 90723	
SCAQMD ID No.:	Metal finishing	
	016951	

(One in a million means one chance in a million of getting cancer from being constantly exposed to a certain level of a chemical over a period of time)

A. Cancer Risk

1. Inventory Reporting Year : 2016
2. Maximum Cancer Risk to Receptors : *(Offsite and residence = 30-year exposure, worker = 25-year exposure)*

a. Offsite	<u>93,625</u> in a million	Location: <u>391889, 3750691</u> (Fenceline, southern boundary)
b. Residence	<u>356</u> in a million	Location: <u>392040, 3750920</u> (325 m NE of facility)
c. Worker	<u>5,133</u> in a million	Location: <u>391880, 3750660</u> (30 m south of facility)
3. Substances Accounting for 90% of Cancer Risk: Strontium chromate (paint), sodium dichromate
Processes Accounting for 90% of Cancer Risk: Painting in spray booths (per purchase not usage records)
4. Cancer Burden for a 70-yr exposure: *(Cancer Burden = [cancer risk] x [# of people exposed to specific cancer risk])*

a. Cancer Burden		<u>3.6</u>
b. Number of people exposed to >1 per million cancer risk for a 70-yr exposure		<u>1,198,675</u>
c. Maximum distance to edge of 70-year, 1 x 10 ⁻⁶ cancer risk isopleth (meters)		<u>12,900</u>

B. Hazard Indices

*[Long Term Effects (chronic) and Short Term Effects (acute)]
(non-carcinogenic impacts are estimated by comparing calculated concentration to identified Reference Exposure Levels, and expressing this comparison in terms of a "Hazard Index")*

1. Maximum Chronic Hazard Indices:

a. Residence HI: <u>0.03</u>	Location: <u>392040, 3750920</u>	toxicological endpoint: <u>Respiratory system</u>
b. Worker HI: <u>1.5</u>	Location: <u>391900, 3750760</u>	toxicological endpoint: <u>Respiratory system</u>
2. Substances Accounting for 90% of Chronic Hazard Index: Sulfuric acid, chromium trioxide, nickel & compounds, strontium chromate, MDI
3. Maximum 8-hour Chronic Hazard Index:

8-Hour Chronic HI: <u>0.067</u>	Location: <u>391880, 3750660</u>	toxicological endpoint: <u>Respiratory system</u>
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4. Substances Accounting for 90% of 8-hour Chronic Hazard Index: MDI, nickel & compounds, formaldehyde
5. Maximum Acute Hazard Index:

PMI: <u>24</u>	Location: <u>391873, 3750758</u>	toxicological endpoint: <u>Respiratory system</u>
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6. Substances Accounting for 90% of Acute Hazard Index: Methyl ethyl ketone

C. Public Notification and Risk Reduction

1. Public Notification Required? Yes No
 a. If 'Yes', estimated population exposed to risks > 10 in a million for a 30-year exposure, or an HI > 1
31,452
2. Risk Reduction Required? Yes No

Revised 4/30/2015

**AB2588 HEALTH RISK ASSESSMENT (HRA) BASED ON SCAQMD DIRECTION
AND SCAQMD OPERATING SCHEDULE (AB2588 HRA1)**

1. INTRODUCTION

1.1 Background

At the direction of SCAQMD staff, this September 2018 revision of the Air Toxics Hot Spots (AB2588) Health Risk Assessment (HRA) Report for the Anaplex Facility (“the Facility”, SCAQMD Facility ID 016951) is being submitted on behalf of Anaplex Corporation, located at 15547 Garfield Avenue in Paramount, California. ALG, Inc. (ALG) previously prepared an AB2588 HRA for Anaplex and submitted to SCAQMD on June 13, 2017 (referred to hereinafter as the “Original 2016 HRA”). Per the review comments on the Original 2016 HRA by SCAQMD in its letters to Anaplex dated December 8, 2017 and April 17, 2018, Ramboll US Corporation (Ramboll) prepared a revised report (referred to hereinafter as “Revised 2016 HRA – May 2018”).

In late July 2017, SCAQMD staff contacted Anaplex and stated that the 2016 HRA should model the facility’s emissions as if they were evenly distributed (i.e., 24/7/365 operations) unless continuous emissions monitor system (CEMS) or similar data for individual Anaplex operations. This type of monitoring is neither required nor possible for historical Anaplex operations, which generally involve tank-based plating and anodizing and/or spray painting of parts. SCAQMD staff requested, and Anaplex complied, modeling of operations over a 24/7/365 schedule. Anaplex stated that they did not operate on a 24/7/365 schedule and never have; they note that they have operated the same 1-shift per weekday plating/anodizing/painting schedule they have operated under for over 40 years, with office, minor maintenance and sometimes masking operations for some Saturday hours. In August, Anaplex submitted ampere-hour records, water discharge records, and hour electrical usage data from Southern California Edison (SCE) in support of their 2016 operating schedule). These records are described and summarized in Appendix A and are consistent with Anaplex’s routine and predictable operations.

Upon further review of these records, SCAQMD directed the Facility to model their 2016 emissions using the following operating schedule [SCAQMD Operating Schedule]

- Monday through Thursday: 1am to 8pm (19 hours per day)
- Friday: 1am to 7pm (18 hours per day)
- Saturday: 1am to 4pm (15 hours per day)
- Sunday: no operation

This schedule presumes plating/anodizing/painting operations with little or no facility lighting and ventilation during the earliest hours of the morning (i.e., 1am to 6am) from Monday through Saturday, which is non-sensical and is not based on the “routine and predictable” operations of Anaplex, as required by OEHHA guidance. Anaplex has never operated in this fashion in any of its 40+ years of operations. Despite the fact this schedule does not represent how the facility actual operating schedule in 2016, at the SCAQMD’s explicit direction and command, this revised HRA report (Revised 2016 HRA - September 2018) includes an analysis and AB2588 summary based on the SCAQMD’s operating schedule.

Except for using the SCAQMD’s operating schedule, which does not reflect the routine and predictable operations of Anaplex in 2016 or any other year, this report follows relevant AB2588 HRA guidance from OEHHA and SCAQMD, and the USEPA guidelines for air dispersion modeling.

1.2 Health Risk Assessment Format and Definitions

For the purpose of this AB2588 HRA, acute, chronic, and cancer health impacts are defined as follows:

- Acute risks are non-cancer adverse health impacts, commonly associated with exposures to relatively high concentrations of toxic air contaminants (TAC) over short periods of time, from minutes to hours. Acute exposure typically results in headaches, dizziness, nausea, eye/nose/throat irritation, and/or skin rash. Each toxic chemical may affect the body through different mechanisms. Target organs for each TAC have been identified by OEHHA in its guidance document.
- Chronic risks are non-cancer adverse health impacts, commonly associated with exposures to relatively low concentrations of TACs over long periods of time, as in several years. Typical symptoms of chronic exposure include persistent respiratory or digestive problems, chronic cough, chest pains, numbness or tingling, loss of smell or taste, etc. As with acute risks, the target organs due to chronic risks that will be analyzed in this HRA may affect the body through different mechanisms and have been identified by OEHHA (OEHHA, 2015).
- Cancer is defined as the abnormal or irregular growth of cells or tissue. There are many triggers that may cause or increase the risk of cancer, including exposure to certain chemicals or TACs. The increased risk of cancer from exposure to a chemical means the additional risk of getting cancer from continuous exposure (i.e., 30 years and 365 days per year) to potentially cancer-causing compounds. Cancer risk is usually expressed as a probability (e.g., ten excess chances of contracting cancer in one million exposed individuals).

In general, this AB2588 HRA – September 2018 provides conservative estimates of the probabilities for contracting adverse health effects due to the processes occurring at the facility. A “conservative” estimate assumes that the worst-case exposure conditions exist so that the health effects are not underestimated.

1.3 Significance Criteria and Notification Levels

Under AB2588, the operator of a facility must provide notices to all exposed persons if the facility’s health risk assessment indicates that there is a significant health risk associated with the air toxic emissions from the facility. The SCAQMD’s public notification thresholds are as follows:

- Greater than or equal to 10 maximum individual (lifetime) cancer risk (MICR),
- Greater than 1.0 Hazard Index Acute (HIA), or
- Greater than 1.0 Hazard Index Chronic (HIC).

The operator is also required to implement risk reduction measures if the emissions from the facility cause an exceedance of any of the following Action Risk Levels in SCAQMD Rule 1402:

- MICR of twenty-five in one million,
- Cancer burden of 0.5, or
- Total HIA or HIC of three (3.0) for any target organ system at any receptor location.

SCAQMD Rule 1402 also establishes significant risk levels; facilities above these levels are required to submit a risk reduction plan, as well as expedited actions to implement the Risk Reduction Plan:

- MICR of 100 in one million, or
- Total HIA or HIC of five (5.0) for any target organ system at any receptor location.

1.4 Objectives

Consistent with AB2588 requirements, the objective of this HRA report is to estimate potential risks to human populations in the vicinity of the Facility that may be exposed to potential operational emissions. At the direction of SCAQMD staff, potential operational emissions were modeled based on 2016 Facility emissions

The methodologies used to complete the Revised 2016 HRA - September 2018 are based on the SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588) ("SCAQMD Supplemental Guidelines," SCAQMD 2016) as well as the District-approved Office of OEHHA of Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments ("OEHHA Guidance," OEHHA 2015) except for the operating schedule. As stated in the Section 4.2.1.3 of the 2015 OEHHA guidance, "For AB2588 purposes, emissions should be reported based on routine and predictable operations. Weekly or seasonal emission patterns may vary and should be discussed. This is especially important in a refined HRA. Diurnal emission patterns should be simulated in the air dispersion model because of diurnal nature of meteorological observations. Diurnal evaluations are important to include since diurnal weather patterns and emission releases may cause significant differences in the concentration at a receptor of interest." The operating schedule modeled in this revised HRA is at the SCAQMD's direction, and it does not depict the Facility's operation in 2016 accurately.

As prescribed in the OEHHA Guidance, the Hotspots Analysis Reporting Program (HARP) model was used to estimate the potential impacts to human health in the vicinity of the Facility. Dispersion of potential emissions attributable to the Facility was modeled using the American Meteorological Society/Environmental Protection Agency regulatory air dispersion model (AERMOD version 18081). The results from AERMOD were imported into the Risk Analysis module of HARP2, developed by the California Air Resources Board (ARB), to calculate the potential cancer risk¹, potential chronic non-cancer hazard index (HI), and potential acute HI at an array of receptors.

This report includes the sections corresponding to the sections in SCAQMD's HRA outline contained in Appendix C of the SCAQMD Supplemental Guidelines as follows:

- Table of Content corresponds to Section I in SCAQMD guidelines
- Executive Summary corresponds to Section II in SCAQMD guidelines
- Section 2 Hazard Identification corresponds to Section III.A in SCAQMD guidelines
- Section 2.1 Facility Location and Process Description corresponds to Section III.B.1 in SCAQMD guidelines

¹ Cancer risks evaluated in the 2016 HRA refer to the calculated excess cancer risk due to potential emissions at the Facility, as required by OEHHA and SCAQMD guidance documents.

- Section 2.3 Quantification of Emissions corresponds to Section III.B.2 in SCAQMD guidelines
- Section 3.1 Air Dispersion Modeling corresponds to Section III.B.3 in SCAQMD guidelines
- Section 3.3 Source Parameters and Operating Schedule corresponds to III.B.2 in SCAQMD guidelines
- Sections 4 and 5 Risk Assessment Procedures correspond to III.C in SCAQMD guidelines
- Section 16 References corresponds to III.D in SCAQMD guidelines

2. HAZARD IDENTIFICATION

2.1 Facility Location and Process Description

Anaplex Corporation (SCAQMD ID #016951) is a metal finishing facility located in the city of Paramount at 15547 Garfield Avenue. Figure 1 shows the facility location and its vicinity. The land use in the immediate vicinity of the facility is primarily industrial or commercial urban area with the nearest residential neighborhood approximately 200 meters to the northeast. The topography around the facility is generally flat. The facility's layout showing the locations of the various buildings and the emission sources is included as Figure 2. As recommended in the SCAQMD Supplemental Guidelines and the SCAQMD Modeling Guidance for AERMOD (SCAQMD, 2016), the urban dispersion option was used with a population of 9,818,605, based on the population of Los Angeles County.

Due to its location in an urbanized area with no drinking water reservoirs within the zone of influence, exposure to TACs from the Facility was estimated for the inhalation, dermal, soil ingestion, home-grown produce, and mother's milk pathways enabled.² The input parameters for each pathway are further discussed in Section 4.1.

Anaplex performs metal finishing operations (electroplating and anodizing) primarily for the aerospace industry. Metals finished at this location include aluminum, stainless steel, steel, copper, brass, titanium, and magnesium. Potential onsite sources of emissions include the anodizing and plating tanks, curing and drying ovens, paint spray booths, and miscellaneous natural gas sources such as boilers.

2.2 Substances Emitted and Evaluated

The list of potentially emitted substances considered in preparation of the Revised 2016 HRA is from Appendix A-I of the California Air Resources Board (CARB) AB2588 requirements and the OEHHA Guidance. The AB2588 TACs potentially emitted from the Facility are shown in Table 1. Table 2 also includes an identification of which compounds are evaluated for cancer risk, non-cancer chronic, or non-cancer acute impacts, as well as which compounds have non-inhalation routes of exposure.³

For carcinogens, cancer potency factors (CPF) were used for computing cancer risk. For non-cancer health effects, reference exposure levels (REL) were used. The non-carcinogenic hazard indices were computed for chronic and acute exposures with their respective toxicological endpoints shown. For multipathway pollutants, oral doses, oral CPFs, and/or non-inhalation RELs were used as appropriate. Details of the risk assessment procedures used are included in Section 4.

2.3 Quantification of Emissions

Anaplex has the following TAC emission sources. Ramboll divided these sources into three groups based on the source configuration (e.g., point, volume, or area source) used in the air dispersion model. More details on the source characterization are discussed in Section 3.2.

1. Point sources
 - Spray booths #2, #3, #4

² Home-grown produce and mother's milk pathways are only applicable to potential residential exposures.

³ All potential non-inhalation pathways are listed in Table 1.

- Three boilers
 - One vapor degreaser vented to a carbon canister
 - Two drying ovens
2. Volume sources
- Anodizing tanks
 - Plating tanks
 - Paint and solvent usage in masking areas
 - Abrasive blasting
3. Area sources
- Two solvent baths

Annual and maximum hourly emissions for TACs were reported from sixteen source groups as shown in Table 1. Ramboll relied on the TAC emissions from the Original 2016 HRA prepared by ALG and reviewed by the SCAQMD in the Revised 2016 HRA – May 2018 except for the following source categories where TAC emissions were updated in response to the SCAQMD's comment letters dated December 7, 2017 and April 17, 2018. The emission calculation methodology and emission updates were discussed in the sections below.

2.4 Spray Booth Emissions

Three spray booths (#2, #3, and #4) were used to apply paint in 2016. All three booths are located in the east building, and emissions from each booth were directed to stacks on the building roof. As requested by the AQMD in the ATIR comment letters (December 7, 2017 and April 17, 2018), the maximum value of toxic chemical specification (i.e., weight fraction) was used if the TAC% is provided in a range. Despite the fact that this is unlikely to represent the Facility's operating condition, the TAC emissions were estimated using the maximum value of the specification range. Paint spray booth VOC emissions were calculated by multiplying the paint usage by the maximum of toxic chemical weight fraction at the direction from the SCAQMD staff.

Paint spray booth particulate emissions were calculated following the SCAQMD guidelines⁴ based on the total paint quantity purchased in 2016 multiplied by the maximum of the toxic chemical weight fraction, an AQMD default 65% solids transfer efficiency, and PM control efficiency of filters. 90% PM filter control efficiency was used at the direction of SCAQMD staff for AB2588 HRA. AQMD staff stated that filter control efficiency of 90% should be used based on the permit description. In addition, SCAQMD insisted that in the absence of a SCAQMD's approved source, 90% control efficiency should be used in this AB2588 HRA, although Ramboll has submitted the manufacturer's testing data (see Appendix A) to support the control efficiency at 95% or higher. Therefore, TAC emissions from spray booth included in Table 1 are based on the 90% PM control efficiency for the filters for the purpose of AB2588 in the Revised 2016 HRA. It should be noted that because chromate emissions from Spray Booth #2 is the dominant risk driver, Ramboll performed alternate HRA analyses to evaluate the potential impact of use of the conservative emissions from Spray Booth #2 on

⁴ Guidelines for Reporting Emissions from the Use of Materials Containing Organic Compounds - December 2016. Available at <http://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/guidelreprtorgcompounds.pdf?sfvrsn=2>. Accessed: May 2018.

the risk results, which does not reflect the facility operations in 2016. These conservative assumptions include the chromate-containing paints usage and the spray booth PM control efficiency. In the alternate HRA, spray booth TAC emissions were calculated using 1) paint usage based on 2016 purchased records and 95% filter control efficiency, and 2) one-third of the purchase records and 95% filter control efficiency per manufacturer's testing data. One-third of purchased chromate-containing paint usage was used for the alternate risk analyses since spraying of chromate-containing paints was halted on April 20, 2016 (i.e., the first four months of 2016 only, assuming consistent annual paint use) pursuant to a SCAQMD directive.

Emissions were assumed to occur during the following operating hours at SCAQMD's direction (SCAQMD Operating Schedule)

- Monday through Thursday: 1am to 8pm (19 hours per day)
- Friday: 1am to 7pm (18 hours per day)
- Saturday: 1am to 4pm (15 hours per day)
- Sunday: no operation

2.5 Anodizing and Plating Tank Emissions

A total of 31 and 47 tanks in the anodizing and plating area, respectively, contained toxic chemicals in 2016. Similar to the paints used in the spray booth, Ramboll revised the TAC emissions from anodizing and plating tanks by using the maximum value of the specification range for the tank solution instead of the average value. Emissions resulted from evaporation, plating, sparging, and heating operations, and were released through roof vents and rollup doors on the east and west sides of the building. In response to the SCAQMD's HRA comment of the source configuration for these tanks followed up with the technical discussion with SCAQMD staff, emissions from these tanks were modeled as multiple adjacent volume sources representing the release occurring in the east building where the anodizing and plating tanks are located as shown in Figure 2. It was assumed that evaporation emissions (Source IDs = ANODZEV and PLATEEV) occurred continuously (24 hours per day, 7 days per week) while plating, sparging, and heating emissions (Source IDs = ANODZPSH and PLATEPSH) occurred only during SCAQMD operating hours

Anodizing and plating tank emissions were calculated using a methodology provided by SCAQMD in the Original 2016 HRA prepared by ALG with the updates on Tank 4, Tank 19, Tank 22 to address SCAQMD comments on the ATIR. Data used in the emission calculations included metal plating efficiencies, material densities and toxic chemical weight fractions (taken from manufacturer safety data sheets), toxic chemical vapor pressures, and tank operational data such as tank dimensions, solution temperature, number of heating cycles, air sparge rates, air sparge hours, rectifier amp ratings, and rectifier amp hours. Emissions from the anodizing and plating tanks in 2016 were generally uncontrolled, with the exception of Tank 19 which used a fume suppressant that controlled particulate emissions at an estimated efficiency of 96.8%. As requested by the SCAQMD and discussed in the Revised 2016 HRA – May 2018, Ramboll revised the plating emissions from Tank 19 using the emission limit of 0.01 mg Cr⁶⁺/amp-hr (0.000022 lb/1000 amp-hr). Ramboll also revised Tank 4 emissions using 1.45 x 10⁻⁴ lb Cr⁶⁺/hr from the results of Anaplex's source test on April 10-12, 2017 in calculating the heating and sparging emissions for Dow 7 tank (Tank 4). Lastly, Ramboll updated Tank 22 emissions using the emission factor of 1.29 x 10⁻⁴ lb Cr⁶⁺/hr calculated based on 1.07 x 10⁻⁶ lb Cr⁶⁺/(hr-ft² tank surface area-% sodium

dichromate in solution) multiplied by tank 22 surface area of 24 ft², and the percent sodium dichromate in solution of 5.01 as suggested by the AQMD.

2.6 Other Emission Sources

The emission calculations for other sources used in the Revised 2016 HRA are consistent with those presented for the Original 2016 HRA and the Revised 2016 HRA – May 2018. The description of these other sources modeled and emission calculation methodology is provided in Table 3. Except for the updates discussed above, Ramboll used the original TAC emission estimates prepared by ALG and reviewed by the SCAQMD for other sources in the Revised 2016 HRAs (May 2018 and September 2018 revision). Emission files (see Appendix C) used in the 2016 HRA are provided electronically.

3. EXPOSURE ASSESSMENT

3.1 Air Dispersion Modeling

Ramboll used AERMOD (version 18081) to estimate ambient concentrations for the Facility. The air dispersion analysis was performed in accordance with OEHHA Guidance, the SCAQMD Supplemental Guidelines, and SCAQMD Modeling Guidance for AERMOD. The results of the air dispersion analysis were used in conjunction with the chemical-specific emissions rates discussed above to estimate potential ambient air concentrations of each compound using Air Dispersion Modeling and Risk Tool (ADMRT) module in HARP developed by ARB.⁵

The air dispersion analysis requires the following: identification of source parameters and operating schedules, evaluation of building downwash effects, preparation of meteorological data, evaluation of potential terrain considerations, selection of appropriate dispersion coefficients based on land use, selection of receptor locations, and selection of appropriate averaging time periods. The following sections describe each of these steps.

Appendix D provide electronic files related to the air dispersion modeling analysis.

3.2 Source Characterization

AERMOD requires source-specific parameters such as stack height, stack inside diameter, exit velocity, and stack gas temperature. Table 4 present the source parameters used in the AERMOD model for each modeled TAC emission source.

Three different representations of emission sources are used in the air dispersion model:

- Point sources;
- Area sources; and
- Volume sources.

Point sources are used to represent those emissions that have single identifiable points of release. A typical point source will have a stack with a defined location. Other sources, however, do not have a single, discrete point of release. Sources that can be reasonably represented as emitting at a uniform rate over a two-dimensional surface are modeled as area sources. Sources that can be reasonably represented as emitting at a uniform rate from a three-dimensional space are modeled as volume sources. Figure 2 shows the modeled TAC emission sources at the facility.

3.3 Source Parameters and Operating Schedules

All source parameters used in the Revised 2016 HRA – September 2018 are consistent with those presented for the Original 2016 HRA, with the exception of the following:

- As discussed in the Revised 2016 HRA – May 2018, to account for the emissions escaping from the building through doors and windows, anodizing and plating emissions, solvent usage emissions in masking areas, and abrasive blasting emissions are modeled as volume sources with a release height of one-half of the building height, as presented in Table 4. The locations of potential onsite sources and nearby buildings are included as Figure 2. The source parameters for these volumes were previously reviewed and approved by the SCAQMD to use in the Revised 2016 HRA – May 2018. Routine sources were modeled according to the SCAQMD's operating schedule (15 - 19 hours per day,

⁵ HARP is available for download online at: <https://www.arb.ca.gov/toxics/harp/harp.htm>.

and 6 days per week), while evaporative emissions from anodizing and plating tanks, and solvent bath emissions were modeled assuming continuous operation.

3.4 Building Downwash

All the point sources at the facility are located on or near the buildings (refer to Figure 2). Consistent with SCAQMD Modeling Guidance for AERMOD, the USEPA-approved Building Profile Input Program PRIME (BPIPPRIME) was used to simulate the building downwash, which is the effect of nearby structures on the flow of the plumes from their respective emission sources. Figure 2 shows the buildings included.

3.5 Dispersion Parameters

Per the SCAQMD Modeling Guidance for AERMOD, the urban dispersion option was used, with a population of 9,818,605, based on the population of Los Angeles County. AERMOD was run using the regulatory default option, also per SCAQMD Modeling Guidance for AERMOD.

3.6 Meteorological Data

SCAQMD's Compton meteorological station was selected as the most representative surface station for the facility based on the technical discussion with the SCAQMD staff. As noted on the AQMD's website⁶, Compton station only has three years of the processed meteorological data available but can be used for modeling upon request and approval of use.⁷ Three years of Compton meteorological data with ADJ_U* option was used for the air dispersion modeling in the Revised 2016 HRA – September 2018. A wind rose for the Compton data in 2012, 2015, and 2016 is provided in Figure 4.

3.7 Terrain

Terrain data were obtained from the United States Geological Survey (USGS), with 1/3 arc-second (~10 meter) National Elevation Dataset (NED) data downloaded. Elevations and hill heights were calculated for all sources, buildings, and receptors, using AERMOD terrain preprocessor, AERMAP.

3.8 Receptor Locations

Health effect indices such as cancer risk, chronic hazard index, and acute hazard index were calculated for a variety of receptor locations. Receptors of primary interest are those at residential locations, at sensitive population locations, and at offsite worker locations. However, in order to get a more complete picture of the patterns of exposure, concentrations and risk are also calculated at regularly spaced grid points throughout the modeling domain.

Receptor networks were constructed for the dispersion analysis based on SCAQMD modeling guidance⁸, including along the property boundary line and out to 500 meters from the facility boundary with a spacing of 20 meters,⁹ a fine grid containing receptors spaced 50 meters apart out to a 1,000-meter radius from the Facility, a medium coarse grid containing receptors spaced 100 meters apart out to a 2-km radius from the Facility, and a coarse grid containing receptors spaced 500 meters apart out to 5,500 m from the facility boundary. The

⁶ <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/aermod-table-1>

⁷ Provided by Melissa Sheffer on January 30, 2018.

⁸ South Coast Air Quality Management District, Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act, November 4, 2016, Table 9.

⁹ Per SCAQMD Supplemental Guidelines, a receptor spacing of 20 meters was used to place boundary receptors since the total Facility area is less than 4 acres.

grid receptor locations inside of the facility boundary are disregarded in the health risk analysis. Consistent with SCAQMD Modeling Guidance for AERMOD, all receptors were run with a height of 0.0 meters, so that ground-level concentrations are modeled. Sensitive receptor locations (schools, day care facilities, and hospitals) as included in Table 5 were obtained via an internet search and the Google Maps database. A total of 6,506 fence-line and grid receptors were included in the analysis, plus an additional 341 sensitive receptors, for a total of 6,847 receptors.

Additionally, to calculate population exposure and cancer burden, separate dispersion modeling runs were performed at receptors located at the centroid of census tracts whose centroid was located within the modeling domain. The HARP model contains the census tract centroid UTM coordinates and population values from the 2010 census; this data was exported from HARP to create the census tract centroid receptor grid. A total of 31,358 census tract centroid receptors were modeled; Figures 3a – 3d show these receptor locations.

3.9 Coordinate System

Ramboll used the Universal Transverse Mercator (UTM) system of coordinates and the North American Datum (NAD 83) for identifying the UTM coordinates of the various modeling objects (sources, buildings, receptors etc.).

3.10 Averaging Times

Calculation of chemical concentrations for use in exposure analysis requires the selection of appropriate concentration averaging times. Multiple dispersion averaging times are used in this analysis and are discussed below. The AERMOD model input and output files used to estimate long- and short-term dispersion factors are presented as an electronic attachment in Appendix D.

3.10.1 Long Term

Average concentrations over the three-year span of the Compton meteorological data were calculated for each compound for use in estimating potential residential cancer risks and chronic non-cancer health effects.

3.10.2 Short Term

Maximum short-term concentrations (one-hour averages) of the three-year period modeled were calculated using maximum hourly emission rates to estimate acute non-health effects. One-hour maximum source-specific concentrations were summed regardless of time of occurrence (*i.e.*, hour of year), which can differ by source, thereby conservatively overestimating the true one-hour maximum at any one time.

3.11 Dispersion Factors

Both point and area source emissions were modeled using the X/Q ("chi over q") method, such that emission source groups are input to the model with unit average annual emission rates (*i.e.*, 1 gram per second [g/s]), and the model estimates 1-hour maximum or annual average dispersion factors (with units of $[\mu\text{g}/\text{m}^3]/[\text{g}/\text{s}]$). To calculate annual average ambient air concentrations, the period average dispersion factors were multiplied by the annual emission rates. To calculate 1-hr maximum ambient air concentrations, the 1-hr maximum dispersion factors were multiplied by the maximum hourly emission rates.

3.12 Ground-Level Concentrations

Ground-level concentrations (GLCs) in the ambient air at each of the modeled Point of Maximum Impact (PMI), Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual Worker (MEIW), and maximally exposed individual sensitive receptor (MEISR) for both the long- and short-term scenarios are shown in Tables 6 and 7.

4. RISK ASSESSMENT PROCEDURES

Modeled health risks were estimated for the Facility based on methods and tools outlined in the OEHHA Guidance. Potential Facility emissions and air dispersion results, using the HARP ADMRT tool, were input into HARP2, the OEHHA-recommended program for completing an HRA. The HARP emissions file used is provided in Appendix E.

4.1 Identification of Potentially Exposed Populations

The potentially exposed populations considered include current residents, off-site workers, and sensitive receptors located within the grid of receptors and described in Section 3.8. Locations of each potentially exposed population were identified based on review of aerial photographs (Google Earth 2016). The nearest residential property identified is located at the residential property near the intersection of Madison Street and Illinois Avenue approximately 300 meters east of the Facility.

Since the Facility is located in the industrial/commercial zone, when evaluating the MEIR, receptors within the industrial zone were excluded.

Sensitive population locations, such as hospitals, K-12 schools, preschools, and child care centers were based on those previously identified in the Original 2016 HRA by ALG and reviewed by the SCAQMD.

Consistent with the methods specified by the OEHHA Guidance, risks were estimated at the location of the MEIR and the location of the MEIW. The MEIR and MEIW are defined as the off-site receptor locations where individuals may reside or work, respectively, with the potential highest cancer risk, acute Hazard Index (HI) or chronic non-cancer HI. In addition, the point of PMI was identified for acute non-cancer hazards.

4.1.1 Estimation of Exposure Point Concentrations

Exposure point concentrations are the concentrations of each chemical to which an individual may be exposed at a given receptor location. Chemical concentrations in air at each receptor location were estimated based on the air dispersion modeling described in Section 3. The exposure point concentrations used to estimate carcinogenic risks and chronic non-cancer HIs are the annual average concentrations of each chemical. The exposure point concentrations used to estimate acute non-cancer HIs are the one-hour maximum concentrations of each chemical. These concentrations at the 2016 operations modeled PMI, MEIR, MEIW, and the MEISR are presented in Tables 6 and 7, respectively, as discussed in Section 3.12 above.

4.1.2 Exposure Pathways

The exposure pathways evaluated in the Revised 2016 HRA were selected in accordance with the OEHHA Guidance and the SCAQMD Supplemental Guidelines. The inhalation pathway must be evaluated for all chemicals. In addition, the OEHHA Guidance also requires the evaluation of non-inhalation exposure pathways, referred to as a multipathway analysis, for specific chemicals.

Selection of the additional pathways for a multipathway analysis is specific to the chemical and land use in the area surrounding the Facility and was based on the recommendations in the OEHHA Guidance. The chemicals that must be evaluated in a multipathway analysis are shown in Table 5.1 of the OEHHA Guidance and are programmed into HARP. As discussed in Section 2, HARP, which complements the OEHHA Guidance with respect to exposure pathway

selection, was used in the Revised 2016 HRA – September 2018 to estimate potential cancer risks and potential non-cancer hazards. The sections below discuss the exposure pathways considered for each potentially exposed population identified in the vicinity of the Facility.

4.1.2.1 Residents

Consistent with the OEHHA Guidance for conducting a multipathway analysis, it was assumed that residents considered in the Revised 2016 HRA – September 2018 may be exposed to Facility emissions via inhalation, dermal absorption, incidental ingestion of soil, ingestion of homegrown produce, and mother's milk. A deposition rate of 0.02 meters per second (m/s) was used, per SCAQMD Supplemental Guidelines.

Since the Facility is located in an urban area with no agricultural areas (e.g., cattle grazing areas or dairy farms) in the vicinity, the Revised 2016 HRA – September 2018 does not include an evaluation of potential exposures via ingestion of meat, dairy, or eggs. However, potential exposures to chemicals in homegrown produce were evaluated for a resident in the Revised 2016 HRA – September 2018 because it is possible that residents in the area may have small vegetable gardens exclusively for personal use. The default home-grown produce parameters for urban settings were used in HARP, consistent with SCAQMD Supplemental Guidelines. Nearby drinking water reservoirs were not identified within the modeled zone of impact; therefore, the drinking water pathway was not included.

4.1.2.2 Off-Site Workers

Consistent with the OEHHA Guidance, off-site workers are assumed to be potentially exposed to facility emissions via inhalation, dermal absorption, and incidental ingestion of soil. Similar to residents, a deposition rate of 0.02 meters per second (m/s) was used, per SCAQMD Supplemental Guidelines.

4.1.2.3 Sensitive Receptors

The sensitive populations considered in the Revised 2016 HRA – September 2018 include schools, hospitals, nursing homes, and daycare centers as identified in Table 5. However, HARP does not include methods for evaluating these specific populations differently than residential populations. Thus, as a conservative screening approach, sensitive receptor locations were evaluated assuming the exposure pathways utilized for evaluating the residential population noted above.

4.1.3 Exposure Assumptions

For all pathways, default exposure assumptions built into HARP were used in the risk calculations. The exposure assumptions in HARP are consistent with OEHHA Guidance. However, the specific exposure assumptions applied to calculate risks are dependent on the exposure analysis method selected to calculate risks, as described below in Section 4.1.4.

4.1.4 HARP Exposure Analysis Methods

HARP allows a user to select from a series of exposure analysis methods. Each method in HARP utilizes exposure assumptions differently, depending on the requirements of a specific regulation (e.g., compliance with CARB's Air Toxics Hot Spots Program) or project need (e.g., provide point estimates for risk management decisions). That is, HARP will select the dominant pathway(s) and assign exposure assumptions depending on the exposure analysis method identified by the user. For the Revised 2016 HRA – September 2018, each exposure analysis method selected was based on the type of receptor as presented in Table 8 and is described below.

4.1.4.1 Resident

Consistent with HARP and OEHHA Guidance, potential cancer risks for residential populations were calculated based on RMP using Derived Analysis Method. This method applies conservative exposure assumptions to the two dominant exposure pathways for each chemical. The remaining pathways are evaluated using average exposure assumptions. If inhalation is one of the two dominant exposure pathways, then it is evaluated using the 80th percentile breathing rate.

As required in the OEHHA Guidance for preparing a Tier 1 risk assessment under AB2588, it was assumed that a resident may be exposed to Facility emissions for 30 years. Cancer risks estimated assuming a residential exposure duration of 30 years are used by State and local agencies for risk management and public notification purposes, even though could be conservative and not representative of actual exposure scenarios.

As discussed previously, it was assumed that individuals residing in the vicinity of the Facility may ingest produce obtained from vegetable gardens grown at their homes. Ingestion of homegrown produce is estimated by applying a default parameter of 13.7 percent of produce ingested by individuals in an urban setting that is homegrown and is comprised of four categories including exposed, leafy, protected, and root vegetables (OEHHA 2015). This is the default setting in HARP and is recommended in the SCAQMD Supplemental Guidelines.

The Derived (OEHHA) Analysis method was used to calculate chronic non-cancer HIs for the resident. This method utilizes high-end exposure assumptions to evaluate the two dominant pathways for each chemical. The remaining pathways are evaluated using average exposure assumptions.

4.1.4.2 Off-Site Worker

Consistent with the OEHHA Guidance, the Point Estimate Analysis method was used to calculate carcinogenic risks and chronic non-cancer HIs associated with off-site worker exposure to Facility emissions. This method utilizes the standard exposure assumptions for worker populations as defined in OEHHA Guidance.

Since potential cancer risks are driven by route emission sources (i.e., spray booths) which are assumed to be emitted average 18 hours a day, 6 days a week per SCAQMD operating schedule, an adjustment factor of 1.54 for off-site worker ground-level concentrations are used, consistent with what is shown in Table 11 of SCAQMD Supplemental Guidelines for continuous operation. This is consistent with OEHHA Guidance which recommends using the average concentration that the worker breathes over their work day, which, for continuous operation, is equivalent to the annual average air concentration calculated in AERMOD.

4.1.4.3 Sensitive Receptor

The RMP using Derived Analysis method described previously was used to calculate risks for the MEISR. Potential exposures of the MEISR were evaluated using a continuous 30-year exposure duration, consistent with the residential exposure duration. This is a very conservative approach, as the sensitive receptors include locations such as hospitals, K-12 schools, preschools, child care facilities, and age-care facilities, where the exposure duration is not continuous and is much lower than 30 years.

4.2 Dose-Response Assessment

The dose-response assessment (also referred to as the toxicity assessment) examines the potential for a chemical to cause adverse health effects in exposed individuals (as modeled). Toxicity values that are used to estimate the likelihood of adverse effects occurring in humans are identified in this component of the risk assessment process. Toxicity factors in the latest HARP Health Database,¹⁰ integrated into the HARP program were used in the Revised 2016 HRA – September 2018. The HARP program contains the most up-to-date listing of available inhalation and oral CPFs, chronic inhalation and oral RELs, and acute RELs approved by California Environmental Protection Agency (Cal/EPA) for use in AB2588 Air Toxics Hot Spots Program risk assessments. The methods used to evaluate potential non-cancer effects of lead are described in Section 4.3.2.

4.3 Risk Characterization Methodology

This section describes the methods used to estimate potential adverse effects associated with off-site exposures to chemicals emitted from the Facility. The results of the Revised 2016 HRA – September 2018 are presented in Section 5. HARP was used to estimate carcinogenic risks and non-cancer HIs associated with potential exposures to potential emissions from the Facility.

4.3.1 Carcinogenic Risks

Carcinogenic risks were estimated as the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to carcinogens potentially present in Facility emissions (USEPA 1989). The estimated risk is expressed as a unitless probability. For carcinogenic chemicals, both inhalation and non-inhalation pathways must be considered, using the CPFs in HARP. Total risk is the sum of risks attributable to each chemical considered by each pathway.

The equation used to calculate the potential excess cancer risk from inhalation for each carcinogenic chemical is:

$$\text{Risk}_i = \text{Inhalation Dose}_i \times \text{Cancer Potency Factor}_i$$

Where:

Risk _i	=	Lifetime excess cancer risk from exposure to chemical _i
Inhalation Dose _i	=	Inhalation dose of chemical _i (mg/kg-day)
CPF _i	=	Inhalation CPF for chemical _i (mg/kg-day) ⁻¹

A similar equation, using oral dose and the oral CPF, is used to calculate risks from oral exposure. In the Revised 2016 HRA – September 2018, oral cancer risks include dermal absorption, incidental ingestion of soil, ingestion of homegrown produce, and mother's milk. HARP default exposure parameters were used, as described in Section 4.1.4.

For worker cancer calculations, by default HARP assumes that emissions occur continuously, and the worker is exposed to the average concentration 40 hours per week. When emission sources are not continuous, a portion of the hours during the year have zero emissions and therefore would have zero exposure. If those zero hours occur when a worker is not present,

¹⁰ The latest HARP Health Database is available from ARB here: <http://www.arb.ca.gov/toxics/harp/news.htm>

worker risk would be underestimated. Thus, a “worker adjustment factor” (WAF) needs to be applied to scale the exposure to account for worker and source emission schedule overlap.

The WAF is calculated as follows:

$$WAF = H_{\text{residential}}/H_{\text{source}} \times D_{\text{residential}}/D_{\text{source}}$$

Where:

$H_{\text{residential}}$ = the number of hours per day the long-term residential concentration is based on (always 24 hours)

H_{source} = the number of hours the source operates per day

$D_{\text{residential}}$ = the number of days per week the long-term residential concentration is based on (always 7 days)

D_{source} = the number of days the source operates per week

For this project, it was assumed that the worker schedule overlapped with the SCAQMD operating schedule for the non-continuous sources. Therefore, the WAF input into HARP to calculate worker cancer risk was $24/18 \times 7/6 = 1.54$.

4.3.2 Chronic Non-Cancer Hazards

When evaluating chronic non-cancer effects due to chemical exposures, a hazard quotient (HQ) is established for each constituent. The equation used to calculate an inhalation HQ is:

$$HQ_i = \frac{C_i}{REL_i}$$

Where:

HQ_i = Chronic hazard quotient for chemical_i

C_i = Annual average air concentration of chemical_i ($\mu\text{g}/\text{m}^3$)

REL_i = Chronic REL for chemical_i ($\mu\text{g}/\text{m}^3$)

To evaluate the potential for adverse non-cancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals that affect the same target organ are summed yielding a HI. The HI is thus estimated as follows:

$$HI_{\text{(eyes)}} = \sum HQ_{\text{substance 1 (eyes)}} + HQ_{\text{substance 2 (eyes)}}$$

Estimation of non-inhalation chronic health effects uses a similar method, but the annual average air concentration is replaced by the dose calculated by HARP using the exposure parameters mentioned above, and the appropriate non-inhalation REL is used.

Estimation of an HI for each target organ (also referred to as a segregation of HI by target organ analysis) is recommended by OEHHA because the non-cancer effects of chemicals with different target organs are generally not additive. For the Revised 2016 HRA – September 2018, a segregation of hazard indices analysis was performed for the modeled PMI, MEIR, MEIW, and the MEISR.

4.3.3 Acute Non-Cancer Hazards

The potential for acute effects was evaluated by comparing the one-hour maximum concentrations with the acute RELs within the HARP program. Acute HQs were estimated for those chemicals for which an REL was available. The equation used to calculate acute HQs is as follows:

$$HQ_i = \frac{C_i}{REL_i}$$

Where:

HQ _i	=	Acute hazard quotient for chemical _i
C _i	=	One-hour maximum air concentration for chemical _i (µg/m ³)
REL	=	Acute non-cancer reference exposure level for chemical _i (µg/m ³)

Ramboll summed the HQs to obtain a target organ-specific HI as follows:

$$HI_{(eyes)} = \sum HQ_{\text{substance 1 (eyes)}} + HQ_{\text{substance 2 (eyes)}}$$

The acute HIs presented in the Revised 2016 HRA – September 2018 conservatively overestimate the true one hour maximum at any one time because one hour maximum air concentrations were summed regardless of time of occurrence (i.e., hour of year) which can differ by source.

4.3.4 Non-cancer Evaluation of Lead

Given that there is no chronic or acute REL for lead, the HRA did not evaluate non-carcinogenic impacts from lead using the standard Hazard Index approach as described above. Per SCAQMD Rule 1402, the Lead National Ambient Air Quality Standard (NAAQS) of 0.15 µg/m³ was compared, conservatively, to the modeled maximum 1-hour lead concentration to evaluate the non-cancer effects of lead in the Revised 2016 HRA – September 2018.

5. RISK CHARACTERIZATION FOR AB2588¹¹

Table 9 shows the results of the Revised 2016 HRA – September 2018 at the modeled PMI, the modeled MEIR, and the modeled MEIW. Sensitive receptors with a cancer risk at or above 10 in one million are listed in Tables 10. Non-cancer health hazard index for all sensitive receptors is below 0.5. Table 11 shows the cancer burden results based on 70-year exposure. Figures 5 through 8 show the locations of these receptors. Figure 9 shows the location of sensitive receptors with risk greater or equal to 1 in a million. Figure 10 shows the modeled 30-year lifetime cancer risk zone of impact, which represents receptor locations where the multipathway lifetime cancer risk is greater than 1 in one million. It is important to note that the zone of impact (i.e., 1 in a million cancer risk contour) presented in Figure 10 conservatively assumes all receptors are residential (which is not the case), along with the modeled 10, 25, and 100 in one million cancer risk contours. Figure 11 shows the modeled 25-year lifetime cancer risk based on the worker exposure scenario. Figure 12 shows the modeled chronic HI isopleths. Acute HI contours at levels of 0.5, 1.0, 3.0, and 5.0 are shown in Figures 13. Since the cancer burden is greater than 0.5, 1 in one million risk contour based on a 70-year lifetime residential exposure is also presented in Figure 14.

The results presented in the Revised 2016 HRA – September 2018 is based on the 2016 emissions at the SCAQMD's direction and modeled using the SCAQMD operation schedule directed by the SCAQMD; the results are conservative by assuming the facility used all the chromate-containing paints purchased in 2016. In addition, the results are not indicative of the operations and procedures currently in place at the Facility. The results of the HARP risk characterization runs are provided electronically in Appendix F.

5.1 Carcinogens

HARP calculates cancer risk based on annual average concentrations. HARP was run separately for continuous and non-continuous sources for worker cancer risk given that WAF of 1.54 was only applied to the non-continuous sources. The cancer risk calculated at each receptor for the continuous sources was added to the cancer risk calculated at each receptor for the non-continuous sources in a spreadsheet to get the total cancer risk at each receptor.¹² The spreadsheets are provided electronically.

5.1.1 Point of Maximum Impact (PMI)

The cancer risk at the point of maximum impact¹³ is 161,320 per million, at a fence line receptor (#6) on the southern boundary of the facility. Over 99% of the risk is due to chromium compounds, primarily strontium chromate, but also sodium dichromate, barium chromate, chromium trioxide, and other hexavalent chromium compounds. Paint spray booth #2 is responsible for 99.6% of the risk due to its emissions of chromium compounds and also its proximity to receptor #6. The remainder of the cancer risk is due primarily to emissions from the anodizing and plating tanks. Complete breakdowns of cancer risk by

¹¹ When evaluating risk results, total multipathway potential cancer risks and maximum potential non-cancer hazard indices as reported in HARP were used. Additionally, rounding procedures specified in Section 3.5 of the SCAQMD Supplemental Guidelines were followed.

¹² The HARP worker risk results for continuous and non-continuous emission source were summed. The highest worker risk at each receptor was based on total worker cancer risk after summing the results from both (continuous and non-continuous) HARP model runs.

¹³ Based on 30-yr residential exposure.

source at the PMI are provided in Table 12. Cancer risk at the PMI is broken down by substance and pathway in Table 13. Figure 5 shows the location of the PMI for cancer risk.

5.1.2 Resident (MEIR)

The highest cancer risk at a residential receptor (#1567) is a cancer risk value of 931 in one million. The receptor is located about 300 meters east of Anaplex near the intersection of Madison Street and Illinois Avenue. Similar to the PMI, nearly all of the risk is due to chromium compounds at 99.9% of the risk is from paint spray booth #2, the anodizing tanks, and the plating tanks (98%, 1.8%, and 0.1%, respectively). Complete breakdowns of cancer risk by source at the MEIR are provided in Table 12. Cancer risk at the MEIR is broken down by substance and pathway in Table 14. Figure 5 shows the location of the MEIR for cancer risk. A contour map showing the 30-yr residential cancer risk is included as Figure 10.

5.1.3 Off-Site Worker (MEIW)

The highest risk calculated for offsite worker exposure cancer risk is located directly south of Anaplex, across Madison Street about 30 meters from the plant boundary (receptor #1391). The worst case worker cancer risk at this receptor is 2,836 per million. Chromium compounds again contribute to more than 99% of the risk, with strontium chromate responsible for 98%, with sodium dichromate, barium chromate, chromium trioxide, and other hexavalent chromium compounds responsible for most of the remainder. The primary source of the worker cancer risk is paint spray booth #2, accounting for more than 99% of the risk. Complete breakdowns of cancer risk by source at the MEIW are provided in Table 12. Cancer risk at the MEIW is broken down by substance and pathway in Table 15. A contour map showing the 25-yr worker cancer risk is included as Figure 11.

5.1.4 Maximally Exposed Individual Sensitive Receptor (MEISR)

The highest calculated cancer risk at a sensitive receptor is 114 per million, at Gaines Elementary School Child Daycare Center (receptor #6728) located about 660 meters south of Anaplex. The Wesley Gaines Elementary School and the Gaines State Preschool daycare center are also located at/near this receptor. Cancer risk at each of these receptors is primarily due to exposure to chromium compounds, mainly strontium chromate (96%) and sodium dichromate (2%). Over 99% of the cancer risk at this sensitive receptor is from paint spray booth #2 (96.8%), and the anodizing tanks (3%). Complete breakdowns of cancer risk by source at the maximum exposed sensitive receptor are provided in Table 12. Cancer risk at the maximum exposed sensitive receptor is broken down by substance and pathway in Table 16. Figure 5 shows the location of the maximum exposed sensitive receptor. Table 10 provides a list of all sensitive receptors with a cancer risk above 10 per million. Figure 9 shows the locations of sensitive receptors with cancer risk greater than one in a million.

5.1.5 Population Exposure & Cancer Burden

Along with potential cancer risk, potential population exposure was analyzed, and potential cancer burden was calculated within the modeled zone of impact. Census block receptors were extracted from HARP within an approximate 15-km radius, including additional receptors up to 30 km from the Facility, and were modeled in AERMOD. To determine population exposure, modeling was performed at receptors located at the centroid of all census tracts whose centroid was located within the modeling domain. Both AERMOD and HARP were run in the manner as was done previously, except with the census tract centroid receptors instead of fence line, grid, and sensitive receptors. 70-yr residential cancer risk was calculated at each of these receptors. For any receptor with a cancer risk greater than one

per million, the population of the census tract represented by that receptor was summed to determine the total exposure to various levels of cancer risk. The results of these calculations are provided in Table 11. Additionally, cancer burden was calculated based on the total population exposed to 70-yr cancer risk above one per million. The population of each census tract was multiplied by the 70-yr cancer risk calculated at the representative receptor. These products were summed, and the cancer burden was determined to be 9.7. A contour map showing the one per million cancer risk based on 70-yr exposure is included as Figure 14.

5.2 Non-Carcinogens

As described in Section 4.3.2 and 4.3.3, the non-cancer health impacts are characterized through a hazard index (HI). When more than one chemical is considered, it is assumed that the effects are additive provided the associated chemicals are expected to have an adverse impact on the same target organ system (respiratory system, liver, etc.). Thus, chemical-specific hazard indices are summed to arrive at a hazard index for each target organ. For any organ system, a total hazard index exceeding 1.0 indicates a potential health effect. Although the assumption of additivity of exposure to multiple chemicals ignores possible antagonistic or synergistic interactions, this approach has been accepted by regulatory agencies as generally conservative.

5.2.1 Chronic HI

The chronic HI calculations are based on annual average concentrations and the chronic REL.

The chronic hazard index at the point of maximum impact is 8.4, at receptor #3 located on the eastern boundary of the facility. The primary chemical contributing to the chronic hazard index is sulfuric acid (55%). Chromic trioxide, nickel & compounds, strontium chromate, methylene diphenyl diisocyanate, phosphoric acid, hydrofluoric acid, hydrochloric acid, and toluene combined also contributed more than 42% of the maximum chronic risk. The associated target organ is the respiratory system. Over 98% of the chronic risk is a result of emissions from the anodizing tanks (67.2%), the plating tanks (22.8%), and paint spray booth #2 (8.4%).

The maximum chronic risk at a worker receptor is a hazard index of 2.02, at receptor #1659 located on the northern boundary of the facility where there is a common wall with a neighboring business. The primary chemical contributing to the chronic hazard index is sulfuric acid (60%). Chromic trioxide, nickel & compounds, strontium chromate, methylene diphenyl diisocyanate, phosphoric acid, hydrochloric acid, hydrofluoric acid, and toluene combined also contributed more than 35% of the maximum chronic risk. The associated target organ is the respiratory system. Over 96% of the chronic risk is a result of emissions from the anodizing tanks (74.1%), the plating tanks (11.7%), and paint spray booth #2 (10.6%).

The maximum chronic risk at a residential receptor is a hazard index of 0.06, at receptor #2115 located about 200 meters northeast of Anaplex. The primary chemical contributing to the chronic hazard index is sulfuric acid (48%). Nickel & compounds, chromium trioxide, strontium chromate, methylene diphenyl diisocyanate, hydrochloric acid, hydrofluoric acid, phosphoric acid, and toluene also contributed between 2% and 11% to the highest chronic risk. The associated target organ is the respiratory system. Over 97% of the chronic risk is a result of emissions from the anodizing tanks (58.6%), the plating tanks (19.6%), and paint spray booth #2 (19.3%).

The maximum chronic risk at a sensitive receptor is a hazard index of 0.009 at receptor #6728 located about 660 meters south of Anaplex (Gaines Elementary School Child Daycare Center). The primary chemical contributing to the chronic hazard index is sulfuric acid (45%). Nickel & compounds, chromium trioxide, phosphoric acid, hydrofluoric acid, strontium chromate, methylene diphenyl diisocyanate, hydrochloric acid, hydrofluoric acid, crystalline silica, and toluene also contributed between 2% and 12% to the highest chronic risk. The associated target organ is the respiratory system. About 97% of the chronic risk is a result of emissions from the anodizing tanks (55.1%), the plating tanks (21.8%), and paint spray booth #2 (20.5%).

Complete breakdowns of chronic risk by source at each of the maximum chronic HI receptors are provided Table 17. Chronic HI is broken down by substance in Tables 18 - 21. Figure 6 shows the location of these receptors. A map showing the chronic HI contours is included as Figure 12.

5.2.2 8-Hour Chronic HI

The 8-hr chronic hazard index at the point of maximum impact is 0.51, at a fence line receptor (#6) on the southern boundary of the facility. The primary chemical contributing to the 8-hr chronic hazard index is methylene diphenyl diisocyanate (68.7%). Nickel & compounds (11.1%) and formaldehyde (11.2%) contribute nearly all of the remaining risk. The associated target organ is the respiratory system. The sources responsible for over 96% of the 8-hr chronic risk are paint spray booth #2 (85.3%), the plating tanks (9.3%), and the anodizing tanks (1.9%).

The maximum 8-hr chronic risk at a residential receptor is a hazard index of 0.0035, at receptor #1567 located about 300 meters east of Anaplex near the intersection of Madison Street and Illinois Avenue. The primary chemicals contributing to the 8-hr chronic hazard index are methylene diphenyl diisocyanate (57.1%), nickel & compounds (25.9%), and formaldehyde (9.2%). The associated target organ is the respiratory system. Over 96% of the 8-hr chronic risk is a result of emissions from paint spray booth #2 (69.8%), the plating tanks (17.4%), and the anodizing tanks (8.7%).

The maximum 8-hr chronic risk at a worker receptor is a hazard index of 0.11, at receptor #1391 located directly south of Anaplex, across Madison Street about 30 meters from the plant boundary. The primary chemicals contributing to the 8-hr chronic hazard index are methylene diphenyl diisocyanate (67.4%), nickel & compounds (12.8%), and formaldehyde (11%). The associated target organ is the respiratory system. Over 97% of the 8-hr chronic risk is a result of emissions from paint spray booth #2 (83.6%), the plating tanks (9.7%), and the anodizing tanks (3%).

The maximum 8-hr chronic risk at a sensitive receptor is a hazard index of 0.0005 at receptor #6728 located about 660 meters south of Anaplex (Gaines Elementary School Child Daycare Center). The primary chemicals contributing to the 8-hr chronic hazard index are nickel & compounds (37%), methylene diphenyl diisocyanate (48.3%), and formaldehyde (7.9%). The associated target organ is the respiratory system. Over 95% of the 8-hr chronic risk is a result of emissions from the paint spray booth #2 (59.2%), plating tanks (25%), and the anodizing tanks (12.1%). Complete breakdowns of 8-hr chronic risk by source at each of the maximum receptors are provided Table 22. Chronic HI is broken down by substance in Tables 23 - 26. Figure 7 shows the location of these receptors.

5.2.3 Acute HI

The acute hazard index at the point of maximum impact is 24, at receptor #17 located on the northern boundary of the facility where there is a common wall with a neighboring business. The primary chemical contributing to the acute hazard index is methyl ethyl ketone (MEK) (98.1%). The associated target organ is the respiratory system. The MEK was used in the solvent baths at Anaplex in 2016 and solvent baths (modeled as a single area source) were responsible for 98% of the acute risk at the PMI. Since the PMI is along a shared wall with a neighboring facility (receptor #17), the PMI also represents maximum acute risk at a worker receptor or MEIW. Note that the facility switched from MEK to acetone in December 2016, the acute HI would be significantly lower at its current operation.

The maximum acute risk at a residential receptor is a hazard index of 0.07, at receptor #2115 located about 200 meters northeast of Anaplex. The primary chemical contributing to the acute hazard index is MEK (73.2%). Sulfuric acid (10.3%), sodium hydroxide (6.8%), nitric acid (2.7%), MDI (2%), and IPA (2%) also contributed more than 1% to the acute risk. The associated target organ is the respiratory system. Over 98% of the acute risk is a result of emissions from the solvent baths (71.2%), the anodizing tanks (9.8%), the plating tanks (10.5%), and paint spray booth #2 (6.6%).

The maximum acute risk at a sensitive receptor is a hazard index of 0.014 at receptor #6728 located about 660 meters south of Anaplex (Gaines Elementary School Child Daycare Center). The primary chemical contributing to the acute hazard index is MEK (86.3%). The associated target organ is the immune system. Over 98% of the acute risk is a result of emissions from the solvent baths (86%), the anodizing tanks (5.8%), the plating tanks (6.7%), and paint spray booth #2 (1%).

Complete breakdowns of acute HI by source at each of the maximum receptors are provided Table 27. Acute HI is broken down by substance in Tables 28 - 30. The MEI location for acute HI is shown in Figure 8. A map showing the acute HI contours is included as Figure 13.

5.3 Lead Evaluation

As discussed in Section 4.3.4, in a measure of conservatism, the maximum 1-hour lead concentration is approximately $0.02 \mu\text{g}/\text{m}^3$, was compared to the Lead NAAQS and does not exceed lead NAAQS of $0.15 \mu\text{g}/\text{m}^3$. As such, the maximum lead concentration in air at the Facility boundary does not pose any significant adverse non-cancer effect for the residents.

6. UNCERTAINTIES

In any risk evaluation, a number of assumptions must be made in order to estimate human exposure and to calculate potential risks. These assumptions may, however, introduce uncertainty in risk calculations. Regulatory guidance requires that conservative assumptions be used to provide an upper-bound estimate of the risk and to avoid underestimating the potential exposures and associated health risks, even though these assumptions may not be indicative or representative of actual conditions at and in the vicinity of the Facility. The key sources of uncertainty in the Revised 2016 HRA – September 2018 include:

- Estimation of emissions,
- Estimation of exposure concentrations,
- Exposure assumptions, and
- Chemical toxicity criteria.

In all of these cases, conservative, health-protective assumptions were used in the Revised 2016 HRA. By compounding conservative assumptions, the estimated excess cancer risks are upper-bound estimates and the actual incidence of cancer or non-cancer health impacts is likely to be significantly lower (USEPA 1989). The following sections summarize the critical uncertainties associated with the emissions estimation, air dispersion modeling, and risk estimation components of the risk assessment.

6.1 Estimation of Emissions

There are some uncertainties associated with the estimation of emissions in this Revised 2016 HRA -September 2018. These uncertainty would affect the subsequent estimation of exposure concentrations and risk characterization. In particular, Ramboll identified the following three major uncertainties associated with Anaplex's emission estimates in the Revised 2016 HRA – September 2018.

- Chemical specification range of solvent or paints used in the process
- Chromate-containing paints usage
- Control efficiency for spray booth filters

As described in the memorandum for the revised ATIR (see Appendix A), it is unlikely that each of the coatings used by the facility would always present at the maximum value in reality. Despite the uncertainty related to these emission estimates, Ramboll revised the emissions from tanks and spray booths using the maximum chemical content from the SDS when applicable.

Secondly, based on the risk characterization results, spray painting with chromate-containing compounds (Spray Booth #2) dominates the calculated cancer risk levels. As described in Section 6, Ramboll performed alternate HRA analyses to calculate cancer risk using both one-third of the purchased chromate-containing paint and all purchase records in 2016, and manufacturer spray booth filter control efficiency of 95%. Pursuant to a SCAQMD directive, spraying of chromate-containing paints was halted on April 20, 2016. After that date, Anaplex has stated that chromate-containing paints were either disposed of as waste or sent to other facilities permitted to use them. In addition, Anaplex believes the spray booths have been equipped with filters at 98% control efficiency since 2010. Ramboll also conducted a site visit on January 17, 2017 to further investigate the control efficiency for the filters and

provided additional documentation to the SCAQMD as explained in the memorandum for the ATIR (see Appendix A).

6.2 Estimation of Exposure Concentrations

There are a number of uncertainties associated with the estimation of exposure concentrations from air dispersion modeling of potential emissions from the Facility's operations. This section briefly describes some of the uncertainties that may influence the exposure concentrations used in the risk characterization.

6.2.1 Operating Schedule

This revised 2016 HRA – September 2018 is based on the operating schedule insisted upon by the SCAQMD. By including the additional operation hours at night overestimated the annual average concentration residents would be exposed to due to more calm winds (i.e., less dispersion), particularly since Anaplex did not operate during these hours in 2016 or any other year. On the other hand, the worker cancer risks were underestimated given that emissions were distributed over more hours over a day, and thus reduce the exposure concentrations that workers would have been exposed to. Most importantly, the SCAQMD schedule did not represent the actual operating schedule Anaplex had in 2016, and therefore, it is not "routine and predictable" operation of Anaplex, as required by OEHHA guidance for a refined HRA.

6.2.2 Estimates from Air Dispersion Models

As discussed in Section 3, the dispersion modeling algorithm in AERMOD was used to estimate average off-site TAC exposure concentrations at the various offsite receptor locations. The AERMOD model uses a steady-state Gaussian plume equation to calculate ambient air concentrations from emission sources. The limitations of the air dispersion model provide a source of uncertainty in the estimation of exposure concentrations. According to USEPA, errors due to the limitation of the algorithms implemented in the AERMOD model in the highest estimated concentrations of +/- 10 percent to 40 percent are typical (USEPA 2005).

6.2.3 Meteorological Data Selection

Uncertainty also exists in the meteorological data used in the AERMOD air dispersion model. These uncertainties are related to the use of meteorological data that is not collected at the site. Therefore, the meteorological data used in this analysis was based on meteorological data from a SCAQMD's monitor station in Compton. While this meteorological station is close to the Facility, the uncertainties due to the use of meteorological data not collected at the site resulted in approximate exposure concentrations.

6.3 Risk Characterization

There are a number of uncertainties associated with the risk characterization process. This section briefly describes some of the uncertainties that may influence the risk estimates produced in this analysis.

6.3.1 Exposure Assumption Uncertainties

Consistent with OEHHA Guidance, risks were estimated assuming that hypothetical residents at the receptor points spend a continuous 30 years at one location. However, the USEPA has estimated that 50% of the population lives in the same residence for only eight years, while only 10% remain in the same house for 32 years (USEPA 2011). Adults, moreover, spend

only 66 to 82% of their total daily time at home (USEPA 2011), rather than the 100% assumed here. Accordingly, the actual risks to hypothetical residents at the modeled receptor locations are likely lower than those calculated in this assessment. Moreover, as discussed previously, use of residential exposure parameters represents a conservative assessment of actual risk to other types of receptors, such as sensitive receptors.

6.3.2 Dose-Response Assessment

The primary uncertainties associated with the toxicity assessment are related to derivation of toxicity values. Standard RELs and CPFs established by Cal/EPA and listed in the HARP model were used to estimate potential carcinogenic and non-cancer health effects from exposures to compounds emitted from the Facility. These values are derived by applying conservative assumptions and are intended to protect the most sensitive individuals in the potentially exposed populations.

To derive the toxicity values, Cal/EPA makes several assumptions that tend to overestimate the actual hazard or risk to human health. Because data from human studies are generally unavailable, RELs are typically derived from animal studies. Uncertainty factors and modifying factors are then applied to these data to ensure that the RELs are adequately protective of human health. For many compounds, it is anticipated that this approach overestimates the potential for non-cancer effects.

CPFs used to estimate carcinogenic risk are also typically derived based on data from animal studies. These data are based on studies in which high doses of a test chemical were administered to laboratory animals, and the reported response is extrapolated to the much lower doses typical of human exposure. Very little experimental data are available on the nature of the dose-response relationship at low doses, such as whether a threshold exists or if the dose-response curve passes through the origin. Because of this uncertainty, a conservative model is used to estimate the low-dose relationship, and uses an upper bound estimate (the 95 upper confidence limit of the slope predicted by the extrapolation model) as the CPF. With this factor, an upper-bound estimate of potential cancer risks is obtained.

6.3.3 Risk Calculation

The USEPA (1989) notes that the conservative assumptions used in a risk assessment are intended to assure that the estimated risks do not underestimate the actual risks posed by a site and that the estimated risks do not necessarily represent actual risks experienced by populations at or near a site. The estimated risks in this risk assessment are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure, and chemical toxicity. The use of conservative assumptions tends to produce upper-bound estimates of risk. Although it is difficult to quantify the uncertainties associated with all the assumptions made in this risk assessment, the use of conservative assumptions is likely to result in substantial overestimates of exposure, and hence, risk.

7. CONCLUSIONS

The results of the Revised HRA – September 2018 indicate that Notification and Action Risk Levels are exceeded based on 2016 emissions from Anaplex. HRA results are summarized in Table 9. Based on these results, Anaplex is subject to the following Rule 1402 provisions:

7.1 Public Notification

As results of this HRA, cancer risk, chronic HI, and acute HI are greater than or equal to the Notification Risk Level, Anaplex will be required to provide public notice, in accordance with the procedures in the most current version of “SCAQMD Public Notification Procedures for Facilities Under the Air Toxics ‘Hot Spots’ Information and Assessment Act (AB 2588) and Rule 1402.

7.2 Risk Reduction Plan (RRP)

As results of this HRA, cancer risk, cancer burden, and acute HI are greater than or equal to the Action Risk Level, Anaplex is required to prepare a Risk Reduction Plan (RRP). The purpose of the RRP is to perform risk reduction measures at the facility which will bring modeled risk below the Action Risk Level. Anaplex has already submitted and substantially implemented Risk Reduction Plans (RRP) in June 2017 and May 2018, per the Rule 1402 significant risk level requirements. An Early Risk Reduction Plan was submitted on March 13, 2017. The original RRP was submitted in June 13, 2017 and demonstrated that maximum cancer risk levels for workers and residents will be well below 10 in million. A revised RRP was submitted that reflects the results of this Revised HRA – May 2018 and clarifications requested by AQMD. A revised RRP is being submitted that will reflect the results of this Revised HRA – September 2018 and clarifications requested by AQMD.

7.3 Current Mitigation Measures

As described in Section 6, the results of this HRA relied on various conservative assumptions which would likely to overestimate the emissions and therefore subsequent exposure concentration and risk at the offsite receptors. Based on the Table ES-1 and Figures 15 - 16, the risk and associated impact area could vary significant depending on the chromate-containing paints usage and filter control efficiency are assumed.

Notably, the results of this HRA **do not** represent current risk levels as the following risk reduction measures have already been implemented at the facility:

1. Over 95% of the cancer risk evaluated by this HRA resulted from chrome containing paints sprayed in Booth #2. Anaplex has discontinued spraying paints containing chromium compounds until a high efficiency filtration system can be installed.
2. Methyl Ethyl Ketone emissions from solvent cleaning operations were the primary source of acute risk in the HRA. Use as a solvent cleaner has been discontinued.
3. The majority of chrome containing tanks at the facility employ covers when not in use.
4. Tank solutions for several tanks have been switched to non-chrome based solutions.
5. Several tanks have been permanently taken out of service.
6. Polyballs have been added to multiple chrome containing tanks.
7. Temperature has been reduced on Tank 22.

8. Anaplex has made, and proposes to make, additional reductions as discussed in the Original and Revised RRP which is submitted separately from this HRA.

Additionally, Anaplex intends to implement the following measures, as included in the Revised RRP:

1. Permit and install air pollution control equipment (mist eliminator and particulate filter) to control emissions for multiple anodizing and plating tanks.
2. Permit and install higher efficiency particulate control on the #2 spray booth (up to 99.9995% control @ 3 microns or greater).

**AB2588 HEALTH RISK ASSESSMENT (HRA) BASED ON SCAQMD'S PREVIOUS
DIRECTION AND THE 2016 ROUTINE AND PREDICTABLE OPERATING
SCHEDULE PROVIDED BY ANAPLEX (AB2588 HRA2)**

8. INTRODUCTION

8.1 Background

At the direction of Dr. Jillian Wong, Planning & Rules Manager at the South Coast Air Quality Management District (SCAQMD or “the District”), this Air Toxics Hot Spots (AB2588) Health Risk Assessment (HRA) Report for the Anaplex Facility (“the Facility”, SCAQMD Facility ID 016951) is being submitted on behalf of Anaplex Corporation, located at 15547 Garfield Avenue in Paramount, California. Anaplex previously submitted an AB2588 HRA prepared by ALG, Inc. to SCAQMD on June 13, 2017 (“Original 2016 HRA”). SCAQMD provided the initial and follow up comments for Anaplex’s Air Toxic Inventory Report (ATIR), Original 2016 HRA, and Risk Reduction Plan (RRP, “Original 2016 RRP”) in the comment letters dated on December 8, 2017 and April 17, 2018, respectively. In response to the comments received in these letters, Ramboll US Corporation (Ramboll) prepared this Revised report (Revised 2016 HRA – May 2018) using the Facility’s 2016 emissions. This report follows relevant AB2588 HRA guidance from Office of Environmental Health Hazard Assessment (OEHHA) and SCAQMD, and the United States Environmental Protection Agency (USEPA) guidelines for air dispersion modeling.

8.2 Health Risk Assessment Format and Definitions

For the purpose of this AB2588 HRA, acute, chronic, and cancer health impacts are defined as follows:

- Acute risks are non-cancer adverse health impacts, commonly associated with exposures to relatively high concentrations of toxic air contaminants (TAC) over short periods of time, from minutes to hours. Acute exposure typically results in headaches, dizziness, nausea, eye/nose/throat irritation, and/or skin rash. Each toxic chemical may affect the body through different mechanisms. Target organs for each TAC have been identified by OEHHA in its guidance document.
- Chronic risks are non-cancer adverse health impacts, commonly associated with exposures to relatively low concentrations of TACs over long periods of time, as in several years. Typical symptoms of chronic exposure include persistent respiratory or digestive problems, chronic cough, chest pains, numbness or tingling, loss of smell or taste, etc. As with acute risks, the target organs due to chronic risks that will be analyzed in this HRA may affect the body through different mechanisms and have been identified by OEHHA (OEHHA, 2015).
- Cancer is defined as the abnormal or irregular growth of cells or tissue. There are many triggers that may cause or increase the risk of cancer, including exposure to certain chemicals or TACs. The increased risk of cancer from exposure to a chemical means the additional risk of getting cancer from continuous exposure (i.e., 30 years and 365 days per year) to potentially cancer-causing compounds. Cancer risk is usually expressed as a probability (e.g., ten excess chances of contracting cancer in one million exposed individuals).

In general, this AB2588 HRA provides conservative estimates of the probabilities for contracting adverse health effects due to the processes occurring at the facility. A “conservative” estimate assumes that the worst-case exposure conditions exist so that the health effects are not underestimated.

8.3 Significance Criteria and Notification Levels

Under AB2588, the operator of a facility must provide notices to all exposed persons if the facility's health risk assessment indicates that there is a significant health risk associated with the air toxic emissions from the facility. The SCAQMD's public notification thresholds are as follows:

- Greater than or equal to 10 maximum individual (lifetime) cancer risk (MICR),
- Greater than 1.0 Hazard Index Acute (HIA), or
- Greater than 1.0 Hazard Index Chronic (HIC).

The operator is also required to implement risk reduction measures if the emissions from the facility cause an exceedance of any of the following Action Risk Levels in SCAQMD Rule 1402:

- MICR of twenty-five in one million,
- Cancer burden of 0.5, or
- Total HIA or HIC of three (3.0) for any target organ system at any receptor location.

SCAQMD Rule 1402 also establishes significant risk levels; facilities above these levels are required to submit a risk reduction plan, as well as expedited actions to implement the Risk Reduction Plan:

- MICR of 100 in one million, or
- Total HIA or HIC of five (5.0) for any target organ system at any receptor location.

8.4 Objectives

Consistent with AB2588 requirements, the objective of this HRA report is to estimate potential risks to human populations in the vicinity of the Facility that may be exposed to potential operational emissions. At the direction of SCAQMD staff, potential operational emissions were modeled based on 2016 Facility operations.

The methodologies used to complete the Revised 2016 HRA are based on the District-approved Office of Environmental Health Hazard Assessment (OEHHA) of Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments ("OEHHA Guidance," OEHHA 2015) as well as the SCAQMD Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588) ("SCAQMD Supplemental Guidelines," SCAQMD 2016).

As prescribed in the OEHHA Guidance, the Hotspots Analysis Reporting Program (HARP) model was used to estimate the potential impacts to human health in the vicinity of the Facility. Dispersion of potential emissions attributable to the Facility was modeled using the American Meteorological Society/Environmental Protection Agency regulatory air dispersion model (AERMOD version 16216r). The results from AERMOD were imported into the Risk Analysis module of HARP2, developed by the California Air Resources Board (ARB), to calculate the potential cancer risk¹⁴, potential chronic non-cancer hazard index (HI), and potential acute HI at an array of receptors.

¹⁴ Cancer risks evaluated in the 2016 HRA refer to the calculated excess cancer risk due to potential emissions at the Facility, as required by OEHHA and SCAQMD guidance documents.

This report includes the sections corresponding to the sections in SCAQMD's HRA outline contained in Appendix C of the SCAQMD Supplemental Guidelines as follows:

- Table of Content corresponds to Section I in SCAQMD guidelines
- Executive Summary corresponds to Section II in SCAQMD guidelines
- Section 9 Hazard Identification corresponds to Section III.A in SCAQMD guidelines
- Section 9.1 Facility Location and Process Description corresponds to Section III.B.1 in SCAQMD guidelines
- Section 9.3 Quantification of Emissions corresponds to Section III.B.2 in SCAQMD guidelines
- Section 10.1 Air Dispersion Modeling corresponds to Section III.B.3 in SCAQMD guidelines
- Section 10.3 Source Parameters and Operating Schedule corresponds to III.B.2 in SCAQMD guidelines
- Sections 11 and 12 Risk Assessment Procedures correspond to III.C in SCAQMD guidelines
- Section 16 References corresponds to III.D in SCAQMD guidelines

9. HAZARD IDENTIFICATION

9.1 Facility Location and Process Description

Anaplex Corporation (SCAQMD ID #016951) is a metal finishing facility located in the city of Paramount at 15547 Garfield Avenue. Figure 17 shows the facility location and its vicinity. The land use in the immediate vicinity of the facility is primarily industrial or commercial urban area with the nearest residential neighborhood approximately 200 meters to the northeast. The topography around the facility is generally flat. The facility's layout showing the locations of the various buildings and the emission sources is included as Figure 18. As recommended in the SCAQMD Supplemental Guidelines and the SCAQMD Modeling Guidance for AERMOD (SCAQMD, 2016), the urban dispersion option was used with a population of 9,818,605, based on the population of Los Angeles County.

Due to its location in an urbanized area with no drinking water reservoirs within the zone of influence, exposure to TACs from the Facility was estimated for the inhalation, dermal, soil ingestion, home-grown produce, and mother's milk pathways enabled.¹⁵ The input parameters for each pathway are further discussed in Section 11.1.

Anaplex performs metal finishing operations (electroplating and anodizing) primarily for the aerospace industry. Metals finished at this location include aluminum, stainless steel, steel, copper, brass, titanium, and magnesium. Potential onsite sources of emissions include the anodizing and plating tanks, curing and drying ovens, paint spray booths, and miscellaneous natural gas sources such as boilers.

9.2 Substances Emitted and Evaluated

The list of potentially emitted substances considered in preparation of the Revised 2016 HRA is from Appendix A-I of the California Air Resources Board (CARB) AB2588 requirements and the OEHHA Guidance. The AB2588 TACs potentially emitted from the Facility are shown in Table 31. Table 32 also includes an identification of which compounds are evaluated for cancer risk, non-cancer chronic, or non-cancer acute impacts, as well as which compounds have non-inhalation routes of exposure.¹⁶

For carcinogens, cancer potency factors (CPF) were used for computing cancer risk. For non-cancer health effects, reference exposure levels (REL) were used. The non-carcinogenic hazard indices were computed for chronic and acute exposures with their respective toxicological endpoints shown. For multipathway pollutants, oral doses, oral CPFs, and/or non-inhalation RELs were used as appropriate. Details of the risk assessment procedures used are included in Section 11.

9.3 Quantification of Emissions

Anaplex has the following TAC emission sources. Ramboll divided these sources into three groups based on the source configuration (e.g., point, volume, or area source) used in the air dispersion model. More details on the source characterization are discussed in Section 10.2.

9. Point sources
 - Spray booths #2, #3, #4

¹⁵ Home-grown produce and mother's milk pathways are only applicable to potential residential exposures.

¹⁶ All potential non-inhalation pathways are listed in Table 1.

- Three boilers
- One vapor degreaser vented to a carbon canister
- Two drying ovens

10. Volume sources

- Anodizing tanks
- Plating tanks
- Paint and solvent usage in masking areas
- Abrasive blasting

11. Area sources

- Two solvent baths

Annual and maximum hourly emissions for TACs were reported from sixteen source groups as shown in Table 31. Ramboll relied on the TAC emissions from the Original 2016 HRA prepared by ALG and reviewed by the SCAQMD in the Revised 2016 HRA – May except for the following source categories where TAC emissions were updated in response to the SCAQMD's comment letters dated December 7, 2017 and April 17, 2018. The emission calculation methodology and emission updates were discussed in the sections below.

9.4 Spray Booth Emissions

Three spray booths (#2, #3, and #4) were used to apply paint in 2016. All three booths are located in the east building, and emissions from each booth were directed to stacks on the building roof. As requested by the AQMD in the ATIR comment letters (December 7, 2017 and April 17, 2018), the maximum value of toxic chemical specification (i.e., weight fraction) was used if the TAC% is provided in a range. Despite the fact that this is unlikely to represent the Facility's operating condition, the TAC emissions were estimated using the maximum value of the specification range. Pint spray booth VOC emissions were calculated by multiplying the paint usage by the maximum of toxic chemical weight fraction at the direction from the SCAQMD staff.

Paint spray booth particulate emissions were calculated following the SCAQMD guidelines¹⁷ based on the total paint quantity purchased in 2016 multiplied by the maximum of the toxic chemical weight fraction, an AQMD default 65% solids transfer efficiency, and PM control efficiency of filters. 90% PM filter control efficiency was used at the direction of SCAQMD staff for AB2588 HRA. AQMD staff stated that filter control efficiency of 90% should be used based on the permit description. In addition, SCAQMD insisted that in the absence of a SCAQMD's approved source, 90% control efficiency should be used in this AB2588 HRA, although Ramboll has submitted the manufacturer's testing data (see Appendix A) to support the control efficiency at 95% or higher. Therefore, TAC emissions from spray booth included in Table 31 are based on the 90% PM control efficiency for the filters for the purpose of AB2588 in the Revised 2016 HRA – May 2018. It should be noted that because chromate emissions from Spray Booth #2 is the dominant risk driver, Ramboll performed alternate HRA analyses to evaluate the potential impact of use of the conservative emissions from

¹⁷ Guidelines for Reporting Emissions from the Use of Materials Containing Organic Compounds - December 2016. Available at <http://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/guidelreprtorgcompounds.pdf?sfvrsn=2>. Accessed: May 2018.

Spray Booth #2 on the risk results, which does not reflect the facility operations in 2016. These conservative assumptions include the chromate-containing paints usage and the spray booth PM control efficiency. In the alternate HRA, spray booth TAC emissions were calculated using 1) paint usage based on 2016 purchased records and 95% filter control efficiency, and 2) one-third of the purchase records and 95% filter control efficiency per manufacturer's testing data. One-third of purchased chromate-containing paint usage was used for the alternate risk analyses since spraying of chromate-containing paints was halted on April 20, 2016 (i.e., the first four months of 2016 only, assuming consistent annual paint use) pursuant to a SCAQMD directive.

Emissions were assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).

9.5 Anodizing and Plating Tank Emissions

A total of 31 and 47 tanks in the anodizing and plating area, respectively, contained toxic chemicals in 2016. Similar to the paints used in the spray booth, Ramboll revised the TAC emissions from anodizing and plating tanks by using the maximum value of the specification range for the tank solution instead of the average value. Emissions resulted from evaporation, plating, sparging, and heating operations, and were released through roof vents and rollup doors on the east and west sides of the building. In response to the SCAQMD's HRA comment of the source configuration for these tanks followed up with the technical discussion with SCAQMD staff, emissions from these tanks were modeled as multiple adjacent volume sources representing the release occurring in the east building where the anodizing and plating tanks are located as shown in Figure 18. It was assumed that evaporation emissions (Source IDs = ANODZEV and PLATEEV) occurred continuously (24 hours per day, 7 days per week) while plating, sparging, and heating emissions (Source IDs = ANODZPSH and PLATEPSH) occurred only during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).

Anodizing and plating tank emissions were calculated using a methodology provided by SCAQMD in the Original 2016 HRA prepared by ALG with the updates on Tank 4, Tank 19, Tank 22 to address SCAQMD comments on the ATIR. Data used in the emission calculations included metal plating efficiencies, material densities and toxic chemical weight fractions (taken from manufacturer safety data sheets), toxic chemical vapor pressures, and tank operational data such as tank dimensions, solution temperature, number of heating cycles, air sparge rates, air sparge hours, rectifier amp ratings, and rectifier amp hours. Emissions from the anodizing and plating tanks in 2016 were generally uncontrolled, with the exception of Tank 19 which used a fume suppressant that controlled particulate emissions at an estimated efficiency of 96.8%. As requested by the SCAQMD, Ramboll revised the plating emissions from Tank 19 using the emission limit of 0.01 mg Cr⁶⁺/amp-hr (0.000022 lb/1000 amp-hr). Ramboll also revised Tank 4 emissions using 1.45 x 10⁻⁴ lb Cr⁶⁺/hr from the results of Anaplex's source test on April 10-12, 2017 in calculating the heating and sparging emissions for Dow 7 tank (Tank 4). Lastly, Ramboll updated Tank 22 emissions using the emission factor of 1.29 x 10⁻⁴ lb Cr⁶⁺/hr calculated based on 1.07 x 10⁻⁶ lb Cr⁶⁺/(hr-ft² tank surface area-% sodium dichromate in solution) multiplied by tank 22 surface area of 24 ft², and the percent sodium dichromate in solution of 5.01 as suggested by the AQMD.

9.6 Other Emission Sources

The emission calculations for other sources used in the Revised 2016 HRA – May 2018 are consistent with those presented for the Original 2016 HRA. The description of these other

sources modeled and emission calculation methodology is provided in Table 33. Except for the updates discussed above, Ramboll used the original TAC emission estimates prepared by ALG and reviewed by the SCAQMD for other sources in the Revised 2016 HRA. Emission files used in the 2016 HRA – May 2018 were previously provided electronically to the SCAQMD (See Appendix B of Revised 2016 HRA - May 2018).

10. EXPOSURE ASSESSMENT

10.1 Air Dispersion Modeling

Ramboll used AERMOD (version 16216r) to estimate ambient concentrations for the Facility. The air dispersion analysis was performed in accordance with OEHHA Guidance, the SCAQMD Supplemental Guidelines, and SCAQMD Modeling Guidance for AERMOD. The results of the air dispersion analysis were used in conjunction with the chemical-specific emissions rates discussed above to estimate potential ambient air concentrations of each compound using Air Dispersion Modeling and Risk Tool (ADMRT) module in HARP developed by ARB.¹⁸

The air dispersion analysis requires the following: identification of source parameters and operating schedules, evaluation of building downwash effects, preparation of meteorological data, evaluation of potential terrain considerations, selection of appropriate dispersion coefficients based on land use, selection of receptor locations, and selection of appropriate averaging time periods. The following sections describe each of these steps.

Appendix C of Revised 2016 HRA – May 2018 provides electronic files related to the air dispersion modeling analysis.

10.2 Source Characterization

AERMOD requires source-specific parameters such as stack height, stack inside diameter, exit velocity, and stack gas temperature. Table 4 present the source parameters used in the AERMOD model for each modeled TAC emission source.

Three different representations of emission sources are used in the air dispersion model:

- Point sources;
- Area sources; and
- Volume sources.

Point sources are used to represent those emissions that have single identifiable points of release. A typical point source will have a stack with a defined location. Other sources, however, do not have a single, discrete point of release. Sources that can be reasonably represented as emitting at a uniform rate over a two-dimensional surface are modeled as area sources. Sources that can be reasonably represented as emitting at a uniform rate from a three-dimensional space are modeled as volume sources. Figure 18 shows the modeled TAC emission sources at the facility.

10.3 Source Parameters and Operating Schedules

All source parameters and operating schedules used in the Revised 2016 HRA are consistent with those presented for the Original 2016 HRA, with the exception of the following:

- To account for the emissions escaping from the building through doors and windows, anodizing and plating emissions, solvent usage emissions in masking areas, and abrasive blasting emissions are modeled as volume sources with a release height of one-half of the building height, as presented in Table 34. The locations of potential onsite sources and nearby buildings are included as Figure 18. The source parameters for these volumes were previously reviewed and approved by the SCAQMD to use in the Revised 2016 HRA – May 2018. Routine sources were modeled according to their operating

¹⁸ HARP is available for download online at: <https://www.arb.ca.gov/toxics/harp/harp.htm>.

schedule (8 hours per day, and 5 days per week), while evaporative emissions from anodizing and plating tanks were modeled assuming continuous operation.

10.4 Building Downwash

All the point sources at the facility are located on or near the buildings (refer to Figure 18). Consistent with SCAQMD Modeling Guidance for AERMOD, the USEPA-approved Building Profile Input Program PRIME (BPIPPRIME) was used to simulate the building downwash, which is the effect of nearby structures on the flow of the plumes from their respective emission sources. Figure 18 shows the buildings included.

10.5 Dispersion Parameters

Per the SCAQMD Modeling Guidance for AERMOD, the urban dispersion option was used, with a population of 9,818,605, based on the population of Los Angeles County. AERMOD was run using the regulatory default option, also per SCAQMD Modeling Guidance for AERMOD.

10.6 Meteorological Data

SCAQMD's Compton meteorological station was selected as the most representative surface station for the facility based on the technical discussion with the SCAQMD staff. As noted on the AQMD's website¹⁹, Compton station only has three years of the processed meteorological data available but can be used for modeling upon request and approval of use.²⁰ Three years of Compton meteorological data with ADJ_U* option was used for the air dispersion modeling in the Revised 2016 HRA. A wind rose for the Compton data in 2012, 2015, and 2016 is provided in Figure 20.

10.7 Terrain

Terrain data were obtained from the United States Geological Survey (USGS), with 1/3 arc-second (~10 meter) National Elevation Dataset (NED) data downloaded. Elevations and hill heights were calculated for all sources, buildings, and receptors, using AERMOD terrain preprocessor, AERMAP.

10.8 Receptor Locations

Health effect indices such as cancer risk, chronic hazard index, and acute hazard index were calculated for a variety of receptor locations. Receptors of primary interest are those at residential locations, at sensitive population locations, and at offsite worker locations. However, in order to get a more complete picture of the patterns of exposure, concentrations and risk are also calculated at regularly spaced grid points throughout the modeling domain.

Receptor networks were constructed for the dispersion analysis based on SCAQMD modeling guidance²¹, including along the property boundary line and out to 500 meters from the facility boundary with a spacing of 20 meters,²² a fine grid containing receptors spaced 50 meters apart out to a 1,000-meter radius from the Facility, a medium coarse grid containing receptors spaced 100 meters apart out to a 2-km radius from the Facility, and a coarse grid containing receptors spaced 500 meters apart out to 5,500 m from the facility

¹⁹ <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/aermod-table-1>

²⁰ Provided by Melissa Sheffer on January 30, 2018.

²¹ South Coast Air Quality Management District, Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act, November 4, 2016, Table 9.

²² Per SCAQMD Supplemental Guidelines, a receptor spacing of 20 meters was used to place boundary receptors since the total Facility area is less than 4 acres.

boundary. The grid receptor locations inside of the facility boundary are disregarded in the health risk analysis. Consistent with SCAQMD Modeling Guidance for AERMOD, all receptors were run with a height of 0.0 meters, so that ground-level concentrations are modeled. Sensitive receptor locations (schools, day care facilities, and hospitals) as included in Table 35 were obtained via an internet search and the Google Maps database. A total of 6,506 fence-line and grid receptors were included in the analysis, plus an additional 341 sensitive receptors, for a total of 6,847 receptors.

Additionally, to calculate population exposure and cancer burden, separate dispersion modeling runs were performed at receptors located at the centroid of census tracts whose centroid was located within the modeling domain. The HARP model contains the census tract centroid UTM coordinates and population values from the 2010 census; this data was exported from HARP to create the census tract centroid receptor grid. A total of 19,697 census tract centroid receptors were modeled; Figures 19a – 19d show these receptor locations.

10.9 Coordinate System

Ramboll used the Universal Transverse Mercator (UTM) system of coordinates and the North American Datum (NAD 83) for identifying the UTM coordinates of the various modeling objects (sources, buildings, receptors etc.).

10.10 Averaging Times

Calculation of chemical concentrations for use in exposure analysis requires the selection of appropriate concentration averaging times. Multiple dispersion averaging times are used in this analysis and are discussed below. The AERMOD model input and output files used to estimate long- and short-term dispersion factors are presented as an electronic attachment in Appendix C of Revised 2016 HRA – May 2018.

10.10.1 Long Term

Average concentrations over the three-year span of the Compton meteorological data were calculated for each compound for use in estimating potential residential cancer risks and chronic non-cancer health effects.

10.10.2 Short Term

Maximum short-term concentrations (one-hour averages) of the three-year period modeled were calculated using maximum hourly emission rates to estimate acute non-health effects. One-hour maximum source-specific concentrations were summed regardless of time of occurrence (*i.e.*, hour of year), which can differ by source, thereby conservatively overestimating the true one-hour maximum at any one time.

10.11 Dispersion Factors

Both point and area source emissions were modeled using the X/Q ("chi over q") method, such that emission source groups are input to the model with unit average annual emission rates (*i.e.*, 1 gram per second [g/s]), and the model estimates 1-hour maximum or annual average dispersion factors (with units of $[\mu\text{g}/\text{m}^3]/[\text{g}/\text{s}]$). To calculate annual average ambient air concentrations, the period average dispersion factors were multiplied by the annual emission rates. To calculate 1-hr maximum ambient air concentrations, the 1-hr maximum dispersion factors were multiplied by the maximum hourly emission rates.

10.12 Ground-Level Concentrations

Ground-level concentrations (GLCs) in the ambient air at each of the modeled Point of Maximum Impact (PMI), Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual Worker (MEIW), and maximally exposed individual sensitive receptor (MEISR) for both the long- and short-term scenarios are shown in Tables 36 and 37.

11. RISK ASSESSMENT PROCEDURES

Modeled health risks were estimated for the Facility based on methods and tools outlined in the OEHHA Guidance. Potential Facility emissions and air dispersion results, using the HARP ADMRT tool, were input into HARP2, the OEHHA-recommended program for completing an HRA. The HARP emissions file used is provided in Appendix D of Revised 2016 HRA – May 2018I.

11.1 Identification of Potentially Exposed Populations

The potentially exposed populations considered include current residents, off-site workers, and sensitive receptors located within the grid of receptors and described in Section 10.8. Locations of each potentially exposed population were identified based on review of aerial photographs (Google Earth 2016). The nearest residential property identified is located approximately 200 meters northeast of the Facility.

Since the Facility is located in the industrial/commercial zone, when evaluating the MEIR, receptors within the industrial zone were excluded.

Sensitive population locations, such as hospitals, K-12 schools, preschools, and child care centers were based on those previously identified in the Original 2016 HRA by ALG and reviewed by the SCAQMD.

Consistent with the methods specified by the OEHHA Guidance, risks were estimated at the location of the MEIR and the location of the MEIW. The MEIR and MEIW are defined as the off-site receptor locations where individuals may reside or work, respectively, with the potential highest cancer risk, acute Hazard Index (HI) or chronic non-cancer HI.

In addition, the point of PMI was identified for acute non-cancer hazards.

11.1.1 Estimation of Exposure Point Concentrations

Exposure point concentrations are the concentrations of each chemical to which an individual may be exposed at a given receptor location. Chemical concentrations in air at each receptor location were estimated based on the air dispersion modeling described in Section 10. The exposure point concentrations used to estimate carcinogenic risks and chronic non-cancer HIs are the annual average concentrations of each chemical. The exposure point concentrations used to estimate acute non-cancer HIs are the one-hour maximum concentrations of each chemical. These concentrations at the 2016 operations modeled PMI, MEIR, MEIW, and the MEISR are presented in Tables 36 and 37, respectively, as discussed in Section 10.12 above.

11.1.2 Exposure Pathways

The exposure pathways evaluated in the Revised 2016 HRA – May 2018 were selected in accordance with the OEHHA Guidance and the SCAQMD Supplemental Guidelines. The inhalation pathway must be evaluated for all chemicals. In addition, the OEHHA Guidance also requires the evaluation of non-inhalation exposure pathways, referred to as a multipathway analysis, for specific chemicals.

Selection of the additional pathways for a multipathway analysis is specific to the chemical and land use in the area surrounding the Facility and was based on the recommendations in the OEHHA Guidance. The chemicals that must be evaluated in a multipathway analysis are shown in Table 12.1 of the OEHHA Guidance and are programmed into HARP. As discussed in Section 9, HARP, which complements the OEHHA Guidance with respect to exposure pathway

selection, was used in the Revised 2016 HRA – May 2018 to estimate potential cancer risks and potential non-cancer hazards. The sections below discuss the exposure pathways considered for each potentially exposed population identified in the vicinity of the Facility.

11.1.2.1 Residents

Consistent with the OEHHA Guidance for conducting a multipathway analysis, it was assumed that residents considered in the Revised 2016 HRA – May 2018 may be exposed to Facility emissions via inhalation, dermal absorption, incidental ingestion of soil, ingestion of homegrown produce, and mother's milk. A deposition rate of 0.02 meters per second (m/s) was used, per SCAQMD Supplemental Guidelines.

Since the Facility is located in an urban area with no agricultural areas (e.g., cattle grazing areas or dairy farms) in the vicinity, the Revised 2016 HRA – May 2018 does not include an evaluation of potential exposures via ingestion of meat, dairy, or eggs. However, potential exposures to chemicals in homegrown produce were evaluated for a resident in the Revised 2016 HRA – May 2018 because it is possible that residents in the area may have small vegetable gardens exclusively for personal use. The default home-grown produce parameters for urban settings were used in HARP, consistent with SCAQMD Supplemental Guidelines. Nearby drinking water reservoirs were not identified within the modeled zone of impact, therefore the drinking water pathway was not included.

11.1.2.2 Off-Site Workers

Consistent with the OEHHA Guidance, off-site workers are assumed to be potentially exposed to facility emissions via inhalation, dermal absorption, and incidental ingestion of soil. Similar to residents, a deposition rate of 0.02 meters per second (m/s) was used, per SCAQMD Supplemental Guidelines.

11.1.2.3 Sensitive Receptors

The sensitive populations considered in the Revised 2016 HRA – May 2018 include schools, hospitals, nursing homes, and daycare centers as identified in Table 35. However, HARP does not include methods for evaluating these specific populations differently than residential populations. Thus, as a conservative screening approach, sensitive receptor locations were evaluated assuming the exposure pathways utilized for evaluating the residential population noted above.

11.1.3 Exposure Assumptions

For all pathways, default exposure assumptions built into HARP were used in the risk calculations. The exposure assumptions in HARP are consistent with OEHHA Guidance. However, the specific exposure assumptions applied to calculate risks are dependent on the exposure analysis method selected to calculate risks, as described below in Section 11.1.4.

11.1.4 HARP Exposure Analysis Methods

HARP allows a user to select from a series of exposure analysis methods. Each method in HARP utilizes exposure assumptions differently, depending on the requirements of a specific regulation (e.g., compliance with CARB's Air Toxics Hot Spots Program) or project need (e.g., provide point estimates for risk management decisions). That is, HARP will select the dominant pathway(s) and assign exposure assumptions depending on the exposure analysis method identified by the user. For the Revised 2016 HRA – May 2018, each exposure analysis method selected was based on the type of receptor as presented in Table 38 and is described below.

11.1.4.1 Resident

Consistent with HARP and OEHHA Guidance, potential cancer risks for residential populations were calculated based on RMP using Derived Analysis Method. This method applies conservative exposure assumptions to the two dominant exposure pathways for each chemical. The remaining pathways are evaluated using average exposure assumptions. If inhalation is one of the two dominant exposure pathways, then it is evaluated using the 80th percentile breathing rate.

As required in the OEHHA Guidance for preparing a Tier 1 risk assessment under AB2588, it was assumed that a resident may be exposed to Facility emissions for 30 years. Cancer risks estimated assuming a residential exposure duration of 30 years are used by State and local agencies for risk management and public notification purposes, even though could be conservative and not representative of actual exposure scenarios.

As discussed previously, it was assumed that individuals residing in the vicinity of the Facility may ingest produce obtained from vegetable gardens grown at their homes. Ingestion of homegrown produce is estimated by applying a default parameter of 13.7 percent of produce ingested by individuals in an urban setting that is homegrown and is comprised of four categories including exposed, leafy, protected, and root vegetables (OEHHA 2015). This is the default setting in HARP, and is recommended in the SCAQMD Supplemental Guidelines.

The Derived (OEHHA) Analysis method was used to calculate chronic non-cancer HIs for the resident. This method utilizes high-end exposure assumptions to evaluate the two dominant pathways for each chemical. The remaining pathways are evaluated using average exposure assumptions.

11.1.4.2 Off-Site Worker

Consistent with the OEHHA Guidance, the Point Estimate Analysis method was used to calculate carcinogenic risks and chronic non-cancer HIs associated with off-site worker exposure to Facility emissions. This method utilizes the standard exposure assumptions for worker populations as defined in OEHHA Guidance.

Since potential cancer risks are driven by route emission sources (i.e., spray booths) which are assumed to be emitted 8 hours a day, 5 days a week, an adjustment factor of 4.2 for off-site worker ground-level concentrations are used, consistent with what is shown in Table 41 of SCAQMD Supplemental Guidelines for continuous operation. This is consistent with OEHHA Guidance which recommends using the average concentration that the worker breathes over their work day, which, for continuous operation, is equivalent to the annual average air concentration calculated in AERMOD.

11.1.4.3 Sensitive Receptor

The RMP using Derived Analysis method described previously was used to calculate risks for the MEISR. Potential exposures of the MEISR were evaluated using a continuous 30-year exposure duration, consistent with the residential exposure duration. This is a very conservative approach, as the sensitive receptors include locations such as hospitals, K-12 schools, preschools, child care facilities, and age-care facilities, where the exposure duration is not continuous and is much lower than 30 years.

11.2 Dose-Response Assessment

The dose-response assessment (also referred to as the toxicity assessment) examines the potential for a chemical to cause adverse health effects in exposed individuals (as modeled). Toxicity values that are used to estimate the likelihood of adverse effects occurring in humans are identified in this component of the risk assessment process. Toxicity factors in the latest HARP Health Database,²³ integrated into the HARP program were used in the Revised 2016 HRA – May 2018. The HARP program contains the most up-to-date listing of available inhalation and oral CPFs, chronic inhalation and oral RELs, and acute RELs approved by California Environmental Protection Agency (Cal/EPA) for use in AB2588 Air Toxics Hot Spots Program risk assessments. The methods used to evaluate potential non-cancer effects of lead are described in Section 11.3.2.

11.3 Risk Characterization Methodology

This section describes the methods used to estimate potential adverse effects associated with off-site exposures to chemicals emitted from the Facility. The results of the Revised 2016 HRA – May 2018 are presented in Section 12. HARP was used to estimate carcinogenic risks and non-cancer HIs associated with potential exposures to potential emissions from the Facility.

11.3.1 Carcinogenic Risks

Carcinogenic risks were estimated as the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to carcinogens potentially present in Facility emissions (USEPA 1989). The estimated risk is expressed as a unitless probability. For carcinogenic chemicals, both inhalation and non-inhalation pathways must be considered, using the CPFs in HARP. Total risk is the sum of risks attributable to each chemical considered by each pathway.

The equation used to calculate the potential excess cancer risk from inhalation for each carcinogenic chemical is:

$$\text{Risk}_i = \text{Inhalation Dose}_i \times \text{Cancer Potency Factor}_i$$

Where:

Risk _i	=	Lifetime excess cancer risk from exposure to chemical _i
Inhalation Dose _i	=	Inhalation dose of chemical _i (mg/kg-day)
CPF _i	=	Inhalation CPF for chemical _i (mg/kg-day) ⁻¹

A similar equation, using oral dose and the oral CPF, is used to calculate risks from oral exposure. In the Revised 2016 HRA – May 2018, oral cancer risks include dermal absorption, incidental ingestion of soil, ingestion of homegrown produce, and mother's milk. HARP default exposure parameters were used, as described in Section 11.1.4.

For worker cancer calculations, by default HARP assumes that emissions occur continuously, and the worker is exposed to the average concentration 40 hours per week. When emission sources are not continuous, a portion of the hours during the year have zero emissions and therefore would have zero exposure. If those zero hours occur when a worker is not present,

²³ The latest HARP Health Database is available from ARB here: <http://www.arb.ca.gov/toxics/harp/news.htm>

worker risk would be underestimated. Thus, a “worker adjustment factor” (WAF) needs to be applied to scale the exposure to account for worker and source emission schedule overlap.

The WAF is calculated as follows:

$$WAF = H_{\text{residential}}/H_{\text{source}} \times D_{\text{residential}}/D_{\text{source}}$$

Where:

$H_{\text{residential}}$ = the number of hours per day the long-term residential concentration is based on (always 24 hours)

H_{source} = the number of hours the source operates per day

$D_{\text{residential}}$ = the number of days per week the long-term residential concentration is based on (always 7 days)

D_{source} = the number of days the source operates per week

For this project, it was conservatively assumed that the worker schedule perfectly overlapped with the Anaplex operating schedule of Monday through Friday, 6:00 AM to 2:00 PM for the non-continuous sources. Therefore, the WAF input into HARP to calculate worker cancer risk was $24/8 \times 7/5 = 4.2$.

11.3.2 Chronic Non-Cancer Hazards

When evaluating chronic non-cancer effects due to chemical exposures, a hazard quotient (HQ) is established for each constituent. The equation used to calculate an inhalation HQ is:

$$HQ_i = \frac{C_i}{REL_i}$$

Where:

HQ_i = Chronic hazard quotient for chemical_i

C_i = Annual average air concentration of chemical_i ($\mu\text{g}/\text{m}^3$)

REL_i = Chronic REL for chemical_i ($\mu\text{g}/\text{m}^3$)

To evaluate the potential for adverse non-cancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals that affect the same target organ are summed yielding a HI. The HI is thus estimated as follows:

$$HI_{\text{(eyes)}} = \sum HQ_{\text{substance 1 (eyes)}} + HQ_{\text{substance 2 (eyes)}}$$

Estimation of non-inhalation chronic health effects uses a similar method, but the annual average air concentration is replaced by the dose calculated by HARP using the exposure parameters mentioned above, and the appropriate non-inhalation REL is used.

Estimation of an HI for each target organ (also referred to as a segregation of HI by target organ analysis) is recommended by OEHHA because the non-cancer effects of chemicals with different target organs are generally not additive. For the Revised 2016 HRA – May 2018, a segregation of hazard indices analysis was performed for the modeled PMI, MEIR, MEIW, and the MEISR.

11.3.3 Acute Non-Cancer Hazards

The potential for acute effects was evaluated by comparing the one-hour maximum concentrations with the acute RELs within the HARP program. Acute HQs were estimated for those chemicals for which an REL was available. The equation used to calculate acute HQs is as follows:

$$HQ_i = \frac{C_i}{REL_i}$$

Where:

HQ _i	=	Acute hazard quotient for chemical _i
C _i	=	One-hour maximum air concentration for chemical _i (µg/m ³)
REL	=	Acute non-cancer reference exposure level for chemical _i (µg/m ³)

Ramboll summed the HQs to obtain a target organ-specific HI as follows:

$$HI_{(eyes)} = \sum HQ_{\text{substance 1 (eyes)}} + HQ_{\text{substance 2 (eyes)}}$$

The acute HIs presented in the Revised 2016 HRA – May 2018 conservatively overestimate the true one hour maximum at any one time because one hour maximum air concentrations were summed regardless of time of occurrence (i.e., hour of year) which can differ by source.

11.3.4 Non-cancer Evaluation of Lead

Given that there is no chronic or acute REL for lead, the HRA did not evaluate non-carcinogenic impacts from lead using the standard Hazard Index approach as described above. Per SCAQMD Rule 1402, the Lead National Ambient Air Quality Standard (NAAQS) of 0.15 µg/m³ was compared, conservatively, to the modeled maximum 1-hour lead concentration to evaluate the non-cancer effects of lead in the Revised 2016 HRA – May 2018.

12. RISK CHARACTERIZATION FOR AB2588²⁴

Table 39 shows the results of the Revised 2016 HRA – May 2018 at the modeled PMI, the modeled MEIR, and the modeled MEIW. Sensitive receptors with a cancer risk at or above 10 in one million are listed in Tables 40. Non-cancer health hazard index for all sensitive receptors is below 0.5. Table 41 shows the cancer burden results based on 70-year exposure. Figures 21 through 24 show the locations of these receptors. Figure 25 shows the location of sensitive receptors with risk greater or equal to 1 in a million. Figure 26 shows the modeled 30-year lifetime cancer risk zone of impact, which represents receptor locations where the multipathway lifetime cancer risk is greater than 1 in one million. It is important to note that the zone of impact (i.e., 1 in a million cancer risk contour) presented in Figure 26 conservatively assumes all receptors are residential (which is not the case), along with the modeled 10, 25, and 100 in one million cancer risk contours. Figure 27 shows the modeled 25-year lifetime cancer risk based on the worker exposure scenario. Figure 28 shows the modeled chronic HI isopleths. Acute HI contours at levels of 0.5, 1.0, 3.0, and 5.0 are shown in Figures 29. Since the cancer burden is greater than 0.5, 1 in one million risk contour based on a 70-year lifetime residential exposure is also presented in Figure 30.

The results presented in the Revised 2016 HRA – May 2018 is based on the 2016 operations; however, the results are conservative by assuming the facility used all the chromate-containing paints purchased in 2016. In addition, the results are not indicative of the operations and procedures currently in place at the Facility. The results of the HARP risk characterization runs are provided electronically in Appendix E of Revised 2016 HRA - May 2018J.

12.1 Carcinogens

HARP calculates cancer risk based on annual average concentrations. As mentioned previously, separate AERMOD runs were performed for continuous and non-continuous sources. HARP was also run separately for continuous and non-continuous sources, and the WAF of 4.2 was only applied to the non-continuous sources. The cancer risk calculated at each receptor for the continuous sources was added to the cancer risk calculated at each receptor for the non-continuous sources in a spreadsheet to get the total cancer risk at each receptor. The spreadsheets are provided electronically.

12.1.1 Point of Maximum Impact (PMI)

The cancer risk at the point of maximum impact²⁵ is 93,625 per million, at a fence line receptor (#6) on the southern boundary of the facility. Over 99% of the risk is due to chromium compounds, primarily strontium chromate, but also sodium dichromate, barium chromate, chromium trioxide, and other hexavalent chromium compounds. Paint spray booth #2 is responsible for 99.5% of the risk due to its emissions of chromium compounds and also its proximity to receptor #6. The remainder of the cancer risk is due primarily to emissions from the anodizing and plating tanks. Complete breakdowns of cancer risk by source at the PMI are provided in Table 42. Cancer risk at the PMI is broken down by substance and pathway in Table 43. Figure 21 shows the location of the PMI for cancer risk.

²⁴ When evaluating risk results, total multipathway potential cancer risks and maximum potential non-cancer hazard indices as reported in HARP were used. Additionally, rounding procedures specified in Section 3.5 of the SCAQMD Supplemental Guidelines were followed.

²⁵ Based on 30-yr residential exposure.

12.1.2 Resident (MEIR)

The highest cancer risk at a residential receptor (#2115) is a cancer risk value of 356 in one million. The receptor is located about 200 meters northeast of Anaplex. Similar to the PMI, nearly all of the risk is due to chromium compounds. 99.9% of the risk is from paint spray booth #2, the anodizing tanks, and the plating tanks (96.6%, 3.1%, and 0.1%, respectively). Complete breakdowns of cancer risk by source at the MEIR are provided in Table 42. Cancer risk at the MEIR is broken down by substance and pathway in Table 44. Figure 21 shows the location of the MEIR for cancer risk. A contour map showing the 30-yr residential cancer risk is included as Figure 26.

12.1.3 Off-Site Worker (MEIW)

The highest risk calculated for offsite worker exposure cancer risk is located directly south of Anaplex, across Madison Street about 30 meters from the plant boundary (receptor #1391). The worst case worker cancer risk at this receptor is 5,133 per million. Chromium compounds again contribute to more than 99% of the risk, with strontium chromate responsible for 98.1%, with sodium dichromate, barium chromate, chromium trioxide, and other hexavalent chromium compounds responsible for most of the remainder. The primary source of the worker cancer risk is paint spray booth #2, accounting for more than 99% of the risk. Complete breakdowns of cancer risk by source at the MEIW are provided in Table 42. Cancer risk at the MEIW is broken down by substance and pathway in Table 45. A contour map showing the 25-yr worker cancer risk is included as Figure 27.

12.1.4 Maximally Exposed Individual Sensitive Receptor (MEISR)

The highest calculated cancer risk at a sensitive receptor is 39.2 per million, at Gaines Elementary School Child Daycare Center (receptor #6728) located about 660 meters south of Anaplex. The Wesley Gaines Elementary School and the Gaines State Preschool daycare center are also located at/near this receptor. Cancer risk at each of these receptors is primarily due to exposure to chromium compounds, mainly strontium chromate (96%) and sodium dichromate (2%). Over 99% of the cancer risk at this sensitive receptor is from paint spray booth #2 (96.8%), the anodizing tanks (3%), and the plating tanks (0.2%). Complete breakdowns of cancer risk by source at the maximum exposed sensitive receptor are provided in Table 42. Cancer risk at the maximum exposed sensitive receptor is broken down by substance and pathway in Table 46. Figure 21 shows the location of the maximum exposed sensitive receptor. Table 10 provides a list of all sensitive receptors with a cancer risk above 10 per million. Figure 25 shows the locations of sensitive receptors with cancer risk greater than one in a million.

12.1.5 Population Exposure & Cancer Burden

Along with potential cancer risk, potential population exposure was analyzed and potential cancer burden was calculated within the modeled zone of impact. Census block receptors were extracted from HARP within a 13-km radius from the Facility and were modeled in AERMOD. To determine population exposure, modeling was performed at receptors located at the centroid of all census tracts whose centroid was located within the modeling domain. Both AERMOD and HARP were run in the manner as was done previously, except with the census tract centroid receptors instead of fence line, grid, and sensitive receptors. 30-yr and 70-yr residential cancer risk was calculated at each of these receptors. For any receptor with a cancer risk greater than one per million, the population of the census tract represented by that receptor was summed to determine the total exposure to various levels of cancer risk. The results of these calculations are provided in Table 41. Additionally, cancer burden was

calculated based on the total population exposed to 70-yr cancer risk above one per million. The population of each census tract was multiplied by the 70-yr cancer risk calculated at the representative receptor. These products were summed, and the cancer burden was determined to be 3.6. A contour map showing the one per million cancer risk based on 70-yr exposure is included as Figure 30.

12.2 Non-Carcinogens

As described in Section 11.3.2 and 11.3.3, the non-cancer health impacts are characterized through a hazard index (HI). When more than one chemical is considered, it is assumed that the effects are additive provided the associated chemicals are expected to have an adverse impact on the same target organ system (respiratory system, liver, etc.). Thus, chemical-specific hazard indices are summed to arrive at a hazard index for each target organ. For any organ system, a total hazard index exceeding 1.0 indicates a potential health effect. Although the assumption of additivity of exposure to multiple chemicals ignores possible antagonistic or synergistic interactions, this approach has been accepted by regulatory agencies as generally conservative.

12.2.1 Chronic HI

The chronic HI calculations are based on annual average concentrations and the chronic REL. As described above, separate HARP analyses were run for continuous and for non-continuous emission sources. The results from the two HARP runs were then summed together to determine the total HI²⁶.

The chronic hazard index at the point of maximum impact is 6.9, at receptor #3 located on the eastern boundary of the facility. The primary chemical contributing to the chronic hazard index is sulfuric acid (54%). Chromic trioxide, nickel & compounds, strontium chromate, methylene diphenyl diisocyanate, phosphoric acid, hydrofluoric acid, and toluene combined also contributed more than 42% of the maximum chronic risk. The associated target organ is the respiratory system. Over 92% of the chronic risk is a result of emissions from the anodizing tanks (66.3%), the plating tanks (25.4%), and paint spray booth #2 (6.9%).

The maximum chronic risk at a worker receptor is a hazard index of 1.5, at receptor #1660 located on the northern boundary of the facility where there is a common wall with a neighboring business. The primary chemical contributing to the chronic hazard index is sulfuric acid (56%). Chromic trioxide, nickel & compounds, strontium chromate, methylene diphenyl diisocyanate, phosphoric acid, hydrofluoric acid, and toluene combined also contributed more than 40% of the maximum chronic risk. The associated target organ is the respiratory system. Over 96% of the chronic risk is a result of emissions from the anodizing tanks (70.6%), the plating tanks (13.6%), and paint spray booth #2 (12.2%).

The maximum chronic risk at a residential receptor is a hazard index of 0.03, at receptor #2115 located about 200 meters northeast of Anaplex. The primary chemical contributing to the chronic hazard index is sulfuric acid (41.6%). Nickel & compounds, chromium trioxide, strontium chromate, methylene diphenyl diisocyanate, hydrofluoric acid, and toluene also contributed between 1% and 13% to the highest chronic risk. The associated target organ is

²⁶ The HARP chronic risk results for continuous and non-continuous emission source were summed by target organ. The highest chronic risk at each receptor was based on the target organ with the highest total chronic risk after summing the results from both (continuous and non-continuous) HARP model runs.

the respiratory system. Over 97% of the chronic risk is a result of emissions from the anodizing tanks (52.3%), the plating tanks (28.1%), and paint spray booth #2 (17.4%).

The maximum chronic risk at a sensitive receptor is a hazard index of 0.0037 at receptor #6728 located about 660 meters south of Anaplex (Gaines Elementary School Child Daycare Center). The primary chemical contributing to the chronic hazard index is sulfuric acid (35.7%). Nickel & compounds, chromium trioxide, phosphoric acid, hydrofluoric acid, strontium chromate, methylene diphenyl diisocyanate, hydrochloric acid, and toluene also contributed between 1% and 19% to the highest chronic risk. The associated target organ is the respiratory system. About 98% of the chronic risk is a result of emissions from the anodizing tanks (45.5%), the plating tanks (36.8%), and paint spray booth #2 (15.7%).

Complete breakdowns of chronic risk by source at each of the maximum chronic HI receptors are provided Table 47. Chronic HI is broken down by substance in Tables 48 - 51. Figure 22 shows the location of these receptors. A map showing the chronic HI contours is included as Figure 28.

12.2.2 8-Hour Chronic HI

The 8-hr chronic hazard index at the point of maximum impact is 0.27, at a fence line receptor (#6) on the southern boundary of the facility. The primary chemical contributing to the 8-hr chronic hazard index is methylene diphenyl diisocyanate (73.5%).

Nickel & compounds (14.3%) and formaldehyde (12.1%) contribute nearly all of the remaining risk. The associated target organ is the respiratory system. The sources responsible for over 96% of the 8-hr chronic risk are paint spray booth #2 (82.2%), the plating tanks (12.1%), and the anodizing tanks (2.2%).

The maximum 8-hr chronic risk at a residential receptor is a hazard index of 0.0015, at receptor #2115 located about 200 meters northeast of Anaplex. The primary chemicals contributing to the 8-hr chronic hazard index are methylene diphenyl diisocyanate (52.6%), nickel & compounds (38.2%), and formaldehyde (8.5%). The associated target organ is the respiratory system. Over 96% of the 8-hr chronic risk is a result of emissions from paint spray booth #2 (57.6%), the plating tanks (24.6%), and the anodizing tanks (13.8%).

The maximum 8-hr chronic risk at a worker receptor is a hazard index of 0.0067, at receptor #1391 located directly south of Anaplex, across Madison Street about 30 meters from the plant boundary. The primary chemicals contributing to the 8-hr chronic hazard index are methylene diphenyl diisocyanate (75%), nickel & compounds (12.5%), and formaldehyde (12.3%). The associated target organ is the respiratory system. Over 97% of the 8-hr chronic risk is a result of emissions from paint spray booth #2 (85.2%), the plating tanks (9.8%), and the anodizing tanks (2.9%).

The maximum 8-hr chronic risk at a sensitive receptor is a hazard index of 0.00016 at receptor #6728 located about 660 meters south of Anaplex (Gaines Elementary School Child Daycare Center). The primary chemicals contributing to the 8-hr chronic hazard index are nickel & compounds (39.4%), methylene diphenyl diisocyanate (51.5%), and formaldehyde (8.4%). The associated target organ is the respiratory system. Over 95% of the 8-hr chronic risk is a result of emissions from the paint spray booth #2 (56.7%), plating tanks (26.6%), and the anodizing tanks (12.9%). Complete breakdowns of 8-hr chronic risk by source at each of the maximum receptors are provided Table 52. Chronic HI is broken down by substance in Tables 53 - 56. Figure 23 shows the location of these receptors.

12.2.3 Acute HI

The acute hazard index at the point of maximum impact is 24, at receptor #17 located on the northern boundary of the facility where there is a common wall with a neighboring business. The primary chemical contributing to the acute hazard index is methyl ethyl ketone (MEK) (98.3%). The associated target organ is the respiratory system. The MEK was used in the solvent baths at Anaplex in 2016 and solvent baths (modeled as a single area source) were responsible for 98.2% of the acute risk at the PMI. Since the PMI is along a shared wall with a neighboring facility (receptor #17), the PMI also represents maximum acute risk at a worker receptor. Note that the facility switched from MEK to acetone in December 2016, the acute HI would be significantly lower at its current operation.

The maximum acute risk at a residential receptor is a hazard index of 0.071, at receptor #2115 located about 200 meters northeast of Anaplex. The primary chemical contributing to the acute hazard index is MEK (73.1%). Sulfuric acid (10.7%), sodium hydroxide (7.1%), and nitric acid (2.9%) also contributed more than 1% to the acute risk. The associated target organ is the respiratory system. Over 98% of the acute risk is a result of emissions from the solvent baths (71.3%), the anodizing tanks (10.2%), the plating tanks (10.9%), and paint spray booth #2 (5.7%).

The maximum acute risk at a sensitive receptor is a hazard index of 0.014 at receptor #6728 located about 660 meters south of Anaplex (Gaines Elementary School Child Daycare Center). The primary chemical contributing to the acute hazard index is MEK (86.4%). The associated target organ is the immune system. Over 98% of the acute risk is a result of emissions from the solvent baths (85.8%), the anodizing tanks (5.8%), the plating tanks (6.7%), and paint spray booth #2 (1.3%).

Complete breakdowns of acute HI by source at each of the maximum receptors are provided Table 57. Acute HI is broken down by substance in Tables 58 - 60. The MEI location for acute HI is shown in Figure 24. A map showing the acute HI contours is included as Figure 29.

12.3 Lead Evaluation

As discussed in Section 11.3.4, in a measure of conservatism, the maximum 1-hour lead concentration is approximately $0.12 \mu\text{g}/\text{m}^3$, was compared to the Lead NAAQS and does not exceed lead NAAQS of $0.15 \mu\text{g}/\text{m}^3$. As such, the maximum lead concentration in air at the Facility boundary does not pose any significant adverse non-cancer effect for the residents.

13. ALTERNATE HRA ANALYSES

Ramboll performed the alternate HRA analyses to account for the higher spray booth filter control efficiency at Anaplex during 2016 based on the manufacturer's testing results and, in an additional analysis, also reflect paint usage in 2016 consistent with the no longer using chromate-containing paints after April 2016 (pursuant to a SCAQMD directive, spraying of chromate-containing paints was halted on April 20, 2016). After that date, Anaplex has stated that chromate-containing paints were either disposed of as waste or sent to other facilities permitted to use them. Although the available records are either incomplete and/or are for all paints (not broken out by paint type). Anaplex states that a smaller amount was actually used. Thus, the alternate HRA analyses use both purchase records and 1/3rd of purchase records in calculating risk levels. Other than the Spray Booth #2 emissions, the methodology (i.e., air dispersion modeling, risk calculation) used in the alternate HRA follows both OEHHA and SCAQMD supplemental guidelines for AB2588 HRA. Note that the alternate HRA focus on cancer risk only because cancer risk is the dominant health impact resulting from Anaplex emissions and produces the largest zone of impacts compared to the non-cancer risk results.

Alternate 1: Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on purchase records

Ramboll revised the Spray Booth #2 TAC emissions using Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on purchase records in this alternate HRA. Table 61 summarizes the estimated incremental cancer risk for the MEIR is 127 in a million, and for the MEIW is 1,730 in a million. The locations of the PMI, MEIR, MEIW, and MEISR for cancer risk are the same as those presented in the AB2588 HRA (see Figure 21) based on SCAQMD directions.

Alternate 2: Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on actual usage

Ramboll revised the Spray Booth #2 TAC emissions using Spray Booth #2 filter control efficiency of 95% per manufacturer testing data and chromate containing paint usage based on chromate containing paint usage curtailed after August 2016 in this alternate HRA. As presented in Table 61, the estimated incremental cancer risk for the MEIR is 69 in a million, and for the MEIW is 879 in a million. The locations of the PMI, MEIR, MEIW, and MEISR for cancer risk are the same as those presented in the AB2588 HRA based on SCAQMD directions.

Comparison of Cancer Risk Isoleth

Figures 31 and 32 show ten-in-a-million and twenty-five-in-a-million cancer risk isopleths for the alternate HRA analyses based on the 30-year residential exposure assumptions.

10-in-a-million risk level corresponds to the public notification level, while 25-in-a million represents the higher risk levels that triggered risk reduction planning. As shown in Figures 31, although all three sets of the results show cancer risk exceeds the public notification level, the alternate HRA results using the manufacturer's filter control efficiency and actual 2016 operating conditions at Anaplex would have resulted in a much smaller public notification area. The results of this AB288 HRA contain conservative assumptions (i.e., use of maximum TAC weight percentage in paints and solvent, use of 2016 purchase records, use of filter control efficiency of 90%) would over-report emissions and therefore risk levels.

14. UNCERTAINTIES

In any risk evaluation, a number of assumptions must be made in order to estimate human exposure and to calculate potential risks. These assumptions may, however, introduce uncertainty in risk calculations. Regulatory guidance requires that conservative assumptions be used to provide an upper-bound estimate of the risk and to avoid underestimating the potential exposures and associated health risks, even though these assumptions may not be indicative or representative of actual conditions at and in the vicinity of the Facility. The key sources of uncertainty in the Revised 2016 HRA – May 2018 include:

- Estimation of emissions,
- Estimation of exposure concentrations,
- Exposure assumptions, and
- Chemical toxicity criteria.

In all of these cases, conservative, health-protective assumptions were used in the Revised 2016 HRA – May 2018. By compounding conservative assumptions, the estimated excess cancer risks are upper-bound estimates and the actual incidence of cancer or non-cancer health impacts is likely to be significantly lower (USEPA 1989). The following sections summarize the critical uncertainties associated with the emissions estimation, air dispersion modeling, and risk estimation components of the risk assessment.

14.1 Estimation of Emissions

There are some uncertainties associated with the estimation of emissions in this Revised 2016 HRA. These uncertainties would affect the subsequent estimation of exposure concentrations and risk characterization. In particular, Ramboll identified the following three major uncertainties associated with Anaplex's emission estimates in the Revised 2016 HRA.

- Chemical specification range of solvent or paints used in the process
- Chromate-containing paints usage
- Control efficiency for spray booth filters

As described in the memorandum for the revised ATIR (see Appendix A), it is unlikely that each of the coatings used by the facility would always present at the maximum value in reality. Despite the uncertainty related to these emission estimates, Ramboll revised the emissions from tanks and spray booths using the maximum chemical content from the SDS when applicable.

Secondly, based on the risk characterization results, spray painting with chromate-containing compounds (Spray Booth #2) dominates the calculated cancer risk levels. As described in Section 6, Ramboll performed alternate HRA analyses to calculate cancer risk using both one-third of the purchased chromate-containing paint and all purchase records in 2016, and manufacturer spray booth filter control efficiency of 95%. Pursuant to a SCAQMD directive, spraying of chromate-containing paints was halted on April 20, 2016. After that date, Anaplex has stated that chromate-containing paints were either disposed of as waste or sent to other facilities permitted to use them. In addition, Anaplex believes the spray booths have been equipped with filters at 98% control efficiency since 2010. Ramboll also conducted a site visit on January 17, 2017 to further investigate the control efficiency for the filters and

provided additional documentation to the SCAQMD as explained in the memorandum for the ATIR (see Appendix A).

14.2 Estimation of Exposure Concentrations

There are a number of uncertainties associated with the estimation of exposure concentrations from air dispersion modeling of potential emissions from the Facility's operations. This section briefly describes some of the uncertainties that may influence the exposure concentrations used in the risk characterization.

14.2.1 Estimates from Air Dispersion Models

As discussed in Section 10, the dispersion modeling algorithm in AERMOD was used to estimate average off-site TAC exposure concentrations at the various offsite receptor locations. The AERMOD model uses a steady-state Gaussian plume equation to calculate ambient air concentrations from emission sources. The limitations of the air dispersion model provide a source of uncertainty in the estimation of exposure concentrations. According to USEPA, errors due to the limitation of the algorithms implemented in the AERMOD model in the highest estimated concentrations of +/- 10 percent to 40 percent are typical (USEPA 2005).

14.2.2 Meteorological Data Selection

Uncertainty also exists in the meteorological data used in the AERMOD air dispersion model. These uncertainties are related to the use of meteorological data that is not collected at the site. Therefore, the meteorological data used in this analysis was based on meteorological data from a SCAQMD's monitor station in Compton. While this meteorological station is close to the Facility, the uncertainties due to the use of meteorological data not collected at the site resulted in approximate exposure concentrations.

14.3 Risk Characterization

There are a number of uncertainties associated with the risk characterization process. This section briefly describes some of the uncertainties that may influence the risk estimates produced in this analysis.

14.3.1 Exposure Assumption Uncertainties

Consistent with OEHHA Guidance, risks were estimated assuming that hypothetical residents at the receptor points spend a continuous 30 years at one location. However, the USEPA has estimated that 50% of the population lives in the same residence for only eight years, while only 10% remain in the same house for 32 years (USEPA 2011). Adults, moreover, spend only 66 to 82% of their total daily time at home (USEPA 2011), rather than the 100% assumed here. Accordingly, the actual risks to hypothetical residents at the modeled receptor locations are likely lower than those calculated in this assessment. Moreover, as discussed previously, use of residential exposure parameters represents a conservative assessment of actual risk to other types of receptors, such as sensitive receptors.

14.3.2 Dose-Response Assessment

The primary uncertainties associated with the toxicity assessment are related to derivation of toxicity values. Standard RELs and CPFs established by Cal/EPA and listed in the HARP model were used to estimate potential carcinogenic and non-cancer health effects from exposures to compounds emitted from the Facility. These values are derived by applying conservative assumptions and are intended to protect the most sensitive individuals in the potentially exposed populations.

To derive the toxicity values, Cal/EPA makes several assumptions that tend to overestimate the actual hazard or risk to human health. Because data from human studies are generally unavailable, RELs are typically derived from animal studies. Uncertainty factors and modifying factors are then applied to these data to ensure that the RELs are adequately protective of human health. For many compounds, it is anticipated that this approach overestimates the potential for non-cancer effects.

CPFs used to estimate carcinogenic risk are also typically derived based on data from animal studies. These data are based on studies in which high doses of a test chemical were administered to laboratory animals, and the reported response is extrapolated to the much lower doses typical of human exposure. Very little experimental data are available on the nature of the dose-response relationship at low doses, such as whether a threshold exists or if the dose-response curve passes through the origin. Because of this uncertainty, a conservative model is used to estimate the low-dose relationship, and uses an upper bound estimate (the 95 upper confidence limit of the slope predicted by the extrapolation model) as the CPF. With this factor, an upper-bound estimate of potential cancer risks is obtained.

14.3.3 Risk Calculation

The USEPA (1989) notes that the conservative assumptions used in a risk assessment are intended to assure that the estimated risks do not underestimate the actual risks posed by a site and that the estimated risks do not necessarily represent actual risks experienced by populations at or near a site. The estimated risks in this risk assessment are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure, and chemical toxicity. The use of conservative assumptions tends to produce upper-bound estimates of risk. Although it is difficult to quantify the uncertainties associated with all the assumptions made in this risk assessment, the use of conservative assumptions is likely to result in substantial overestimates of exposure, and hence, risk.

15. CONCLUSIONS

The results of the Revised 2016 HRA – May 2018 indicate that Notification and Action Risk Levels are exceeded based on 2016 emissions from Anaplex. HRA results are summarized in Table 62. Based on these results, Anaplex is subject to the following Rule 1402 provisions:

15.1 Public Notice

As results of this HRA, cancer risk, chronic HI, and acute HI are greater than or equal to the Notification Risk Level, Anaplex will be required to provide public notice, in accordance with the procedures in the most current version of “SCAQMD Public Notification Procedures for Facilities Under the Air Toxics ‘Hot Spots’ Information and Assessment Act (AB 2588) and Rule 1402.

15.2 Risk Reduction Plan (RRP)

As results of this HRA, cancer risk, cancer burden, and acute HI are greater than or equal to the Action Risk Level, Anaplex is required to prepare a Risk Reduction Plan (RRP). The purpose of the RRP is to perform risk reduction measures at the facility which will bring modeled risk below the Action Risk Level. Anaplex has already submitted and substantially implemented a Risk Reduction Plan (RRP), per the Rule 1402 significant risk level requirements. An Early Risk Reduction Plan was submitted on March 13, 2017. The original RRP was submitted in June 13, 2017 and demonstrated that maximum cancer risk levels for workers and residents will be well below 10 in million. A revised RRP is being submitted that will reflect the results of this Revised HRA and clarifications requested by AQMD.

15.3 Current Mitigation Measures

As described in Section 13, the results of this HRA relied on various conservative assumptions which would likely to overestimate the emissions and therefore subsequent exposure concentration and risk at the offsite receptors. Based on the Table 61 and Figures 31 - 32, the risk and associated impact area could vary significant depending on the chromate-containing paints usage and filter control efficiency are assumed.

Notably, the results of this HRA **do not** represent current risk levels as the following risk reduction measures have already been implemented at the facility:

12. Over 95% of the cancer risk evaluated by this HRA resulted from chrome containing paints sprayed in Booth #2. Anaplex has discontinued spraying paints containing chromium compounds until a high efficiency filtration system can be installed.
13. Methyl Ethyl Ketone emissions from solvent cleaning operations were the primary source of acute risk in the HRA. Use as a solvent cleaner has been discontinued.
14. The majority of chrome containing tanks at the facility employ covers when not in use.
15. Tank solutions for several tanks have been switched to non-chrome based solutions.
16. Several tanks have been permanently taken out of service.
17. Polyballs have been added to multiple chrome containing tanks.
18. Temperature has been reduced on Tank 22.
19. Anaplex has made, and proposes to make, additional reductions as discussed in the Original and Revised RRP which is submitted separately from this HRA.

Additionally, Anaplex intends to implement the following measures, as included in the Revised RRP:

3. Permit and install air pollution control equipment (mist eliminator and particulate filter) to control emissions for multiple anodizing and plating tanks.
4. Permit and install higher efficiency particulate control on the #2 spray booth (up to 99.9995% control @ 3 microns or greater).

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TABLES

Table 1. TAC Emissions Rates by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Volume	ANODZEV	Anodizing Tank Evaporation	1101	Fluorides and Compounds	3.65E-02	5.25E-07	4.17E-06	5.25E-07
Volume	ANODZEV	Anodizing Tank Evaporation	112345	Diethylene Glycol Monobutyl Ether	6.99E-01	1.01E-05	7.98E-05	1.01E-05
Volume	ANODZEV	Anodizing Tank Evaporation	7664393	Hydrofluoric Acid	3.00E+01	4.32E-04	3.43E-03	4.32E-04
Volume	ANODZEV	Anodizing Tank Evaporation	7697372	Nitric Acid	1.06E+01	1.52E-04	1.21E-03	1.52E-04
Volume	ANODZEV	Anodizing Tank Evaporation	7664382	Phosphoric Acid	6.01E+00	8.64E-05	6.86E-04	8.64E-05
Volume	ANODZEV	Anodizing Tank Evaporation	7664939	Sulfuric Acid	2.80E-04	4.03E-09	3.20E-08	4.03E-09
Volume	ANODZEV	Anodizing Tank Evaporation	108883	Toluene	4.38E-01	6.30E-06	5.00E-05	6.30E-06
Volume	ANODZEV	Anodizing Tank Evaporation	1330207	Xylene	2.65E-01	3.81E-06	3.02E-05	3.81E-06
Volume	ANODZPSH	Anodizing Tank	7440473	Chromium & Compounds (Other Than Hexavalent)	2.99E-03	4.31E-08	5.41E-06	6.82E-07
Volume	ANODZPSH	Anodizing Tank	57125	Cyanide Compounds	3.63E-03	5.21E-08	2.42E-06	3.04E-07
Volume	ANODZPSH	Anodizing Tank	1101	Fluorides and Compounds	1.30E-01	1.87E-06	1.51E-03	1.91E-04
Volume	ANODZPSH	Anodizing Tank	18540299	Hexavalent Chromium Compounds (Other)	4.51E-03	6.49E-08	3.01E-06	3.79E-07
Volume	ANODZPSH	Anodizing Tank	7439965	Manganese & Compounds	1.96E-05	2.81E-10	3.76E-06	4.73E-07
Volume	ANODZPSH	Anodizing Tank	7440020	Nickel & Compounds	1.23E-01	1.77E-06	7.70E-05	9.71E-06
Volume	ANODZPSH	Anodizing Tank	1333820	Chromium Trioxide	7.73E-02	1.11E-06	4.71E-04	5.94E-05
Volume	ANODZPSH	Anodizing Tank	112345	Diethylene Glycol Monobutyl Ether	4.19E-02	6.02E-07	4.69E-05	5.91E-06
Volume	ANODZPSH	Anodizing Tank	373024	Nickel Acetate	1.64E-02	2.36E-07	1.03E-05	1.29E-06
Volume	ANODZPSH	Anodizing Tank	7664382	Phosphoric Acid	2.36E-02	3.39E-07	2.85E-04	3.59E-05
Volume	ANODZPSH	Anodizing Tank	10588019	Sodium Dichromate	4.30E-01	6.19E-06	8.04E-04	1.01E-04
Volume	ANODZPSH	Anodizing Tank	1310732	Sodium Hydroxide	5.60E-01	8.05E-06	4.45E-04	5.61E-05
Volume	ANODZPSH	Anodizing Tank	7664939	Sulfuric Acid	1.32E+02	1.90E-03	1.20E-01	1.51E-02
Volume	ANODZPSH	Anodizing Tank	108883	Toluene	1.39E-05	2.00E-10	6.97E-08	8.78E-09
Volume	ANODZPSH	Anodizing Tank	1330207	Xylene	2.84E-05	4.08E-10	1.42E-07	1.79E-08
Volume	ANODZPSH	Anodizing Tank	1314132	Zinc Oxide	1.48E-03	2.13E-08	7.40E-06	9.33E-07
Volume	PLATEEVP	Plating Tank Evaporation	112345	Diethylene Glycol Monobutyl Ether	5.85E-02	8.42E-07	6.68E-06	8.42E-07
Volume	PLATEEVP	Plating Tank Evaporation	111762	Ethylene Glycol Monobutyl Ether	7.23E-01	1.04E-05	8.25E-05	1.04E-05
Volume	PLATEEVP	Plating Tank Evaporation	7647010	Hydrochloric Acid	1.70E+02	2.45E-03	1.94E-02	2.45E-03
Volume	PLATEEVP	Plating Tank Evaporation	7664393	Hydrofluoric Acid	2.92E+01	4.20E-04	3.34E-03	4.20E-04
Volume	PLATEEVP	Plating Tank Evaporation	7697372	Nitric Acid	2.13E+02	3.06E-03	2.43E-02	3.06E-03
Volume	PLATEEVP	Plating Tank Evaporation	7664382	Phosphoric Acid	6.14E+01	8.84E-04	7.01E-03	8.84E-04
Volume	PLATEEVP	Plating Tank Evaporation	7664939	Sulfuric Acid	5.36E-03	7.70E-08	6.11E-07	7.70E-08
Volume	PLATEEVP	Plating Tank Evaporation	127184	Tetrachloroethylene	1.26E+01	1.82E-04	1.44E-03	1.82E-04
Volume	PLATEPSH	Plating Tank	7440439	Cadmium & Compounds	3.54E-02	5.09E-07	1.28E-03	1.62E-04
Volume	PLATEPSH	Plating Tank	7440508	Copper & Compounds	1.28E+00	1.84E-05	1.22E-03	1.53E-04
Volume	PLATEPSH	Plating Tank	57125	Cyanide Compounds	2.69E+00	3.87E-05	9.78E-03	1.23E-03
Volume	PLATEPSH	Plating Tank	1128	Lead Compounds	1.21E-05	1.74E-10	2.33E-07	2.93E-08
Volume	PLATEPSH	Plating Tank	7439965	Manganese & Compounds	3.33E-03	4.79E-08	3.47E-05	4.37E-06
Volume	PLATEPSH	Plating Tank	7440020	Nickel & Compounds	2.54E-01	3.66E-06	9.02E-04	1.14E-04
Volume	PLATEPSH	Plating Tank	7440224	Silver & Compounds	6.67E-03	9.59E-08	3.32E-05	4.19E-06
Volume	PLATEPSH	Plating Tank	7440666	Zinc & Compounds	1.76E-02	2.53E-07	1.84E-04	2.31E-05
Volume	PLATEPSH	Plating Tank	6484522	Ammonium Nitrate	7.40E-03	1.06E-07	3.70E-05	4.66E-06
Volume	PLATEPSH	Plating Tank	1333820	Chromium Trioxide	5.24E-04	7.53E-09	7.56E-07	9.53E-08
Volume	PLATEPSH	Plating Tank	112345	Diethylene Glycol Monobutyl Ether	3.36E-03	4.83E-08	4.20E-06	5.29E-07

Table 1. TAC Emissions Rates by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Volume	PLATEPSH	Plating Tank	7647010	Hydrochloric Acid	8.40E-02	1.21E-06	3.23E-04	4.07E-05
Volume	PLATEPSH	Plating Tank	7664393	Hydrofluoric Acid	5.83E-04	8.38E-09	6.07E-06	7.65E-07
Volume	PLATEPSH	Plating Tank	7439921	Lead	6.78E-05	9.75E-10	1.17E-07	1.48E-08
Volume	PLATEPSH	Plating Tank	7697372	Nitric Acid	3.20E-01	4.60E-06	1.76E-03	2.21E-04
Volume	PLATEPSH	Plating Tank	7664382	Phosphoric Acid	1.26E+01	1.81E-04	6.22E-02	7.84E-03
Volume	PLATEPSH	Plating Tank	10588019	Sodium Dichromate	2.30E-02	3.31E-07	5.74E-05	7.24E-06
Volume	PLATEPSH	Plating Tank	1310732	Sodium Hydroxide	4.35E+00	6.26E-05	5.81E-03	7.32E-04
Volume	PLATEPSH	Plating Tank	7664939	Sulfuric Acid	3.57E+00	5.14E-05	1.78E-02	2.24E-03
Volume	PLATEPSH	Plating Tank	1314132	Zinc Oxide	1.87E-03	2.69E-08	1.95E-05	2.46E-06
Capped Point	SPRYBTH2	Paint Booth #2	95636	1,2,4-Trimethylbenzene	9.58E-01	1.38E-05	4.79E-04	6.03E-05
Capped Point	SPRYBTH2	Paint Booth #2	80057	4,4'-Isopropylidenediphenol	1.08E+00	1.55E-05	5.39E-04	6.80E-05
Capped Point	SPRYBTH2	Paint Booth #2	7429905	Aluminum	1.26E-02	1.81E-07	6.30E-06	7.94E-07
Capped Point	SPRYBTH2	Paint Booth #2	1309644	Antimony Trioxide	9.86E-02	1.42E-06	4.93E-05	6.21E-06
Capped Point	SPRYBTH2	Paint Booth #2	10294403	Barium Chromate	2.64E-01	3.79E-06	1.32E-04	1.66E-05
Capped Point	SPRYBTH2	Paint Booth #2	7440393	Barium & Compounds	2.17E-01	3.12E-06	1.08E-04	1.37E-05
Capped Point	SPRYBTH2	Paint Booth #2	18540299	Hexavalent Chromium Compounds (Other)	2.96E-02	4.26E-07	1.48E-05	1.87E-06
Capped Point	SPRYBTH2	Paint Booth #2	7440484	Cobalt & Compounds	1.32E-05	1.89E-10	6.59E-09	8.30E-10
Capped Point	SPRYBTH2	Paint Booth #2	7440508	Copper & Compounds	3.74E-01	5.38E-06	1.87E-04	2.36E-05
Capped Point	SPRYBTH2	Paint Booth #2	98828	Cumene	1.92E-01	2.76E-06	9.58E-05	1.21E-05
Capped Point	SPRYBTH2	Paint Booth #2	34590948	Dipropylene Glycol Monomethyl Ether	2.56E-03	3.68E-08	1.28E-06	1.61E-07
Capped Point	SPRYBTH2	Paint Booth #2	1091	Epoxy Resins	1.31E+01	1.89E-04	6.57E-03	8.28E-04
Capped Point	SPRYBTH2	Paint Booth #2	100414	Ethyl Benzene	9.38E+01	1.35E-03	4.69E-02	5.91E-03
Capped Point	SPRYBTH2	Paint Booth #2	111762	Ethylene Glycol Monobutyl Ether	1.61E+02	2.31E-03	8.03E-02	1.01E-02
Capped Point	SPRYBTH2	Paint Booth #2	2807309	Ethylene Glycol Monopropyl Ether	2.17E+00	3.12E-05	1.08E-03	1.36E-04
Capped Point	SPRYBTH2	Paint Booth #2	1101	Fluorides and Compounds	3.78E+00	5.44E-05	1.89E-03	2.38E-04
Capped Point	SPRYBTH2	Paint Booth #2	50000	Formaldehyde	1.14E+01	1.64E-04	5.69E-03	7.17E-04
Capped Point	SPRYBTH2	Paint Booth #2	822060	Hexamethylene Diisocyanate Monomer	8.55E-02	1.23E-06	4.28E-05	5.39E-06
Capped Point	SPRYBTH2	Paint Booth #2	123319	Hydroquinone	1.17E+00	1.69E-05	5.87E-04	7.40E-05
Capped Point	SPRYBTH2	Paint Booth #2	67630	IPA	3.79E+02	5.45E-03	1.89E-01	2.39E-02
Capped Point	SPRYBTH2	Paint Booth #2	1125	Isocyanates	1.20E+01	1.73E-04	6.02E-03	7.59E-04
Capped Point	SPRYBTH2	Paint Booth #2	1128	Lead Compounds	5.51E-02	7.92E-07	2.75E-05	3.47E-06
Capped Point	SPRYBTH2	Paint Booth #2	78933	MEK	5.75E+02	8.27E-03	2.88E-01	3.62E-02
Capped Point	SPRYBTH2	Paint Booth #2	67561	Methanol	4.81E+01	6.91E-04	2.40E-02	3.03E-03
Capped Point	SPRYBTH2	Paint Booth #2	75092	Methylene Chloride	8.63E+01	1.24E-03	4.31E-02	5.44E-03
Capped Point	SPRYBTH2	Paint Booth #2	101688	Methylene Diphenyl Diisocyanate	1.18E+00	1.69E-05	5.88E-04	7.41E-05
Capped Point	SPRYBTH2	Paint Booth #2	108101	MIBK	3.18E+02	4.57E-03	1.59E-01	2.00E-02
Capped Point	SPRYBTH2	Paint Booth #2	71363	n-Butanol	8.20E+00	1.18E-04	4.10E-03	5.17E-04
Capped Point	SPRYBTH2	Paint Booth #2	108952	Phenol	1.32E+01	1.90E-04	6.62E-03	8.34E-04
Capped Point	SPRYBTH2	Paint Booth #2	7664382	Phosphoric Acid	7.93E-02	1.14E-06	3.96E-05	4.99E-06
Capped Point	SPRYBTH2	Paint Booth #2	107982	Propylene Glycol Monomethyl Ether	1.03E+02	1.48E-03	5.15E-02	6.49E-03
Capped Point	SPRYBTH2	Paint Booth #2	108656	Propylene Glycol Monomethyl Ether Acetate	5.12E-02	7.37E-07	2.56E-05	3.23E-06
Capped Point	SPRYBTH2	Paint Booth #2	78922	Sec-Butyl Alcohol	3.92E+01	5.65E-04	1.96E-02	2.47E-03
Capped Point	SPRYBTH2	Paint Booth #2	1175	Silica	1.07E+01	1.54E-04	5.36E-03	6.75E-04

Table 1. TAC Emissions Rates by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Capped Point	SPRYBTH2	Paint Booth #2	7789062	Strontium Chromate	2.49E+01	3.58E-04	1.25E-02	1.57E-03
Capped Point	SPRYBTH2	Paint Booth #2	540885	Tert-Butyl Acetate	2.18E+00	3.14E-05	1.09E-03	1.38E-04
Capped Point	SPRYBTH2	Paint Booth #2	108883	Toluene	5.97E+02	8.59E-03	2.98E-01	3.76E-02
Capped Point	SPRYBTH2	Paint Booth #2	1330207	Xylene	4.60E+02	6.62E-03	2.30E-01	2.90E-02
Capped Point	SPRYBTH2	Paint Booth #2	7440666	Zinc & Compounds	1.49E-01	2.15E-06	7.47E-05	9.41E-06
Capped Point	SPRYBTH3	Paint Booth #3	95636	1,2,4-Trimethylbenzene	3.22E+00	4.64E-05	1.61E-03	2.03E-04
Capped Point	SPRYBTH3	Paint Booth #3	80057	4,4'-Isopropylidenediphenol	6.88E-01	9.90E-06	3.44E-04	4.34E-05
Capped Point	SPRYBTH3	Paint Booth #3	7429905	Aluminum	6.24E-02	8.98E-07	3.12E-05	3.93E-06
Capped Point	SPRYBTH3	Paint Booth #3	7440393	Barium & Compounds	9.26E-03	1.33E-07	4.63E-06	5.83E-07
Capped Point	SPRYBTH3	Paint Booth #3	7440473	Chromium & Compounds (Other Than Hexavalent)	2.93E-02	4.22E-07	1.47E-05	1.85E-06
Capped Point	SPRYBTH3	Paint Booth #3	7440484	Cobalt & Compounds	9.20E-03	1.32E-07	4.60E-06	5.79E-07
Capped Point	SPRYBTH3	Paint Booth #3	100414	Ethyl Benzene	1.09E+01	1.57E-04	5.45E-03	6.87E-04
Capped Point	SPRYBTH3	Paint Booth #3	111762	Ethylene Glycol Monobutyl Ether	1.32E+00	1.89E-05	6.58E-04	8.29E-05
Capped Point	SPRYBTH3	Paint Booth #3	1101	Fluorides and Compounds	6.84E-01	9.85E-06	3.42E-04	4.31E-05
Capped Point	SPRYBTH3	Paint Booth #3	822060	Hexamethylene Diisocyanate Monomer	2.04E-01	2.94E-06	1.02E-04	1.29E-05
Capped Point	SPRYBTH3	Paint Booth #3	67630	IPA	1.10E+00	1.58E-05	5.50E-04	6.94E-05
Capped Point	SPRYBTH3	Paint Booth #3	1125	Isocyanates	3.28E+01	4.71E-04	1.64E-02	2.06E-03
Capped Point	SPRYBTH3	Paint Booth #3	78933	MEK	3.19E+02	4.59E-03	1.60E-01	2.01E-02
Capped Point	SPRYBTH3	Paint Booth #3	101688	Methylene Diphenyl Diisocyanate	3.93E-02	5.65E-07	1.96E-05	2.47E-06
Capped Point	SPRYBTH3	Paint Booth #3	108101	MIBK	5.63E+01	8.09E-04	2.81E-02	3.54E-03
Capped Point	SPRYBTH3	Paint Booth #3	71363	n-Butanol	1.24E+01	1.79E-04	6.21E-03	7.83E-04
Capped Point	SPRYBTH3	Paint Booth #3	107982	Propylene Glycol Monomethyl Ether	1.22E+02	1.76E-03	6.11E-02	7.69E-03
Capped Point	SPRYBTH3	Paint Booth #3	108656	Propylene Glycol Monomethyl Ether Acetate	3.47E+00	5.00E-05	1.74E-03	2.19E-04
Capped Point	SPRYBTH3	Paint Booth #3	1175	Silica	1.07E+00	1.54E-05	5.34E-04	6.73E-05
Capped Point	SPRYBTH3	Paint Booth #3	540885	Tert-Butyl Acetate	1.47E+00	2.12E-05	7.37E-04	9.29E-05
Capped Point	SPRYBTH3	Paint Booth #3	108883	Toluene	7.73E+01	1.11E-03	3.87E-02	4.87E-03
Capped Point	SPRYBTH3	Paint Booth #3	1330207	Xylene	4.73E+01	6.81E-04	2.37E-02	2.98E-03
Capped Point	SPRYBTH4	Paint Booth #4	95636	1,2,4-Trimethylbenzene	4.26E+00	6.13E-05	2.13E-03	2.69E-04
Capped Point	SPRYBTH4	Paint Booth #4	80057	4,4'-Isopropylidenediphenol	6.88E-01	9.90E-06	3.44E-04	4.34E-05
Capped Point	SPRYBTH4	Paint Booth #4	7429905	Aluminum	6.24E-02	8.98E-07	3.12E-05	3.93E-06
Capped Point	SPRYBTH4	Paint Booth #4	7440393	Barium & Compounds	9.26E-03	1.33E-07	4.63E-06	5.83E-07
Capped Point	SPRYBTH4	Paint Booth #4	7440473	Chromium & Compounds (Other Than Hexavalent)	2.93E-02	4.22E-07	1.47E-05	1.85E-06
Capped Point	SPRYBTH4	Paint Booth #4	7440484	Cobalt & Compounds	9.20E-03	1.32E-07	4.60E-06	5.79E-07
Capped Point	SPRYBTH4	Paint Booth #4	100414	Ethyl Benzene	1.70E+01	2.44E-04	8.49E-03	1.07E-03
Capped Point	SPRYBTH4	Paint Booth #4	111762	Ethylene Glycol Monobutyl Ether	1.32E+00	1.89E-05	6.58E-04	8.29E-05
Capped Point	SPRYBTH4	Paint Booth #4	1101	Fluorides and Compounds	6.84E-01	9.85E-06	3.42E-04	4.31E-05
Capped Point	SPRYBTH4	Paint Booth #4	822060	Hexamethylene Diisocyanate Monomer	2.04E-01	2.94E-06	1.02E-04	1.29E-05
Capped Point	SPRYBTH4	Paint Booth #4	67630	IPA	1.10E+00	1.58E-05	5.50E-04	6.94E-05
Capped Point	SPRYBTH4	Paint Booth #4	1125	Isocyanates	3.28E+01	4.71E-04	1.64E-02	2.06E-03
Capped Point	SPRYBTH4	Paint Booth #4	78933	MEK	3.19E+02	4.59E-03	1.60E-01	2.01E-02
Capped Point	SPRYBTH4	Paint Booth #4	101688	Methylene Diphenyl Diisocyanate	3.93E-02	5.65E-07	1.96E-05	2.47E-06
Capped Point	SPRYBTH4	Paint Booth #4	108101	MIBK	5.63E+01	8.09E-04	2.81E-02	3.54E-03
Capped Point	SPRYBTH4	Paint Booth #4	91203	Naphthalene	1.48E+00	2.13E-05	7.42E-04	9.34E-05

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 Facility ID 016951
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Capped Point	SPRYBTH4	Paint Booth #4	71363	n-Butanol	1.24E+01	1.79E-04	6.21E-03	7.83E-04
Capped Point	SPRYBTH4	Paint Booth #4	107982	Propylene Glycol Monomethyl Ether	1.22E+02	1.76E-03	6.11E-02	7.69E-03
Capped Point	SPRYBTH4	Paint Booth #4	108656	Propylene Glycol Monomethyl Ether Acetate	3.47E+00	5.00E-05	1.74E-03	2.19E-04
Capped Point	SPRYBTH4	Paint Booth #4	1175	Silica	1.07E+00	1.54E-05	5.34E-04	6.73E-05
Capped Point	SPRYBTH4	Paint Booth #4	540885	Tert-Butyl Acetate	1.47E+00	2.12E-05	7.37E-04	9.29E-05
Capped Point	SPRYBTH4	Paint Booth #4	108883	Toluene	7.73E+01	1.11E-03	3.87E-02	4.87E-03
Capped Point	SPRYBTH4	Paint Booth #4	1330207	Xylene	7.14E+01	1.03E-03	3.57E-02	4.50E-03
Volume	MASKING	Masking Area - Paint and Solvent Use	67630	IPA	5.28E+00	7.59E-05	2.64E-03	3.33E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	78933	MEK	1.52E+02	2.19E-03	7.61E-02	9.58E-03
Volume	MASKING	Masking Area - Paint and Solvent Use	75092	Methylene Chloride	4.49E+02	6.45E-03	2.24E-01	2.83E-02
Volume	MASKING	Masking Area - Paint and Solvent Use	91203	Naphthalene	1.54E+01	2.21E-04	7.70E-03	9.70E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	108952	Phenol	1.06E+02	1.52E-03	5.28E-02	6.65E-03
Volume	MASKING	Masking Area - Paint and Solvent Use	108656	Propylene Glycol Monomethyl Ether Acetate	1.54E+01	2.21E-04	7.70E-03	9.70E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	75569	Propylene Oxide	1.52E+01	2.19E-04	7.61E-03	9.58E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	108883	Toluene	6.14E+02	8.84E-03	3.07E-01	3.87E-02
Area	SLVNTBTH	Solvent Degreaser (Manual)	78933	MEK	3.44E+04	4.95E-01	1.72E+01	2.17E+00
Horizontal Point	DGRSR	Vapor Degreaser	67561	Methanol	5.44E+01	7.83E-04	2.72E-02	3.43E-03
Horizontal Point	DGRSR	Vapor Degreaser	79016	Trichloroethylene	5.44E-01	7.83E-06	2.72E-04	3.43E-05
Capped Point	222BLR1	Boiler 1	71432	Benzene	1.54E-02	2.22E-07	1.55E-05	1.95E-06
Capped Point	222BLR1	Boiler 1	50000	Formaldehyde	3.28E-02	4.72E-07	3.29E-05	4.14E-06
Capped Point	222BLR1	Boiler 1	1151	PAH	1.93E-04	2.78E-09	1.93E-07	2.44E-08
Capped Point	222BLR1	Boiler 1	91203	Naphthalene	5.79E-04	8.33E-09	5.80E-07	7.31E-08
Capped Point	222BLR1	Boiler 1	75070	Acetaldehyde	8.30E-03	1.19E-07	8.31E-06	1.05E-06
Capped Point	222BLR1	Boiler 1	107028	Acrolein	5.21E-03	7.49E-08	5.22E-06	6.58E-07
Capped Point	222BLR1	Boiler 1	7664417	Ammonia	6.18E+00	8.88E-05	6.19E-03	7.79E-04
Capped Point	222BLR1	Boiler 1	100414	Ethyl Benzene	1.83E-02	2.64E-07	1.84E-05	2.31E-06
Capped Point	222BLR1	Boiler 1	110543	Hexane	1.22E-02	1.75E-07	1.22E-05	1.53E-06
Capped Point	222BLR1	Boiler 1	115071	Propylene	1.41E+00	2.03E-05	1.41E-03	1.78E-04
Capped Point	222BLR1	Boiler 1	108883	Toluene	7.06E-02	1.02E-06	7.07E-05	8.91E-06
Capped Point	222BLR1	Boiler 1	1330207	Xylene	5.25E-02	7.55E-07	5.26E-05	6.62E-06
Capped Point	222BLR2	Boiler 2	71432	Benzene	1.54E-02	2.22E-07	1.55E-05	1.95E-06
Capped Point	222BLR2	Boiler 2	50000	Formaldehyde	3.28E-02	4.72E-07	3.29E-05	4.14E-06
Capped Point	222BLR2	Boiler 2	1151	PAH	1.93E-04	2.78E-09	1.93E-07	2.44E-08
Capped Point	222BLR2	Boiler 2	91203	Naphthalene	5.79E-04	8.33E-09	5.80E-07	7.31E-08
Capped Point	222BLR2	Boiler 2	75070	Acetaldehyde	8.30E-03	1.19E-07	8.31E-06	1.05E-06
Capped Point	222BLR2	Boiler 2	107028	Acrolein	5.21E-03	7.49E-08	5.22E-06	6.58E-07
Capped Point	222BLR2	Boiler 2	7664417	Ammonia	6.18E+00	8.88E-05	6.19E-03	7.79E-04
Capped Point	222BLR2	Boiler 2	100414	Ethyl Benzene	1.83E-02	2.64E-07	1.84E-05	2.31E-06
Capped Point	222BLR2	Boiler 2	110543	Hexane	1.22E-02	1.75E-07	1.22E-05	1.53E-06
Capped Point	222BLR2	Boiler 2	115071	Propylene	1.41E+00	2.03E-05	1.41E-03	1.78E-04
Capped Point	222BLR2	Boiler 2	108883	Toluene	7.06E-02	1.02E-06	7.07E-05	8.91E-06
Capped Point	222BLR2	Boiler 2	1330207	Xylene	5.25E-02	7.55E-07	5.26E-05	6.62E-06
Capped Point	DGRBLR	Degreaser Boiler	71432	Benzene	3.07E-03	4.42E-08	3.08E-06	3.88E-07

Table 1. TAC Emissions Rates by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Capped Point	DGRBLR	Degreaser Boiler	50000	Formaldehyde	6.53E-03	9.39E-08	6.54E-06	8.24E-07
Capped Point	DGRBLR	Degreaser Boiler	1151	PAH	3.84E-05	5.52E-10	3.85E-08	4.85E-09
Capped Point	DGRBLR	Degreaser Boiler	91203	Naphthalene	1.15E-04	1.66E-09	1.15E-07	1.45E-08
Capped Point	DGRBLR	Degreaser Boiler	75070	Acetaldehyde	1.65E-03	2.38E-08	1.65E-06	2.08E-07
Capped Point	DGRBLR	Degreaser Boiler	107028	Acrolein	1.04E-03	1.49E-08	1.04E-06	1.31E-07
Capped Point	DGRBLR	Degreaser Boiler	7664417	Ammonia	1.23E+00	1.77E-05	1.23E-03	1.55E-04
Capped Point	DGRBLR	Degreaser Boiler	100414	Ethyl Benzene	3.65E-03	5.25E-08	3.65E-06	4.60E-07
Capped Point	DGRBLR	Degreaser Boiler	110543	Hexane	2.42E-03	3.48E-08	2.42E-06	3.05E-07
Capped Point	DGRBLR	Degreaser Boiler	115071	Propylene	2.81E-01	4.04E-06	2.81E-04	3.54E-05
Capped Point	DGRBLR	Degreaser Boiler	108883	Toluene	1.41E-02	2.02E-07	1.41E-05	1.77E-06
Capped Point	DGRBLR	Degreaser Boiler	1330207	Xylene	1.04E-02	1.50E-07	1.05E-05	1.32E-06
Capped Point	DRYER3	Dryer #3	71432	Benzene	6.18E-03	8.88E-08	6.19E-06	7.79E-07
Capped Point	DRYER3	Dryer #3	50000	Formaldehyde	1.31E-02	1.89E-07	1.31E-05	1.66E-06
Capped Point	DRYER3	Dryer #3	1151	PAH	7.72E-05	1.11E-09	7.73E-08	9.74E-09
Capped Point	DRYER3	Dryer #3	91203	Naphthalene	2.32E-04	3.33E-09	2.32E-07	2.92E-08
Capped Point	DRYER3	Dryer #3	75070	Acetaldehyde	3.32E-03	4.77E-08	3.32E-06	4.19E-07
Capped Point	DRYER3	Dryer #3	107028	Acrolein	2.08E-03	3.00E-08	2.09E-06	2.63E-07
Capped Point	DRYER3	Dryer #3	7664417	Ammonia	2.47E+00	3.55E-05	2.47E-03	3.12E-04
Capped Point	DRYER3	Dryer #3	100414	Ethyl Benzene	7.33E-03	1.05E-07	7.35E-06	9.26E-07
Capped Point	DRYER3	Dryer #3	110543	Hexane	4.86E-03	6.99E-08	4.87E-06	6.14E-07
Capped Point	DRYER3	Dryer #3	115071	Propylene	5.64E-01	8.12E-06	5.65E-04	7.12E-05
Capped Point	DRYER3	Dryer #3	108883	Toluene	2.83E-02	4.06E-07	2.83E-05	3.57E-06
Capped Point	DRYER3	Dryer #3	1330207	Xylene	2.10E-02	3.02E-07	2.10E-05	2.65E-06
Capped Point	DRYER4	Dryer #4	71432	Benzene	6.18E-03	8.88E-08	6.19E-06	7.79E-07
Capped Point	DRYER4	Dryer #4	50000	Formaldehyde	1.31E-02	1.89E-07	1.31E-05	1.66E-06
Capped Point	DRYER4	Dryer #4	1151	PAH	7.72E-05	1.11E-09	7.73E-08	9.74E-09
Capped Point	DRYER4	Dryer #4	91203	Naphthalene	2.32E-04	3.33E-09	2.32E-07	2.92E-08
Capped Point	DRYER4	Dryer #4	75070	Acetaldehyde	3.32E-03	4.77E-08	3.32E-06	4.19E-07
Capped Point	DRYER4	Dryer #4	107028	Acrolein	2.08E-03	3.00E-08	2.09E-06	2.63E-07
Capped Point	DRYER4	Dryer #4	7664417	Ammonia	2.47E+00	3.55E-05	2.47E-03	3.12E-04
Capped Point	DRYER4	Dryer #4	100414	Ethyl Benzene	7.33E-03	1.05E-07	7.35E-06	9.26E-07
Capped Point	DRYER4	Dryer #4	110543	Hexane	4.86E-03	6.99E-08	4.87E-06	6.14E-07
Capped Point	DRYER4	Dryer #4	115071	Propylene	5.64E-01	8.12E-06	5.65E-04	7.12E-05
Capped Point	DRYER4	Dryer #4	108883	Toluene	2.83E-02	4.06E-07	2.83E-05	3.57E-06
Capped Point	DRYER4	Dryer #4	1330207	Xylene	2.10E-02	3.02E-07	2.10E-05	2.65E-06
Volume	ABRBLST	Abrasive Blasting	7429905	Aluminum	5.56E-02	8.00E-07	3.05E-05	3.85E-06
Volume	ABRBLST	Abrasive Blasting	7440417	Beryllium & Compounds	7.15E-05	1.03E-09	3.93E-08	4.95E-09
Volume	ABRBLST	Abrasive Blasting	7440439	Cadmium & Compounds	3.97E-05	5.71E-10	2.18E-08	2.75E-09
Volume	ABRBLST	Abrasive Blasting	7440484	Cobalt & Compounds	1.75E-04	2.51E-09	9.60E-08	1.21E-08
Volume	ABRBLST	Abrasive Blasting	7440473	Chromium & Compounds (Other Than Hexavalent)	6.75E-03	9.71E-08	3.71E-06	4.67E-07
Volume	ABRBLST	Abrasive Blasting	7440508	Copper & Compounds	2.22E-02	3.20E-07	1.22E-05	1.54E-06
Volume	ABRBLST	Abrasive Blasting	18540299	Hexavalent Chromium Compounds (Other)	1.43E-03	2.06E-08	7.85E-07	9.90E-08
Volume	ABRBLST	Abrasive Blasting	7439965	Manganese & Compounds	2.22E-03	3.20E-08	1.22E-06	1.54E-07

Table 1. TAC Emissions Rates by Source

Anaplex Corporation
Facility ID 016951
Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Volume	ABRBLST	Abrasive Blasting	7440020	Nickel & Compounds	4.77E-03	6.85E-08	2.62E-06	3.30E-07
Volume	ABRBLST	Abrasive Blasting	7439921	Lead	3.97E-05	5.71E-10	2.18E-08	2.75E-09
Volume	ABRBLST	Abrasive Blasting	7782492	Selenium & Compounds	5.96E-04	8.57E-09	3.27E-07	4.12E-08
Volume	ABRBLST	Abrasive Blasting	7440622	Vanadium (Fume or Dust)	2.98E-04	4.28E-09	1.64E-07	2.06E-08

Abbreviations:

g/s = grams per second
lbs/hr = pounds per hour

lbs/yr = pounds per year
TAC = toxic air contaminant

Table 3. Modeled Source Description

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source	Source ID	Description
Anodizing Tanks	ANODZPSH, ANODZEV	A total of 31 tanks in the anodizing area contained toxic chemicals in 2016. Emissions resulted from evaporation, plating, sparging, and heating operations, and were released through roof vents and rollup doors on the east and west sides of the building. Emissions from these tanks were modeled as multiple volume sources representing the east building where the anodizing tanks are located. It was assumed that evaporation emissions occurred continuously (24 hours per day, 7 days per week) while plating, sparging, and heating emissions occurred only during AQMD operating hours.
		Emissions were calculated using a methodology provided by SCAQMD. Data used in the emission calculations included metal plating efficiencies, material densities and toxic chemical weight fractions (taken from manufacturer safety data sheets), toxic chemical vapor pressures, and tank operational data such as tank dimensions, solution temperature, number of heating cycles, air sparge rates, air sparge hours, rectifier amp ratings, and rectifier amp hours. Emissions from the anodizing tanks in 2016 were generally uncontrolled, with the exception of one of the tanks (Anodizing Tank 19) which used a fume suppressant that controlled particulate emissions at an estimated efficiency of 96.8%. Emission were revised in the Amended HRA to incorporate the SCAQMD's comments on the ATIR.
Plating Tanks	PLATEPSH, PLATEEVP	A total of 47 tanks in the plating area contained toxic chemicals in 2016. Similar to the anodizing tanks, emissions resulted from evaporation on a continuous basis and from plating, sparging, and heating during operating hours. Emissions from the plating tanks were released through roof vents and rollup doors on the east and west sides of the building and were modeled as volume sources representing the east building where the plating tanks are located. Evaporation emissions (Source ID = PLATEEVP) were modeled separately from plating, sparging, and heating emissions (Source ID = PLATEPSH) based on operating schedule.
		Emission from plating tanks were calculated as described above for anodizing tanks. No emission controls were assumed for the plating tanks in 2016. Emission for certain tanks were revised in the Amended HRA to incorporate the SCAQMD's comments on the ATIR.
Paint Spray Booths	SPRYBTH2, SPRYBTH3, SPRYBTH4	Three spray booths (#2, #3, and #4) were used to apply paint in 2016. All three booths are located in the east building, and emissions from each booth were directed to stacks on the building roof. Each stack was affixed with a raincap.
		Paint booth particulate emissions were calculated by multiplying the paint purchases by the toxic chemical weight fraction, applying an AQMD AER default 65% solids transfer efficiency, and applying a 90% PM control efficiency. The 90% PM control efficiency is the default value for the standard filter per SCAQMD's comment on the ATIR. VOC emissions were calculated by multiplying the paint usage by the toxic chemical weight fraction. In the sensitivity run, 95% PM control efficiency was assumed from Spray Booth #2 as described in Section 6.
		Emissions were assumed to occur during SCAQMD operating hours. In the sensitivity run, 1/3 rd of the purchased chromate-containing paint was assumed from Spray Booth #2 as described in Section 6.
Boilers	222BLR1, 222BLR2, DGRBLR	Three boilers (Boiler 1, Boiler 2, and the vapor degreaser boiler) were used at Anaplex in 2016. Boilers 1 and 2 are located outdoors adjacent to the west side of the east building; the degreaser boiler is located inside the west building. Combustion emissions from each boiler were vented to stacks with raincaps.
		Emissions were calculated by multiplying the natural gas usage by the SCAQMD toxic chemical emission factor for natural gas-fired external combustion equipment[1]. For annual emissions, natural gas usage was taken from natural gas invoices and divided among the combustion units based on equipment heat rating (MMBtu/hr). Hourly emissions assumed maximum hourly fuel usage based on equipment rating.
		Emissions from each boiler were assumed to occur during AQMD operating hours.

Table 3. Modeled Source Description

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source	Source ID	Description
Vapor Degreaser	DGRSR	The vapor degreaser is located at the east side of the west building near a large rollup door. The degreaser vents to a carbon canister and was modeled as a stack with a horizontal release.
		Emissions were based on 2016 purchase records and toxic chemical quantities per manufacturer safety data sheets. The carbon canister was assumed to provide 95% control efficiency. Emissions were assumed to occur during SCAQMD operating hours.
Drying Ovens	DRYER3, DRYER4	Two drying ovens (Dryer 3 and Dryer 4) were used at Anaplex in 2016. Dryer 3 is located inside the east building in the southwest corner and Dryer 4 is located in the central portion of the west building. Combustion emissions from each drying oven were vented to stacks with raincaps.
		Emissions were calculated as described above for the boilers. Emissions from each oven were assumed to occur during AQMD operating hours.
Solvent Baths	SLVNTBTH	Two solvent cleaning stations located outdoors and adjacent to each other next to the northwest corner of the east building were modeled as a single fugitive area source.
		Emissions were based on 2016 purchase records and toxic chemical quantities per manufacturer safety data sheets. Emissions were uncontrolled and assumed to occur continuously.
Masking Areas	MASKING	Emissions from hand applied paints and solvents occurred in several masking areas located throughout the east building. Emissions occurred through roof vents and rollup doors. These emissions were modeled as volume sources encompassing the entire east building.
		Emissions were based on 2016 purchase records and toxic chemical quantities per manufacturer safety data sheets. Hand-applied coating and solvent usages were assumed to have a solids transfer efficiency of 100% (only VOCs were emitted). Emissions were uncontrolled and assumed to occur during AQMD operating hours.
Abrasive blasting	ABRBLST	Abrasive blasting took place in three blasting cabinets located roughly in the center of the west building. Emissions occurred through roof vents and rollup doors. These emissions were modeled volume sources encompassing the entire west building.
		Emissions were calculated based on abrasive material throughput, the AQMD PM emission factor for indoor grit blasting assuming 99% control efficiency from a baghouse, and the weight fraction of each toxic chemical based on analytical sample results.
		Abrasive material throughput was estimated from an equation in the AP-42 Section 13.2.6 Background Documentation using nozzle size and pressure. Operating time was estimated by Anaplex to be 7 hours per day, 5 days per week, 52 weeks per year.
		Emissions from abrasive blasting were assumed to occur during AQMD operating hours.

Note:

¹SCAQMD Supplemental Instructions: Reporting Procedures for AB2588 Facilities for Reporting Quadrennial Air Toxics Emissions Inventory, Appendix B, Table B-1, December 2016.

Table 4. Modeled Source Parameters

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source Type	Source Description	Location	Modeled Source Group	Number of Sources	Building Height (m)	Release Height ¹ (m)	Volume Source Width (m)	Initial Vertical Dimension ² (m)	Initial Lateral Dimension ³ (m)	Exclusion Zone ⁴ (m)	X/Q Emission Rate (g/s)
Volume	Anodizing Tank	East Building	ANODZPSH	8	4.88	2.44	8.38	2.27	1.95	5.19	0.125
	Anodizing Tank Evaporation	East Building	ANODZ EVP	8	4.88	2.44	8.38	2.27	1.95	5.19	0.13
	Plating Tank	East Building	PLATEPSH	8	4.88	2.44	8.38	2.27	1.95	5.19	0.125
	Plating Tank Evaporation	East Building	PLATE EVP	8	4.88	2.44	8.38	2.27	1.95	5.19	0.13
	Masking Area - Paint and Solvent Use	East Building	MASKING	32	4.88	2.44	8.38	2.27	1.95	5.19	0.03125
	Abrasive Blasting	West Building	ABRBLST	20	5.79	2.90	8.38	2.69	1.95	5.19	0.05

Source Type	Source Description	Location	Modeled Source Group	Number of Sources	Release Height (m)	X Length (m)	Y Length (m)	Angle	Initial Lateral Dimension (m)	X/Q Emission Rate (g/s-m ²)
Area ⁵	Solvent Degreaser (Manual)	Outside	SLVNTBTH	1	0.91	7.62	3.66	0.00	0.00	0.036

Source Type	Source Description	Location	Modeled Source Group	Number of Sources	Stack Height (m)	Stack Temperature (K)	Stack Velocity (m/s)	Stack Diameter (m)	X/Q Emission Rate (g/s)
Capped Point ⁵	Boiler 1	East Building	222BLR1	1	5.72	477.59	2.01	0.41	1.00
	Boiler 2	East Building	222BLR2	1	5.72	477.59	2.01	0.41	1.00
	Degreaser Boiler	West Building	DGRBLR	1	6.96	466.48	0.69	0.30	1.00
	Dryer #3	East Building	DRYER3	1	5.18	458.15	3.09	0.20	1.00
	Dryer #4	West Building	DRYER4	1	7.24	458.15	3.09	0.20	1.00
	Paint Booth #2	East Building	SPRYBTH2	1	6.83	0.00	9.20	0.91	1.00
	Paint Booth #3	East Building	SPRYBTH3	1	6.71	0.00	18.74	0.66	1.00
	Paint Booth #4	East Building	SPRYBTH4	1	6.71	0.00	17.64	0.66	1.00
Horizontal Point ⁵	Vapor Degreaser	West Building	DGRSR	1	0.30	0.00	0.01	0.06	1.00

Notes:

¹ Release height is assumed to be half of the building height for volume sources

² Sigma Z: calculated as building height divided by 2.15

³ Sigma Y: calculated as volume source width divided by 4.3

⁴ (2.15 x Sigma Y) + 1 meter from the center of the volume source.

Conversion

0.3048 m/ft

⁵ Modeled Source Parameters for area and point source types have not changed from HRA received by the SCAQMD on June 13, 2017.

Abbreviations:

g = gram m = meters

K = Kelvin s = seconds

Table 5. Modeled Sensitive Receptors

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Schools				
Mark Twain Elementary School	5021 E Centralia St, Long Beach, CA 90808	6507	395044	3745024
Hoover Middle School	3501 Country Club Dr, Lakewood, CA 90712	6508	393464	3745074
Bethany Lutheran School	5100 E Arbor Rd, Long Beach, CA 90808	6509	395172	3745288
St Cyprian's School	5133 E Arbor Rd, Long Beach, CA 90808	6510	395226	3745397
Riley Elementary School	3319 Sandwood St, Lakewood, CA 90712	6511	393360	3745486
Cleveland Elementary School	4760 Hackett Ave, Lakewood, CA 90713	6512	397668	3745499
Barton Elementary School	1100 E Del Amo Blvd, Long Beach, CA 90807	6513	390978	3745709
Perry Lindsey Middle School	5075 Daisy Ave, Long Beach, CA 90805	6514	389048	3745899
Holmes Elementary School	5020 Barlin Ave, Lakewood, CA 90712	6515	393788	3746042
Gomper's K-8 School	5206 Briercrest Ave, Lakewood, CA 90713	6516	396179	3746325
Addams Elementary School	256 E Plymouth St, Long Beach, CA 90805	6517	389818	3746478
St Athanasius Catholic School	5377 Linden Ave, Long Beach, CA 90805	6518	390271	3746568
Lindbergh Elementary School	1022 E Market St, Long Beach, CA 90805	6519	390730	3746577
Intensive Learning Center School	4718 Michelson St, Lakewood, CA 90712	6520	394866	3746893
Buena Vista High School	3717 Michelson St, Lakewood, CA 90712	6521	393824	3746966
Stephen Foster Elementary School	5223 Bigelow St, Lakewood, CA 90712	6522	395437	3746968
Educare Preschool and Kindergarten School	5730 South St, Lakewood, CA 90713	6523	396320	3747121
Harte Elementary School	1671 E Phillips St, Long Beach, CA 90805	6524	391606	3747185
St Josephs High School	5825 Woodruff Ave, Lakewood, CA 90713	6525	396566	3747398
Esther Lindstrom Elementary School	5900 Canehill Ave, Lakewood, CA 90713	6526	397279	3747390
Mayfair High School	6000 Woodruff Ave, Lakewood, CA 90713	6527	396813	3747657
Captain Raymond Collins School	6125 Coke Ave, Long Beach, CA 90805	6528	393831	3747927
Craig Williams Elementary School	6144 Clark Ave, Lakewood, CA 90712	6529	395153	3747956
Valley Christian Middle School	18100 Dumont Ave, Cerritos, CA 90703	6530	397938	3748038
Thomas Jefferson Elementary School	10027 Rose St, Bellflower, CA 90706	6531	396403	3748340
Jordan Plus High School	171 W Bort St, Long Beach, CA 90805	6532	388508	3748539
Valley Christian High School	17700 Dumont Ave, Cerritos, CA 90703	6533	397979	3748433
Grant Elementary School	1225 E 64th St, Long Beach, CA 90805	6534	391239	3748530
Jordan High School	6500 Atlantic Ave, Long Beach, CA 90805	6535	390441	3748582
Gahr High School	11111 Artesia Blvd, Cerritos, CA 90703	6536	398787	3748711
Valley Christian Elementary School	17408 Grand Ave, Bellflower, CA 90706	6537	397126	3748868
Las Flores School	10039 Palm St, Bellflower, CA 90706	6538	396466	3749074
St Bernard School	9626 Park Street Bellflower, CA 90706	6539	395732	3749110
McKinley Elementary School	6822 Paramount Blvd., Long Beach, CA, 90805	6540	392799	3749321
Hamilton Middle School	1060 70th St, Long Beach, CA 90805	6541	390925	3749595
Somerset Continuation High School	9242 Laurel St, Bellflower, CA 90706	6542	394874	3749702
Bellflower Alternative Education Center School	16703 South Clark Ave., Bellflower, CA 90706-5203	6543	395084	3749707
Major Lynn Mokler School	8571 Flower St, Paramount, CA 90723	6544	393792	3749726
Robert F. Kennedy Elementary School	1305 S Oleander Ave, Compton, CA 90220	6545	386350	3749910
Ramona Elementary School	9351 Laurel St, Bellflower, CA 90706	6546	395099	3749834
Leona Jackson School	7220 Jackson St, Paramount, CA 90723	6547	391603	3750024
Wesley Gaines School	7340 Jackson St, Paramount, CA 90723	6548	391817	3750027
Emerson Elementary School	1011 E Caldwell St, Compton, CA 90221	6549	387995	3750082
Southlands Christian Academy School	16400 Woodruff Ave, Bellflower, CA 90706	6550	396709	3749983
Alondra Middle School	16200 Downey Ave, Paramount, CA 90723	6551	393695	3750170
Kelly Elementary School	2320 E Alondra Blvd, Compton, CA 90221	6552	389279	3750329
Roosevelt Middle School	1200 E Alondra Blvd, Compton, CA 90221	6553	388069	3750369
Frank J. Zamboni School	15733 Orange Ave, Paramount, CA 90723	6554	391060	3750653
Compton Early College High School	601 S Acacia Ave, Compton, CA 90220	6555	386524	3750757
Compton High School	601 S Acacia Ave, Compton, CA 90220	6556	386524	3750757
Adventists Union School	15548 Santa Ana Ave, Bellflower, CA 90706	6557	395026	3750753
Jefferson Elementary School	8600 Jefferson St, Paramount, CA 90723	6558	393789	3750832
Dominguez High School	15301 S San Jose Ave, Compton, CA 90221	6559	390647	3750924
Washington Elementary School	9725 Jefferson St, Bellflower, CA 90706	6560	395805	3750910
Abraham Lincoln School	15324 California, Paramount, CA, 90723	6561	392915	3750969
Mark Keppel School	6630 Mark Keppel St, Paramount, CA 90723	6562	390853	3751014
Anna M. Glazier Elementary School	10932 East Excelsior Dr, Norwalk, CA 90650	6563	398131	3750940
Nazarene Christian School	15014 Studebaker Rd, Norwalk, CA 90650	6564	398332	3750963
Frank E. Woodruff Elementary School	15332 Eucalyptus Ave, Bellflower, CA 90706	6565	396293	3750995
Bellflower High School	15301 McNab Ave, Bellflower, CA 90706	6566	396984	3750992
First Christian New Life Academy School	225 Santa Fe Ave, Compton, CA 90221	6567	387554	3751148
Clinton Elementary School	6500 E Compton Blvd, Compton, CA 90221	6568	390627	3751173
Loretta Lampton Elementary School	14716 Elmcroft Ave, Norwalk, CA 90650	6569	398752	3751158

Table 5. Modeled Sensitive Receptors

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Progressive Achievement Center School	302 N Long Beach Blvd, Compton, CA 90221	6570	388334	3751477
Albert Baxter Elementary School	14929 Cerritos Ave, Bellflower, CA 90706	6571	394526	3751418
Lifeline Education Charter School	357 E Palmer St, Compton, CA 90221	6572	387254	3751577
Our Lady of Victory School	601 E Palmer St, Compton, CA 90221	6573	387483	3751581
Our Lady of the Rosary School	14813 Paramount Blvd, Paramount, CA 90723	6574	392666	3751551
Bellflower United Methodist School	14527 Bellflower Blvd, Bellflower, CA 90706	6575	395916	3751618
Ernie Pyle School	14500 Woodruff Ave, Bellflower, CA 90706	6576	396909	3751619
Compton Unified ROP School	700 N Bullis Rd, Compton, CA 90221	6577	388465	3751803
Los Cerritos School	14626 Gundry Ave, Paramount, CA 90723	6578	391395	3751772
Roosevelt Elementary School	700 N Bradfield Ave, Compton, CA 90221	6579	388823	3751809
Paramount Park Middle School	14608 Paramount Blvd, Paramount, CA 90723	6580	392890	3751762
Paramount High School	14429 Downey Ave, Paramount, CA 90723	6581	393459	3751819
Paramount Adult School	14507 Paramount Blvd, Paramount, CA 90723	6582	392689	3751835
Paramount Unified Community Day School	14507 Paramount Blvd, Paramount, CA 90723	6583	392682	3751837
Harry Wirtz Elementary School	8535 Contreras St, Paramount, CA 90723	6584	393613	3751872
Whaley Middle School	14401 S Gibson Ave, Compton, CA 90221	6585	389955	3751959
Mayo Elementary School	915 N Mayo Ave, Compton, CA 90221	6586	387817	3752015
Howard Tanner School	7210 Rosecrans Ave, Paramount, CA 90723	6587	391637	3752036
Today's Fresh Start-Compton School	2301 E Rosecrans Ave, Compton, CA 90221	6588	389135	3752144
Rosecrans Elementary School	1301 N Acacia Ave, Compton, CA 90222	6589	386387	3752191
Lynn Pace Elementary School	9625 Van Ruiten St, Bellflower, CA 90706	6590	395779	3752088
Corvallis Middle School	11032 Leffingwell Rd, Norwalk, CA 90650	6591	398476	3752237
Foster Elementary School	1620 N Pannes Ave, Compton, CA 90221	6592	388879	3752433
Sea Compton High School	1705 N Culver Ave, Compton, CA 90222	6593	386432	3752498
St John Bosco High School	13640 Bellflower Blvd, Bellflower, CA 90706	6594	396115	3752396
St Phillip Neri School	12522 N Stoneacre Ave, Lynwood, CA 90262	6595	389602	3752725
New River Elementary School	13432 Halcourt Ave, Norwalk, CA 90650	6596	398159	3752633
D. D. Johnston Elementary School	13421 Fairford Ave, Norwalk, CA 90650	6597	398692	3752634
Janie P. Abbott Elementary School	5260 Clark St, Lynwood, CA 90262	6598	390242	3752750
Norwalk Christian Academy School	11005 Foster Rd, Norwalk, CA 90650	6599	398428	3752770
Carpenter Elementary School	9439 Foster Rd, Downey, CA 90242	6600	395274	3752815
Jefferson Elementary School	2508 E 133rd St, Compton, CA 90222	6601	386809	3752941
Lewis Elementary School	13220 Bellflower Blvd, Downey, CA 90242	6602	396058	3752852
Theodore Roosevelt School	13451 Merkel Ave, Paramount, CA 90723	6603	393061	3752892
Mark Twain Elementary School	12315 Thorson Ave, Lynwood, CA 90262	6604	389211	3753146
Kid Town USA School	13500 Paramount Blvd, South Gate, CA 90280	6605	392857	3753105
Anderson Elementary School	2210 E 130th St, Compton, CA 90222	6606	386068	3753291
Helen Keller Elementary School	3521 Palm Ave, Lynwood, CA 90262	6607	388308	3753312
Ward Elementary School	8851 Adoree St, Downey, CA 90242	6608	394522	3753324
Celerity Achnar Charter School	310 E El Segundo Blvd, Compton, CA 90222	6609	386988	3753494
Lynwood Middle School	12124 Bullis Rd, Lynwood, CA 90262	6610	388727	3753503
Rosa Parks Elementary School	3900 Agnes Ave, Lynwood, CA 90262	6611	388876	3753578
Hollydale Elementary School	5511 Century Blvd, South Gate, CA 90280	6612	391553	3753660
Downey Adult School	12340 Woodruff Ave, Downey, CA 90241	6613	396910	3753681
Downey Community Day School	12340 Woodruff Ave, Downey, CA 90241	6614	396910	3753681
Lindbergh Elementary School	3300 Cedar Ave, Lynwood, CA 90262	6615	387806	3753818
Marco Antonio Firebaugh High School	5246 Martin Luther King Jr Blvd, Lynwood, CA 90262	6616	390661	3753795
St Pius X- St Matthias Academy School	7851 Gardendale St, Downey, CA 90242	6617	392774	3753826
Columbus Continuation School	12330 Woodruff Ave, Downey, CA 90241	6618	396898	3753797
Gauldin Elementary School	9724 Spry St, Downey, CA 90242	6619	396465	3753862
Sussman Middle School	12500 Birchdale Ave, Downey, CA 90242	6620	394759	3753917
Dr. Ralph Bunche Middle School	12338 S Mona Blvd, Compton, CA 90222	6621	386564	3754091
Martin Luther King Elementary School	2270 E 122nd St, Compton, CA 90222	6622	386266	3754102
Wilson Elementary School	11700 School St, Lynwood, CA 90262	6623	388511	3754093
Pathway Independent Study School	11300 Wright Rd, Lynwood, CA 90262	6624	390947	3754066
Vista High School	11300 Wright Rd, Lynwood, CA 90262	6625	390941	3754073
Imperial Elementary School	8133 Imperial Hwy, Downey, CA 90242	6626	393924	3754245
Lynwood Adult School	11277 Atlantic Ave, Lynwood, CA 90262	6627	390306	3754326
Will Rogers Elementary School	11220 Duncan Ave, Lynwood, CA 90262	6628	390709	3754338
Washington Elementary School	4225 Sanborn Ave, Lynwood, CA 90262	6629	390025	3754457
Studebaker Elementary School	11800 Halcourt Ave, Norwalk, CA 90650	6630	398257	3754386
Lynwood Alternative School	11387 Bullis Road Lynwood, CA 90262	6631	389013	3754543
Alameda Elementary School	8613 Alameda St, Downey, CA 90242	6632	395074	3754494
Hosler Middle School	11300 Spruce St, Lynwood, CA 90262	6633	388885	3754684
St Raymond School	12320 Paramount Blvd, Downey, CA 90242	6634	393881	3754688

Table 5. Modeled Sensitive Receptors

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Lakeside Middle School	11000 Kenney St, Norwalk, CA 90650	6635	398597	3754642
Lynwood High School	4050 E Imperial Hwy, Lynwood, CA 90262	6636	389975	3755036
Kirkwood Christian School	11115 Pangborn Ave, Downey, CA 90241	6637	397054	3755103
Lincoln Elementary School	11031 State St, Lynwood, CA 90262	6638	387529	3755368
Lugo Elementary School	4345 Pendleton Ave, Lynwood, CA 90262	6639	390539	3755368
St Emydius Catholic School	10990 California Ave, Lynwood, CA 90262	6640	388358	3755404
Ritter Elementary School	11108 Watts Ave, Los Angeles, CA 90059	6641	386590	3755509
Roosevelt Elementary School	10835 Mallison Ave, Lynwood, CA 90262	6642	389045	3755564
Thurgood Marshall Elementary School	3593 Martin Luther King Jr Blvd, Lynwood, CA 90262	6643	388712	3755632
Cesar Chavez Middle School	3898 Abbott Rd, Lynwood, CA 90262	6644	388632	3755640
Warren High School	8141 De Palma St, Downey, CA 90241	6645	394625	3755674
San Miguel Catholic School	2270 E 108th St, Los Angeles, CA 90059	6646	386186	3755860
Old River Elementary School	11995 Old River School Rd, Downey, CA 90242	6647	393096	3755844
Rio San Gabriel Elementary School	9338 Gotham St, Downey, CA 90241	6648	397202	3755873
Downey High School	11040 Brookshire Ave, Downey, CA 90241	6649	395774	3755950
Stauffer Middle School	11985 Old River School Rd, Downey, CA 90242	6650	393060	3756008
Weigand Avenue Elementary School	10401 Weigand Ave, Los Angeles, CA 90002	6651	386318	3756364
Legacy High School	6625 Tweedy Blvd, South Gate, CA 90280	6652	391092	3756337
Simon Rodia Continuation School	2701 Sequoia Dr, South Gate, CA 90280	6653	386978	3756446
Doty Middle School	10301 Woodruff Ave, Downey, CA 90241	6654	397210	3756344
Tweedy Elementary School	9724 Pinehurst Ave, South Gate, CA 90280	6655	390772	3756507
Williams Elementary School	7530 Arnett St, Downey, CA 90241	6656	393866	3756522
Bryson Elementary School	4470 Missouri Ave, South Gate, CA 90280	6657	389773	3756602
Jordan High School	2265 E 103rd St, Los Angeles, CA 90002	6658	386257	3756651
Montara Avenue Elementary School	10018 Montara Ave, South Gate, CA 90280	6659	387437	3756660
Southeast High School	2720 Tweedy Blvd, South Gate, CA 90280	6660	387017	3756723
San Miguel Avenue Elementary School	9801 San Miguel Ave, South Gate, CA 90280	6661	389006	3756750
Southeast Middle School	2560 Tweedy Blvd, South Gate, CA 90280	6662	386776	3756796
Madison Elementary School	9820 Madison Ave, South Gate, CA 90280	6663	387796	3756819
Soledad Charter School	3616 Missouri Ave, South Gate, CA 90280	6664	388577	3756847
Victoria Elementary School	3320 Missouri Ave, South Gate, CA 90280	6665	388087	3756881
Hospitals				
Bellflower Health Center	10005 Flower St, Bellflower, CA 90706	6666	396337	3749729
Los Angeles Community Hospital at Bellflower	9542 Artesia Blvd, Bellflower, CA 90706	6667	395508	3748797
College Hospital	10802 College Pl, Cerritos, CA 90703	6668	398006	3749881
PIH Hospital - Downey	11500 Brookshire Ave, Downey, CA 90241	6669	395479	3755451
Kaiser Foundation Hospital - Downey	9333 Imperial Hwy, Downey, CA 90242	6670	395639	3753789
Los Angeles County/Rancho Los Amigos National Rehab Center	7601 Imperial Hwy, Downey, CA 90242	6671	392947	3754975
Lakewood Regional Medical Center	3700 E South St, Lakewood, CA 90805	6672	393771	3747191
La Casa Psychiatric Health Facility	6060 Paramount Boulevard	6673	392982	3747803
St. Francis Medical Center	3630 E Imperial Hwy #104, Lynwood, CA 90262	6674	388784	3755044
Coast Plaza Hospital	13100 Studebaker Rd, Norwalk, CA 90650	6675	398450	3753009
Promise Hospital of East Los Angeles-Suburban Campus	16453 Colorado Ave, Paramount, CA 90723	6676	392517	3749932
Physician's Surgery Center	8200 Firestone Blvd, Downey, CA 90241	6677	395126	3756156
Daycare Centers				
Abbott Preschool	5260 E. Clark Street, Lynwood, CA 90262	6678	390261	3752752
Abundance of Life Day Care Center	6100 Long Beach Blvd., Long Beach, CA 90805	6679	389009	3747928
Addams CDC	256 E. Plymouth St., Long Beach, CA 90805	6680	389855	3746531
Alondra Preschool	16200 S. Downey Avenue, Paramount, CA 90723	6681	393593	3750179
Anderson State Preschool	2210 E. 130th Street, Compton, CA 90220	6682	386065	3753324
Around The World Learning Center	10441 Lakewood Blvd., Downey, CA 90241	6683	396538	3756475
Barton Child Development Center	1100 East Del Amo Blvd., Long Beach, CA 90807	6684	390931	3745717
Bellflower Child Development Center	9447 Flower St., Bellflower, CA 90706	6685	395285	3749681
Bellflower II Child Development Center	14523 Bellflower Blvd., Bellflower, CA 90706	6686	395917	3751669
Bellflower III Child Development Center	14527 Bellflower Blvd, Bellflower, CA 90706	6687	395916	3751618
Bellflower Unified School Dist.-Las Flores School	10039 E. Palm Street, Bellflower, CA 90706	6688	396474	3749073
Bellflower Unified School District-Woodruff School	15332 S. Eucalyptus, Bellflower, CA 90706	6689	396329	3750940
Bellflower United Methodist Preschool	14527 Bellflower Blvd., Bellflower, CA 90706	6690	395916	3751618
Bellflower USD-Williams Child Care Center	6144 Clark Ave, Lakewood, CA 90712	6691	395197	3748001
Bethany Lutheran Church Preschool	4644 Clark Ave, Long Beach, CA 90808	6692	395146	3745286
Bundle of Joy Daycare #3	4835 Long Beach Blvd., Long Beach, CA 90805	6693	389597	3745560
Calvary Chapel Christian Preschool	12808 Woodruff Avenue, Downey, CA 90242	6694	396893	3753391
Canaan Preschool	17200 Clark Avenue, Bellflower, CA 90706	6695	395160	3748981
Carmelitos Head Start	5250 Via Pasillo, Long Beach, CA 90805	6696	390486	3746295
Cerritos College Child Development Center	11110 Alondra Blvd, Norwalk, CA 90650	6697	398528	3750136

Table 5. Modeled Sensitive Receptors

Anaplex Corporation
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Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Children R Us Child Development Center Inc.	4611 E. Compton Blvd., E. Rancho Dominguez, CA 90	6698	389791	3751313
Children's Academy of Success	10839 La Reina Avenue, Downey, CA 90241	6699	395303	3756525
The Children's Collective - Casa Dominguez	15711 S. Atlantic Ave, E. Rancho Dominguez, CA 902	6700	389662	3750632
Collins State Preschool	6125 Coke Street, Long Beach, CA 90805	6701	393852	3747914
Columbia Plaza Early Childhood Education Center	12830 Columbia Way, Downey, CA 90242	6702	395304	3753313
Compton College Child Dev. Day Care Ctr.	1111 E. Artesia Blvd., Compton, CA 90221	6703	388054	3749390
Creative Beginnings Infant Center	10910 Paramount Blvd., Downey, CA 90241	6704	395031	3756609
Creative Beginnings Preschool	10819 New Street, Downey, CA 90241	6705	395413	3756508
Creative Beginnings Preschool	10910 Paramount Blvd., Downey, CA 90241	6706	395031	3756609
Creative Day Academy	8740 Ramona Street, Bellflower, CA 90706	6707	394057	3748610
Creative Minds Christian Academy	6380 Orange Avenue, Long Beach, CA 90805	6708	391135	3748423
Crystal Stairs Inc- Wonderland	1223 South Willowbrook Avenue, Compton, CA 90220	6709	386821	3750025
Crystal Stairs Inc.-Willowbrook	1215 North Willowbrook Avenue, Compton, CA 90222	6710	386678	3752231
Crystal Stairs-Dollarhide	1108 N. Oleander Ave., Compton, CA 90222	6711	386313	3752167
The Cultural Caboose	1037 South Street, Long Beach, CA 90805	6712	390816	3747271
Curtis Care Infant Development Program	12114 Paramount Boulevard, Downey, CA 90242	6713	394077	3755109
David's Heart Enrichment Center	2244 N. Bullis Rd, Compton, CA 90221	6714	388504	3752927
Dorothy Ahrens Nursery School	4960 Long Beach Blvd, Long Beach, CA 90805	6715	389602	3745713
Downey United Methodist Church Nursery School	10801 S Downey Ave, Downey, CA 90241	6716	395512	3756474
The Easter's Nest	11815 Long Beach Blvd., Lynwood, CA 90262	6717	388154	3754025
Educare Preschool	5730 South St., Lakewood, CA 90713	6718	396343	3747151
Ella Fitzgerald CDC/Drew Child Development Corpora	2590 Industry Way, Lynwood, CA 90262	6719	386616	3754320
Emerson State Preschool	1011 E. Caldwell Street, Compton, CA 90221	6720	387965	3750056
Emmanuel Preschool	15941 Virginia Ave., Paramount, CA 90723	6721	393187	3750336
Ernie Pyle School-Bellflower U.S.D.	14500 S. Woodruff Ave., Bellflower, CA 90706	6722	396834	3751624
First Baptist Church of Lakewood Preschool	5336 Arbor Road, Long Beach, CA 90808	6723	395681	3745305
First Christian Church	17003 S. Clark Ave, Bellflower, CA 90706	6724	395101	3749422
First Evangelical Church of Cerritos	11330 E. 166th St., Cerritos, CA 90703	6725	398944	3749425
Foster State Preschool	1620 N. Pannes Street, Compton, CA 90221	6726	388808	3752425
Fun 2 Learn Pre-School	5942 Orange Ave, Long Beach, CA 90805	6727	391120	3747631
Gaines Elementary School CDC	7340 E. Jackson Street, Paramount, CA 90723	6728	391823	3750031
Gaines State Preschool	7340 E. Jackson Street, Paramount, CA 90723	6729	391823	3750031
Giant Steps Childrens Center	6951 Obispo Ave., Long Beach, CA 90805	6730	393097	3749531
Glazier Elementary School	10932 E. Excelsior Dr., Norwalk, CA 90650	6731	398079	3751016
Golden West Preschool	10248 Alondra Blvd., Bellflower, CA 90706	6732	396829	3750408
Grant Child Development Center	6405 Walnut Ave, Long Beach, CA 90805	6733	391488	3748503
Hart Head Start	1671 E. Phillips Street, Long Beach, CA 90805	6734	391606	3747192
Hellen Keller Pre-School	3521 Palm Avenue, Lynwood, CA 90262	6735	388296	3753298
Hollydale Preschool	5511 Century Blvd., South Gate, CA 90280	6736	391533	3753588
Holmes Child Development Center	5020 Barlin Avenue, Lakewood, CA 90712	6737	393755	3746053
Honey's Little Angels Child Development Center	5600 N. Paramount Blvd., Long Beach, CA 90805	6738	392728	3747031
HSA Pasitos Head Start Champion PS	13431 Paramount Blvd, South Gate, CA 90280	6739	392798	3753189
HSA Pasitos Head Start Legend Pre School	10125 California Avenue, South Gate, CA 90280	6740	388356	3756432
Immanuel Drew Child Development Corporation	506 E. Laurel Street, Compton, CA 90221	6741	387479	3751039
Independent Steps After School Program	3581 E. Imperial Hwy, Lynwood, CA 90262	6742	388544	3755127
Jackson Child Development Center	8535 Contreras St., Paramount, CA 90723	6743	393549	3751856
Jefferson State Preschool	2508 E. 133rd Street, Compton, CA 90220	6744	386711	3753010
Johnston Elementary School	13421 S. Fairford Ave., Norwalk, CA 90650	6745	398705	3752558
Keppel State Preschool	6630 Mark Keppel Street, Paramount, CA 90723	6746	390852	3751042
Kid Town Usa Preschool-Montessori Academy	13500 Paramount Blvd., South Gate, CA 90280	6747	392859	3753109
Kidzables Learning Center	6424 Long Beach Blvd, Long Beach, CA 90805	6748	388875	3748506
Kiddie Crest Academy	13067 Paramount Boulevard, South Gate, CA 90280	6749	392988	3753547
Kids First Learning Center - Downey	13200 Columbia Avenue, Downey, CA 90242	6750	395193	3752957
Kids Forum Preschool	4523 Tweedy Blvd., South Gate, CA 90280	6751	389859	3756470
Kidz R Us Community Child Care Center Inc.	1115 E. Market, Long Beach, CA 90805	6752	390964	3746660
Kinder Prep Preschool Center	3208 Flower Street, Lynwood, CA 90262	6753	387761	3754525
King State Preschool	2270 E. 122nd St, Compton, CA 90222	6754	386149	3754094
Kirkwood Christian Schools	10822 Brookshire Avenue, Downey, CA 90241	6755	395893	3756218
Lakewood Child Development Center	5225 Hayter Ave., Lakewood, CA 90712	6756	393940	3746407
The Laughter N Learning Center	5600 Atlantic Ave., Long Beach, CA 90805	6757	390407	3747069
LBUSD Starr King Head Start	145 E. Artesia, Long Beach, CA 90805	6758	388851	3748945
LBUSD-Riley CDC-California State Ps Program	3319 Sandwood Street, Lakewood, CA 90712	6759	393356	3745477
The Learning Tree Child Care Center	800 1/2 No. Acacia, Compton, CA 90220	6760	386564	3751899
Lincoln Preschool	11031 State Street, Lynwood, CA 90262	6761	387538	3755369
Lindbergh Childrens Center	12120 Lindbergh Road, Lynwood, CA 90262	6762	387708	3753887

Table 5. Modeled Sensitive Receptors

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Lindbergh Pre-School	3300 Cedar Ave, Lynwood, CA 90262	6763	387830	3753841
Long Beach City College CDC	4630 Clark Ave, Long Beach, CA 90808	6764	395130	3745191
Los Angeles Speech And Language Therapy Center	4764 Tweedy Boulevard, South Gate, CA 90280	6765	390263	3756355
Lugo Preschool	4345 Pendleton Street, Lynwood, CA 90262	6766	390529	3755347
M A W Children's Ctr	5510 Clark Ave, Lakewood, CA 90712	6767	395170	3746757
M.A.W. Children's Centers	5510 N. Clark Ave., Lakewood, CA 90712	6768	395170	3746757
Maria Montessori House of Children	9036 East Imperial Highway, Downey, CA 90242	6769	394958	3753508
Mark Twain Pre-School	12315 Thorson Avenue, Lynwood, CA 90262	6770	389272	3753137
Mckinley Child Development Center	6822 Paramount Blvd., Long Beach, CA 90805	6771	392768	3749324
Mckinley Head Start	6822 Paramount Blvd., Long Beach, CA 90805	6772	392768	3749324
Mokler Children's Center	8571 East Flower, Paramount, CA 90723	6773	393771	3749702
Montessori Children's Academy	7515 Firestone Boulevard, Downey, CA 90241	6774	394121	3756914
Montessori House of South Gate	10108 California Avenue, South Gate, CA 90280	6775	388428	3756447
Montessori School-Eureka	5306 E. Arbor Rd, Long Beach, CA 90808	6776	395457	3745285
NLMUSD Head Start/State PS-New River Elementary	13432 S. Halcourt Avenue, Norwalk, CA 90650	6777	398106	3752576
Optimal Child Development Center	1300 East Palmer Avenue, Compton, CA 90221	6778	388184	3751516
Park Place Early Education Campus/CA Childrens Ac.	12227 Atlantic Ave, Lynwood, CA 90262	6779	389783	3752964
Pasitos Hollydale Early Head Start	12221 Industrial Avenue, South Gate, CA 90280	6780	392377	3753377
Pasitos San Miguel Pre-Kindergarten Academy	9801 San Miguel Avenue, South Gate, CA 90280	6781	389024	3756742
Plymouth Head Start	495 E. Plymouth Street, Long Beach, CA 90805	6782	390270	3746547
Powell CDC CA State Preschool Program	150 Victoria St., Long Beach, CA 90805	6783	388705	3747825
Rainbow Drew Child Development Corporation	12611 S. Willowbrook Ave, Compton, CA 90222	6784	386032	3753707
Rancho Los Amigos Children's Center	7755 Golondrinas Street, Downey, CA 90242	6785	392903	3754389
Roosevelt Preschool	10835 Mallison Avenue, Lynwood, CA 90262	6786	389084	3755498
Roosevelts State Preschool	700 N Bradfield Ave, Compton, CA 90221	6787	388673	3751746
Rosa Parks Pre-School	3900 Agnes Avenue, Lynwood, CA 90262	6788	388905	3753605
Rosecrans State Preschool	1301 N. Acacia Street, Compton, CA 90220	6789	386387	3752208
SAGA Child Development Learning Academy Inc.	3801 Cortland Street, Lynwood, CA 90262	6790	388974	3754218
San Miguel Elementary School Cspg	9801 San Miguel Avenue, South Gate, CA 90280	6791	389023	3756740
Southland Christian Preschool	16400 Woodruff Ave, Bellflower, CA 90706	6792	396704	3749983
St Timothy Episcopal Church/Bundle of Joy Infant	312 Oleander Avenue, Compton, CA 90220	6793	386448	3751007
St. Bernard School	9626 Park Street, Bellflower, CA 90706	6794	395656	3749225
St. Dominic Savio Pre K	9750 Foster Road, Bellflower, CA 90706	6795	396067	3752680
St. Timothy Lutheran Infant Center	4645 Woodruff Avenue, Lakewood, CA 90713	6796	396632	3745274
St. Timothy Lutheran Preschool Day Care	4645 Woodruff Ave, Lakewood, CA 90713	6797	396632	3745274
St. Timothy's Episcopal Church And Day School	312 S. Oleander Ave., Compton, CA 90220	6798	386448	3751007
Sunlite Preschool	9020 Imperial Hwy, Downey, CA 90242	6799	394940	3753501
Sunshine Day Care	2038 E. Compton Blvd., Compton, CA 90221	6800	388969	3751251
Sunshine Day Care Center	12070 Santa Fe Avenue, Lynwood, CA 90262	6801	387471	3753646
Team Pinnacle Sports	2270 East 122nd Street, Compton, CA 90222	6802	386149	3754094
Thomas Jefferson C.C.C-Bellflower U.S.D.	9980 E. Cedar, Bellflower, CA 90706	6803	396337	3748408
Thurgood Marshall Pre-School	3593 Martin L. King Jr. Blvd., Lynwood, CA 90262	6804	388630	3755640
Trinity Child Development Center	1806-1810 E. Compton, Compton, CA 90221	6805	388745	3751283
Trinity Lutheran Preschool & Day Nursery	11609 S. Studebaker Road, Norwalk, CA 90650	6806	398361	3754587
Trinity Unlimited Child Care Center	825 S. Chester Avenue, Compton, CA 90221	6807	387686	3750495
Tutor Time Child Care Learning Center	6504 E. South Street, Lakewood, CA 90713	6808	397646	3746907
Twain Child Development Center	4666 Sunfield Ave., Long Beach, CA 90808	6809	395003	3745268
Tweedy Pasitos School Readiness Program	9724 Pinehurst, South Gate, CA 90280	6810	390735	3756475
Twigs To Trees Child Development Center	15108 Studebaker Road, Norwalk, CA 90650	6811	398329	3750897
United Faith Community Day Care Center	6934 Long Beach Blvd., Long Beach, CA 90805	6812	388640	3749502
Valley Christian Infant Center	10012 Ramona Ave., Bellflower, CA 90706	6813	396398	3748613
Valley Christian Preschool	10012 Ramona Street, Bellflower, CA 90706	6814	396398	3748613
Valley Christian Preschool-Grand	17408 Grand Avenue, Bellflower, CA 90706	6815	397107	3748873
Volunteers of America of Los Angeles	15509 Paramount Boulevard, Paramount, CA 90723	6816	392703	3750856
Volunteers of America - Abbot Head Start	5260 E. Clark Avenue, Lynwood, CA 90262	6817	390261	3752752
Volunteers of America - Bright Stars Head Start	3340 Sanborn Avenue, Lynwood, CA 90262	6818	388200	3754850
Volunteers of America - Chester Head Start	804 E. Rosecrans Avenue, Compton, CA 90221	6819	387675	3752073
Volunteers of America - Greater Emmanuel Head Start	3740 Imperial Hwy, Lynwood, CA 90262	6820	389274	3755258
Volunteers of America - Happy Days Head Start	4207 Carlin Avenue, Lynwood, CA 90262	6821	389375	3753062
Volunteers of America - Mona House Head Start	13124 Mona Boulevard, Compton, CA 90222	6822	386680	3753160
Volunteers of America - Paramount Head Start	6719 Somerset Boulevard, Paramount, CA 90723	6823	390863	3751303
Volunteers of America - Small World Head Start	502 N. Bowen Avenue, Compton, CA 90221	6824	388358	3751646
Washington Preschool	4225 Sanborn Avenue, Lynwood, CA 90262	6825	390024	3754448
Washington School-Bellflower USD	9725 E. Jefferson St., Bellflower, CA 90706	6826	395798	3750896
Whitewood Child Development Center	5511 Whitewood Ave, Lakewood, CA 90712	6827	394920	3746835

Table 5. Modeled Sensitive Receptors

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Will Rogers Children's Center	11250 Duncan, Lynwood, CA 90262	6828	390608	3754265
Will Rogers Preschool	11220 Duncan Avenue, Lynwood, CA 90262	6829	390700	3754360
Wilson Preschool	11700 School Street, Lynwood, CA 90262	6830	388461	3754127
Wiz Child Center	225 W. Alondra Blvd, Compton, CA 90220	6831	386642	3750501
Wonderland Preschool	10440 Artesia Blvd., Bellflower, CA 90706	6832	397178	3748553
YMCA GLB - Weingart-Lakewood - Gompers Site	5206 Briercrest, Lakewood, CA 90713	6833	396133	3746339
YMCA GLB 70th St State Preschool	700 East 70th St., Long Beach, CA 90805	6834	390541	3749641
YMCA GLB Creative Beginnings Preschool	5610 Linden Avenue, Long Beach, CA 90805	6835	390294	3747120
YMCA GLB Fairfield Family Site	4949 Atlantic Avenue, Long Beach, CA 90805	6836	390323	3745680
YMCA GLB First Friendships State Preschool	6650 Orange Avenue, Long Beach, CA 90805	6837	391155	3749006
YMCA GLB Intensive Learning Center Site	4718 Michelson Street, Lakewood, CA 90712	6838	394825	3746901
YMCA GLB Lindstrom Site	5900 Canehill Avenue, Lakewood, CA 90713	6839	397312	3747409
YMCA GLB Mayne St State Preschool	9630 Mayne Street, Bellflower, CA 90706	6840	395691	3750011
YMCA GLB Stephen Foster State SA Site	5223 Bigelow, Lakewood, CA 90712	6841	395403	3746949
YMCA of GLB Los Cerritos Branch	15530 Woodruff Avenue, Bellflower, CA 90706	6842	396719	3750746
YMCA of Metropolitan L.A. Downey - Imperial	8133 E. Imperial Hwy, Downey, CA 90242	6843	393893	3754225
YMCA of Metropolitan L.A. Downey - Rio San Gabriel	9338 Gotham Street, Downey, CA 90241	6844	397212	3755805
Young Horizons-Grisham Site	11 W. 49th Street, Long Beach, CA 90805	6845	389478	3745617
YWCA of Greater Los Angeles - Compton C.D.C.	1600 E. Compton Blvd., Compton, CA 90221	6846	388553	3751255
Zamboni Preschool	15733 Orange Avenue, Paramount, CA 90723	6847	391086	3750584

Table 6. PMI, MEIR, MEIW, and MEISR Annual Average Concentrations

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Pollutant	CAS Number	Annual Average Concentration (mg/m ³)						
		PMI		MEIW		MEIR		MEISR
		Cancer Risk 8-hr Chronic HI	Chronic HI	Cancer 8-hr Chronic HI	Chronic HI	Chronic HI	Cancer 8-hr Chronic HI	Cancer Chronic HI 8-hr Chronic HI
		Rec #6	Rec #3	Rec #1391	Rec #1659	Rec #2115	Rec #1567	Rec #6728
1,2,4-Trimethylbenzene	95636	3.02E-01	1.35E-01	6.60E-02	3.85E-02	1.69E-03	2.24E-03	2.57E-04
4,4'-Isopropylidenediphenol	80057	9.67E-02	3.61E-02	2.10E-02	1.05E-02	4.82E-04	6.43E-04	7.53E-05
Acetaldehyde	75070	4.56E-05	4.94E-05	3.22E-05	4.97E-05	3.84E-06	3.08E-06	6.98E-07
Acrolein	107028	2.86E-05	3.10E-05	2.02E-05	3.12E-05	2.41E-06	1.94E-06	4.38E-07
Aluminum	7429905	5.08E-03	2.32E-03	1.18E-03	7.64E-04	3.55E-05	4.26E-05	5.85E-06
Ammonia	7664417	3.39E-02	3.67E-02	2.40E-02	3.70E-02	2.86E-03	2.30E-03	5.19E-04
Ammonium Nitrate	6484522	8.25E-05	2.44E-04	1.89E-05	2.95E-05	1.33E-06	1.07E-06	2.19E-07
Antimony Trioxide	1309644	3.72E-03	1.03E-03	8.02E-04	3.12E-04	1.57E-05	2.12E-05	2.55E-06
Barium & Compounds	7440393	1.05E-02	3.01E-03	2.25E-03	9.09E-04	4.51E-05	6.06E-05	7.29E-06
Barium Chromate	10294403	2.45E-03	6.76E-04	5.27E-04	2.05E-04	1.03E-05	1.39E-05	1.68E-06
Benzene	71432	8.48E-05	9.18E-05	5.99E-05	9.24E-05	7.14E-06	5.74E-06	1.30E-06
Beryllium & Compounds	7440417	2.09E-07	1.42E-07	1.42E-07	1.74E-07	1.04E-08	7.93E-09	2.14E-09
Cadmium & Compounds	7440439	3.95E-04	1.17E-03	9.07E-05	1.41E-04	6.35E-06	5.13E-06	1.05E-06
Chromium & Compounds (Other Than Hexavalent)	7440473	2.08E-03	1.08E-03	4.64E-04	3.17E-04	1.34E-05	1.68E-05	2.07E-06
Chromium Trioxide	1333820	1.84E-04	1.38E-03	6.46E-05	3.64E-04	8.00E-06	5.80E-06	1.15E-06
Cobalt & Compounds	7440484	6.42E-04	3.03E-04	1.40E-04	8.61E-05	3.72E-06	4.92E-06	5.65E-07
Copper & Compounds	7440508	3.12E-02	4.68E-02	6.96E-03	6.56E-03	3.03E-04	2.83E-04	5.01E-05
Cumene	98828	8.66E-03	2.39E-03	1.87E-03	7.26E-04	3.65E-05	4.92E-05	5.94E-06
Cyanide Compounds	57125	3.00E-02	8.87E-02	6.89E-03	1.07E-02	4.83E-04	3.90E-04	7.98E-05
Diethylene Glycol Monobutyl Ether	112345	4.56E-03	2.98E-02	1.55E-03	7.78E-03	1.88E-04	1.33E-04	2.85E-05
Dipropylene Glycol Monomethyl Ether	34590948	1.16E-04	3.20E-05	2.50E-05	9.71E-06	4.88E-07	6.58E-07	7.94E-08
Epoxy Resins	1091	5.94E-01	1.64E-01	1.28E-01	4.98E-02	2.51E-03	3.37E-03	4.07E-04
Ethyl Benzene	100414	5.20E+00	1.63E+00	1.12E+00	4.86E-01	2.35E-02	3.16E-02	3.76E-03
Ethylene Glycol Monobutyl Ether	111762	7.36E+00	2.07E+00	1.59E+00	6.24E-01	3.13E-02	4.21E-02	5.09E-03
Ethylene Glycol Monopropyl Ether	2807309	9.80E-02	2.70E-02	2.11E-02	8.21E-03	4.13E-04	5.56E-04	6.72E-05
Fluorides and Compounds	1101	2.19E-01	7.55E-02	4.75E-02	2.23E-02	1.03E-03	1.36E-03	1.64E-04
Formaldehyde	50000	5.14E-01	1.42E-01	1.11E-01	4.33E-02	2.18E-03	2.93E-03	3.55E-04
Hexamethylene Diisocyanate Monomer	822060	1.81E-02	7.79E-03	3.94E-03	2.23E-03	9.85E-05	1.31E-04	1.51E-05
Hexane	110543	6.68E-05	7.23E-05	4.72E-05	7.28E-05	5.62E-06	4.52E-06	1.02E-06
Hexavalent Chromium Compounds (Other)	18540299	1.36E-03	5.27E-04	2.99E-04	1.57E-04	6.75E-06	8.42E-06	1.09E-06
Hydrochloric Acid	7647010	2.13E+00	6.15E+00	5.05E-01	7.77E-01	3.68E-02	2.85E-02	6.35E-03
Hydrofluoric Acid	7664393	5.20E-01	2.18E+00	1.43E-01	4.39E-01	1.35E-02	9.89E-03	2.16E-03
Hydroquinone	123319	5.31E-02	1.47E-02	1.14E-02	4.45E-03	2.24E-04	3.02E-04	3.64E-05
IPA	67630	1.73E+01	4.88E+00	3.72E+00	1.52E+00	7.37E-02	9.86E-02	1.20E-02
Isocyanates	1125	2.83E+00	1.23E+00	6.15E-01	3.51E-01	1.55E-02	2.05E-02	2.37E-03
Lead	7439921	8.72E-07	2.31E-06	2.52E-07	3.66E-07	1.79E-08	1.42E-08	3.20E-09
Lead Compounds	1128	2.49E-03	6.88E-04	5.37E-04	2.09E-04	1.05E-05	1.41E-05	1.71E-06
Manganese & Compounds	7439965	4.37E-05	1.15E-04	1.30E-05	1.88E-05	9.22E-07	7.31E-07	1.66E-07
MEK	78933	1.31E+02	2.33E+02	5.23E+01	2.88E+03	7.28E+00	1.02E+01	1.34E+00
Methanol	67561	3.02E+00	2.17E+00	7.91E-01	8.02E-01	2.69E-02	4.10E-02	3.14E-03
Methylene Chloride	75092	1.21E+01	1.06E+01	1.97E+00	6.34E+00	1.02E-01	8.65E-02	1.57E-02
Methylene Diphenyl Diisocyanate	101688	5.59E-02	1.60E-02	1.21E-02	4.83E-03	2.40E-04	3.23E-04	3.89E-05
MIBK	108101	1.83E+01	5.82E+00	3.95E+00	1.73E+00	8.32E-02	1.12E-01	1.33E-02
Naphthalene	91203	3.29E-01	3.50E-01	4.95E-02	2.13E-01	3.22E-03	2.61E-03	4.92E-04
n-Butanol	71363	1.24E+00	5.11E-01	2.69E-01	1.47E-01	6.56E-03	8.72E-03	1.01E-03
Nickel & Compounds	7440020	3.40E-03	1.26E-02	8.56E-04	2.14E-03	7.06E-05	5.49E-05	1.12E-05
Nickel Acetate	373024	2.45E-05	1.86E-04	8.65E-06	4.92E-05	1.08E-06	7.80E-07	1.55E-07
Nitric Acid	7697372	2.72E+00	8.09E+00	6.52E-01	1.08E+00	4.86E-02	3.75E-02	8.32E-03
PAH	1151	1.06E-06	1.15E-06	7.49E-07	1.15E-06	8.93E-08	7.17E-08	1.62E-08
Phenol	108952	2.52E+00	2.40E+00	3.94E-01	1.46E+00	2.26E-02	1.85E-02	3.48E-03
Phosphoric Acid	7664382	9.43E-01	2.86E+00	2.26E-01	3.92E-01	1.70E-02	1.31E-02	2.88E-03
Propylene	115071	7.75E-03	8.39E-03	5.48E-03	8.44E-03	6.52E-04	5.24E-04	1.19E-04
Propylene Glycol Monomethyl Ether	107982	1.32E+01	5.30E+00	2.86E+00	1.53E+00	6.87E-02	9.15E-02	1.06E-02
Propylene Glycol Monomethyl Ether Acetate	108656	5.25E-01	4.40E-01	9.19E-02	2.39E-01	4.33E-03	4.07E-03	6.60E-04
Propylene Oxide	75569	2.77E-01	3.22E-01	3.81E-02	2.04E-01	2.89E-03	2.18E-03	4.42E-04
Sec-Butyl Alcohol	78922	1.77E+00	4.90E-01	3.82E-01	1.49E-01	7.48E-03	1.01E-02	1.22E-03
Selenium & Compounds	7782492	1.74E-06	1.19E-06	1.18E-06	1.45E-06	8.63E-08	6.61E-08	1.79E-08
Silica	1175	5.59E-01	1.69E-01	1.21E-01	5.06E-02	2.47E-03	3.32E-03	3.97E-04
Silver & Compounds	7440224	7.43E-05	2.19E-04	1.71E-05	2.65E-05	1.19E-06	9.64E-07	1.97E-07
Sodium Dichromate	10588019	8.71E-04	6.13E-03	2.95E-04	1.58E-03	3.54E-05	2.58E-05	5.12E-06
Sodium Hydroxide	1310732	5.10E-02	1.62E-01	1.20E-02	2.24E-02	8.91E-04	7.10E-04	1.45E-04
Strontium Chromate	7789062	2.88E-01	7.94E-02	6.20E-02	2.41E-02	1.21E-03	1.63E-03	1.97E-04
Sulfuric Acid	7664939	6.35E-01	4.63E+00	2.19E-01	1.21E+00	2.68E-02	1.95E-02	3.87E-03
Tert-Butyl Acetate	540885	2.01E-01	7.57E-02	4.37E-02	2.20E-02	1.01E-03	1.35E-03	1.57E-04
Tetrachloroethylene	127184	1.58E-01	4.56E-01	3.74E-02	5.76E-02	2.73E-03	2.12E-03	4.71E-04
Toluene	108883	4.36E+01	2.30E+01	8.53E+00	1.12E+01	2.62E-01	2.83E-01	4.11E-02
Trichloroethylene	79016	8.48E-03	1.57E-02	3.23E-03	6.19E-03	1.77E-04	2.87E-04	1.65E-05
Vanadium (Fume or Dust)	7440622	8.69E-07	5.93E-07	5.90E-07	7.23E-07	4.31E-08	3.30E-08	8.93E-09
Xylene	1330207	2.49E+01	7.71E+00	5.38E+00	2.30E+00	1.12E-01	1.50E-01	1.79E-02
Zinc & Compounds	7440666	6.95E-03	2.45E-03	1.50E-03	6.37E-04	3.16E-05	4.09E-05	5.15E-06
Zinc Oxide	1314132	2.21E-05	9.01E-05	5.74E-06	1.67E-05	5.05E-07	3.88E-07	7.83E-08

Table 7. PMI, MEIR, MEIW, and MEISR Hourly Average Concentrations

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Pollutant	CAS Number	Hourly Average Concentration ($\mu\text{g}/\text{m}^3$)			
		PMI	MEIW	MEIR	MEISR
		Acute HI			
		Rec #17	Rec #17	Rec #2115	Rec #6728
1,2,4-Trimethylbenzene	95636	2.52E+00	2.52E+00	1.34E-01	3.30E-03
4,4'-Isopropylidenediphenol	80057	8.33E-01	8.33E-01	3.71E-02	9.67E-04
Acetaldehyde	75070	2.55E-03	2.55E-03	1.66E-04	1.85E-05
Acrolein	107028	1.60E-03	1.60E-03	1.04E-04	1.16E-05
Aluminum	7429905	4.24E-02	4.24E-02	2.31E-03	7.72E-05
Ammonia	7664417	1.90E+00	1.90E+00	1.23E-01	1.37E-02
Ammonium Nitrate	6484522	3.35E-03	3.35E-03	2.37E-04	2.81E-05
Antimony Trioxide	1309644	3.38E-02	3.38E-02	1.14E-03	3.28E-05
Barium & Compounds	7440393	9.38E-02	9.38E-02	3.29E-03	9.32E-05
Barium Chromate	10294403	2.22E-02	2.22E-02	7.51E-04	2.16E-05
Benzene	71432	4.76E-03	4.76E-03	3.09E-04	3.44E-05
Beryllium & Compounds	7440417	2.32E-06	2.32E-06	1.57E-07	3.03E-08
Cadmium & Compounds	7440439	1.16E-01	1.16E-01	8.19E-03	9.72E-04
Chromium & Compounds (Other Than Hexavalent)	7440473	1.79E-02	1.79E-02	9.99E-04	2.98E-05
Chromium Trioxide	1333820	4.55E-02	4.55E-02	1.63E-03	1.79E-04
Cobalt & Compounds	7440484	5.23E-03	5.23E-03	2.97E-04	7.26E-06
Copper & Compounds	7440508	2.64E-01	2.64E-01	1.30E-02	1.08E-03
Cumene	98828	7.85E-02	7.85E-02	2.65E-03	7.62E-05
Cyanide Compounds	57125	8.85E-01	8.85E-01	6.26E-02	7.43E-03
Diethylene Glycol Monobutyl Ether	112345	2.45E-02	2.45E-02	9.12E-04	1.01E-04
Dipropylene Glycol Monomethyl Ether	34590948	1.05E-03	1.05E-03	3.55E-05	1.02E-06
Epoxy Resins	1091	5.38E+00	5.38E+00	1.82E-01	5.23E-03
Ethyl Benzene	100414	4.64E+01	4.64E+01	1.75E+00	4.83E-02
Ethylene Glycol Monobutyl Ether	111762	6.66E+01	6.66E+01	2.27E+00	6.50E-02
Ethylene Glycol Monopropyl Ether	2807309	8.88E-01	8.88E-01	3.00E-02	8.62E-04
Fluorides and Compounds	1101	2.22E+00	2.22E+00	8.45E-02	3.15E-03
Formaldehyde	50000	4.67E+00	4.67E+00	1.58E-01	4.60E-03
Hexamethylene Diisocyanate Monomer	822060	1.51E-01	1.51E-01	7.76E-03	1.93E-04
Hexane	110543	3.75E-03	3.75E-03	2.43E-04	2.71E-05
Hexavalent Chromium Compounds (Other)	18540299	1.27E-02	1.27E-02	4.33E-04	1.46E-05
Hydrochloric Acid	7647010	1.78E+00	1.78E+00	1.26E-01	1.50E-02
Hydrofluoric Acid	7664393	9.39E-01	9.39E-01	4.42E-02	5.04E-03
Hydroquinone	123319	4.82E-01	4.82E-01	1.63E-02	4.67E-04
IPA	67630	1.56E+02	1.56E+02	5.30E+00	1.53E-01
Isocyanates	1125	2.35E+01	2.35E+01	1.22E+00	3.04E-02
Lead	7439921	1.19E-05	1.19E-05	8.36E-07	1.06E-07
Lead Compounds	1128	2.26E-02	2.26E-02	7.63E-04	2.21E-05
Manganese & Compounds	7439965	3.91E-03	3.91E-03	2.52E-04	3.00E-05
MEK	78933	3.04E+05	3.04E+05	7.05E+02	1.53E+02
Methanol	67561	7.43E+01	7.43E+01	4.85E+00	5.02E-02
Methylene Chloride	75092	8.18E+01	8.18E+01	2.65E+00	2.01E-01
Methylene Diphenyl Diisocyanate	101688	5.04E-01	5.04E-01	1.76E-02	4.98E-04
MIBK	108101	1.62E+02	1.62E+02	6.22E+00	1.70E-01
Naphthalene	91203	2.01E+00	2.01E+00	7.41E-02	6.32E-03
n-Butanol	71363	1.04E+01	1.04E+01	5.14E-01	1.30E-02
Nickel & Compounds	7440020	9.61E-02	9.61E-02	6.29E-03	7.43E-04
Nickel Acetate	373024	6.36E-04	6.36E-04	2.28E-05	2.50E-06
Nitric Acid	7697372	2.58E+00	2.58E+00	1.75E-01	2.07E-02
PAH	1151	5.93E-05	5.93E-05	3.86E-06	4.29E-07
Phenol	108952	1.64E+01	1.64E+01	5.25E-01	4.46E-02
Phosphoric Acid	7664382	6.48E+00	6.48E+00	4.50E-01	5.33E-02
Propylene	115071	4.34E-01	4.34E-01	2.82E-02	3.14E-03
Propylene Glycol Monomethyl Ether	107982	1.12E+02	1.12E+02	5.37E+00	1.36E-01
Propylene Glycol Monomethyl Ether Acetate	108656	3.59E+00	3.59E+00	1.63E-01	8.48E-03
Propylene Oxide	75569	1.58E+00	1.58E+00	4.93E-02	5.67E-03
Sec-Butyl Alcohol	78922	1.61E+01	1.61E+01	5.43E-01	1.56E-02
Selenium & Compounds	7782492	1.93E-05	1.93E-05	1.31E-06	2.52E-07
Silica	1175	5.00E+00	5.00E+00	1.83E-01	5.10E-03
Silver & Compounds	7440224	3.00E-03	3.00E-03	2.12E-04	2.52E-05
Sodium Dichromate	10588019	6.14E-02	6.14E-02	2.27E-03	2.50E-04
Sodium Hydroxide	1310732	6.09E-01	6.09E-01	4.01E-02	4.74E-03
Strontium Chromate	7789062	2.61E+00	2.61E+00	8.82E-02	2.53E-03
Sulfuric Acid	7664939	2.39E+01	2.39E+01	9.12E-01	1.01E-01
Tert-Butyl Acetate	540885	1.73E+00	1.73E+00	7.78E-02	2.02E-03
Tetrachloroethylene	127184	1.30E-01	1.30E-01	9.23E-03	1.10E-03
Toluene	108883	3.52E+02	3.52E+02	1.27E+01	5.27E-01
Trichloroethylene	79016	5.46E-01	5.46E-01	4.18E-02	3.10E-04
Vanadium (Fume or Dust)	7440622	9.66E-06	9.66E-06	6.56E-07	1.26E-07
Xylene	1330207	2.22E+02	2.22E+02	8.30E+00	2.30E-01
Zinc & Compounds	7440666	7.79E-02	7.79E-02	3.25E-03	1.99E-04
Zinc Oxide	1314132	2.52E-03	2.52E-03	1.40E-04	1.62E-05

Table 8. HARP2 Calculate Risk Options

Anaplex Corporation
 Facility ID 016951
 Paramount, California

HARP2 Risk Analyses Screen/Option Title		Residential Cancer Risk	Population-wide Cancer Risk	Residential Chronic Risk	Residential 8-Hour Chronic Risk	Worker Cancer Risk	Worker Chronic Risk	Worker 8-Hour Chronic Risk	Acute Risk
Risk Scenario	Analysis Type	Cancer Risk	Cancer Risk	Chronic Risk (Non-cancer)	8-Hour Chronic Risk (Non-cancer)	Cancer Risk	Chronic Risk (Non-cancer)	8-Hour Chronic Risk (Non-cancer)	Acute Risk (Non-cancer)
	Receptor Type	Individual Resident	Population-wide	Individual Resident	Individual Resident	Worker	Worker	Worker	N/A
	Exposure Duration	30 Year	70 Year	N/A	N/A	25 year	N/A	N/A	N/A
	Intake Rate Percentile	RMP using the Derived Method	RMP using the Derived Method	OEHHA Derived Method	OEHHA Derived Method	OEHHA Derived Method	OEHHA Derived Method	N/A	N/A
Pathways to Evaluate	Tab "Pathways to Evaluate"	User Defined: Inhalation, Soil ingestion, Dermal, Mother's milk, and Homegrown produce Deposition rate of 0.02 m/s	User Defined: Inhalation, Soil ingestion, Dermal, Mother's milk, and Homegrown produce Deposition rate of 0.02 m/s	User Defined: Inhalation, Soil ingestion, Dermal, Mother's milk, and Homegrown produce Deposition rate of 0.02 m/s	Used Defaults (Inhalation Only)	Worker Pathways Deposition rate of 0.02 m/s	Worker Pathways Deposition rate of 0.02 m/s	Used Defaults (Inhalation Only)	Used Defaults (No Change)
	Tab "Inh"	Fraction at time at home: check box selected for "Apply fraction of time at residence to age bins greater than or equal to 16 years"	Used Defaults (No Change)	Fraction at time at home: check box selected for "Apply fraction of time at residence to age bins greater than or equal to 16 years"	Fraction at time at home: check box selected for "Apply fraction of time at residence to age bins greater than or equal to 16 years"	Sources operating 24/7: Used Defaults (No Change) Sources operation 8/5/52: Worker Adjustment Factor 4.2	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)
	Tab "Soil"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)	N/A	Used Defaults (No Change)	N/A	N/A	N/A
	Tab "Derm"	Select a climate: Warm	Select a climate: Warm	Select a climate: Warm	N/A	Select a climate: Warm	Select a climate: Warm	N/A	N/A
	Tab "MMIk"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)	N/A	N/A	N/A	N/A	N/A
	Tab "HG Produce"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)	N/A	N/A	N/A	N/A	N/A

Note:

1. Options selected based on SCAQMD's AB 2588 & Rule 1402 Supplemental Guidelines dated November 4, 2016.

Table 9. Risk and Hazard Index Summary

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor Location	Value	Receptor Number	UTM Coordinates (NAD83)	
			Easting (m)	Northing (m)
Cancer Risk (Per Million)				
Point of maximum impact (PMI)	161,320	6	391889.30	3750691.10
Maximally Exposed Individual Resident (MEIR)	931	1567	392200.00	3750720.00
Maximally Exposed Individual Worker (MEIW)	2,836	1391	391880.00	3750660.00
Maximally Exposed Individual Sensitive Receptor (MEISR)	114	6728	391823.21	3750030.73
Substances Accounting for 90% of Cancer Risk:	Strontium chromate (residential and offsite worker)			
Processes Accounting for 90% of Cancer Risk:	Spray Booth 2 (Strontium chromate)			
Cancer Burden	9.7		--	
Number of people exposed to >1 per million cancer risk for a 70-yr exposure	2,277,294		--	
Maximum distance to edge of 70-year, 1 x 10 ⁻⁶ cancer risk isopleth (meters)	17,137		--	
Chronic Hazard Index				
Location	Value	Receptor Number	UTM Coordinates (NAD83)	
			Easting (m)	Northing (m)
Point of maximum impact (PMI)	8.4	3	391906.30	3750724.70
Maximally Exposed Individual Resident (MEIR)	0.06	2115	392040.00	3750920.00
Maximally Exposed Individual Worker (MEIW)	2.02	1659	391880.00	3750760.00
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.0086	6728	391823.21	3750030.73
Substances Accounting for 90% of Chronic Hazard Index:	Residential: Sulfuric Acid (48%), Strontium Chromate (11%), Nickel (9%), Chromium Trioxide (7%), Hydrogen Chloride (7%), MDI (5%), Phosphoric Acid (4%) Offsite Worker: Sulfuric Acid (60%), Chromium Trioxide (9%), Nickel (8%), Strontium Chromate (6%), Hydrogen Chloride (4%), MDI (3%)			
8-Hr Chronic Hazard Index				
Location	Value	Receptor Number	UTM Coordinates (NAD83)	
			Easting (m)	Northing (m)
Point of maximum impact (PMI)	0.51	6	391889.30	3750691.10
Maximally Exposed Individual Resident (MEIR)	0.0035	1567	392200.00	3750720.00
Maximally Exposed Individual Worker (MEIW)	0.112	1391	391880.00	3750660.00
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.00050	6728	391823.21	3750030.73
Substances Accounting for 90% of 8-hour Chronic Hazard Index:	Residential: MDI (57%), Nickel (26%), Formaldehyde (9%) Offsite Worker: MDI (67%), Nickel (13%), Formaldehyde (11%)			
Acute Hazard Index				
Location	Value	Receptor Number	UTM Coordinates (NAD83)	
			Easting (m)	Northing (m)
Point of maximum impact (PMI)	24	17	391872.70	3750758.40
Maximally Exposed Individual Resident (MEIR)	0.074	2115	392040.00	3750920.00
Maximally Exposed Individual Worker (MEIW)	24	17	391872.70	3750758.40
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.014	6728	391823.21	3750030.73
Substances Accounting for 90% of Acute Hazard Index:	Residential: MEK (73%), Sulfuric Acid (10%), Sodium Hydroxide (7%) Offsite Worker: MEK			

Table 10. Sensitive Receptors with Cancer Risk Greater Than or Equal to Ten in a Million

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	X	Y	Receptor Type	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce
6534	391239	3748530	Sensitive	1.51E-05	9.46E-06	1.67E-07	6.40E-09	3.92E-11	5.46E-06
6535	390441	3748582	Sensitive	1.23E-05	7.71E-06	1.36E-07	5.21E-09	3.23E-11	4.45E-06
6540	392799	3749321	Sensitive	2.52E-05	1.58E-05	2.79E-07	1.07E-08	6.40E-11	9.13E-06
6541	390925	3749595	Sensitive	3.07E-05	1.92E-05	3.39E-07	1.30E-08	7.99E-11	1.11E-05
6544	393792	3749726	Sensitive	1.68E-05	1.05E-05	1.86E-07	7.12E-09	4.30E-11	6.07E-06
6547	391603	3750024	Sensitive	9.80E-05	6.14E-05	1.08E-06	4.15E-08	2.43E-10	3.55E-05
6548	391817	3750027	Sensitive	1.13E-04	7.07E-05	1.25E-06	4.78E-08	2.73E-10	4.08E-05
6551	393695	3750170	Sensitive	2.16E-05	1.35E-05	2.39E-07	9.17E-09	5.52E-11	7.82E-06
6552	389279	3750329	Sensitive	1.17E-05	7.31E-06	1.29E-07	4.95E-09	3.12E-11	4.22E-06
6554	391060	3750653	Sensitive	7.87E-05	4.93E-05	8.71E-07	3.34E-08	2.12E-10	2.85E-05
6557	395026	3750753	Sensitive	1.02E-05	6.39E-06	1.13E-07	4.32E-09	2.76E-11	3.69E-06
6558	393789	3750832	Sensitive	2.33E-05	1.46E-05	2.57E-07	9.87E-09	6.04E-11	8.43E-06
6559	390647	3750924	Sensitive	3.91E-05	2.45E-05	4.33E-07	1.66E-08	1.06E-10	1.42E-05
6561	392915	3750969	Sensitive	6.13E-05	3.84E-05	6.78E-07	2.60E-08	1.57E-10	2.22E-05
6562	390853	3751014	Sensitive	5.05E-05	3.17E-05	5.59E-07	2.14E-08	1.38E-10	1.83E-05
6568	390627	3751173	Sensitive	3.52E-05	2.20E-05	3.89E-07	1.49E-08	9.54E-11	1.27E-05
6571	394526	3751418	Sensitive	1.24E-05	7.75E-06	1.37E-07	5.24E-09	3.63E-11	4.48E-06
6574	392666	3751551	Sensitive	4.74E-05	2.97E-05	5.24E-07	2.01E-08	1.23E-10	1.72E-05
6578	391395	3751772	Sensitive	4.46E-05	2.79E-05	4.93E-07	1.89E-08	1.21E-10	1.61E-05
6580	392890	3751762	Sensitive	3.19E-05	2.00E-05	3.53E-07	1.35E-08	8.34E-11	1.15E-05
6581	393459	3751819	Sensitive	2.03E-05	1.27E-05	2.25E-07	8.61E-09	5.35E-11	7.35E-06
6582	392689	3751835	Sensitive	3.47E-05	2.17E-05	3.83E-07	1.47E-08	9.08E-11	1.25E-05
6583	392682	3751837	Sensitive	3.48E-05	2.18E-05	3.84E-07	1.47E-08	9.11E-11	1.26E-05
6584	393613	3751872	Sensitive	1.79E-05	1.12E-05	1.98E-07	7.59E-09	4.75E-11	6.48E-06
6585	389955	3751959	Sensitive	1.45E-05	9.11E-06	1.61E-07	6.16E-09	3.92E-11	5.26E-06
6587	391637	3752036	Sensitive	3.57E-05	2.24E-05	3.95E-07	1.52E-08	9.64E-11	1.29E-05
6598	390242	3752750	Sensitive	1.18E-05	7.41E-06	1.31E-07	5.01E-09	3.16E-11	4.28E-06
6603	393061	3752892	Sensitive	1.33E-05	8.34E-06	1.47E-07	5.64E-09	3.45E-11	4.81E-06
6605	392857	3753105	Sensitive	1.25E-05	7.82E-06	1.38E-07	5.29E-09	3.25E-11	4.51E-06
6676	392517	3749932	Sensitive	5.92E-05	3.71E-05	6.55E-07	2.51E-08	1.45E-10	2.14E-05
6678	390261	3752752	Sensitive	1.19E-05	7.46E-06	1.32E-07	5.04E-09	3.18E-11	4.31E-06
6681	393593	3750179	Sensitive	2.36E-05	1.48E-05	2.61E-07	1.00E-08	6.02E-11	8.55E-06
6698	389791	3751313	Sensitive	1.59E-05	9.94E-06	1.75E-07	6.73E-09	4.27E-11	5.74E-06
6700	389662	3750632	Sensitive	1.54E-05	9.62E-06	1.70E-07	6.51E-09	4.11E-11	5.56E-06
6708	391135	3748423	Sensitive	1.38E-05	8.62E-06	1.52E-07	5.83E-09	3.58E-11	4.98E-06
6721	393187	3750336	Sensitive	3.83E-05	2.40E-05	4.23E-07	1.62E-08	9.61E-11	1.38E-05
6728	391823	3750031	Sensitive	1.14E-04	7.13E-05	1.26E-06	4.83E-08	2.75E-10	4.12E-05
6729	391823	3750031	Sensitive	1.14E-04	7.13E-05	1.26E-06	4.83E-08	2.75E-10	4.12E-05
6730	393097	3749531	Sensitive	2.46E-05	1.54E-05	2.72E-07	1.04E-08	6.23E-11	8.89E-06
6733	391488	3748503	Sensitive	1.54E-05	9.67E-06	1.71E-07	6.55E-09	4.00E-11	5.59E-06
6736	391533	3753588	Sensitive	1.03E-05	6.46E-06	1.14E-07	4.37E-09	2.75E-11	3.73E-06
6739	392798	3753189	Sensitive	1.21E-05	7.56E-06	1.33E-07	5.11E-09	3.14E-11	4.36E-06
6743	393549	3751856	Sensitive	1.88E-05	1.18E-05	2.08E-07	7.96E-09	4.96E-11	6.79E-06
6746	390852	3751042	Sensitive	4.98E-05	3.12E-05	5.51E-07	2.11E-08	1.36E-10	1.80E-05
6747	392859	3753109	Sensitive	1.24E-05	7.80E-06	1.38E-07	5.27E-09	3.24E-11	4.50E-06
6771	392768	3749324	Sensitive	2.57E-05	1.61E-05	2.85E-07	1.09E-08	6.52E-11	9.31E-06
6772	392768	3749324	Sensitive	2.57E-05	1.61E-05	2.85E-07	1.09E-08	6.52E-11	9.31E-06
6773	393771	3749702	Sensitive	1.69E-05	1.06E-05	1.86E-07	7.15E-09	4.32E-11	6.10E-06
6780	392377	3753377	Sensitive	1.16E-05	7.27E-06	1.28E-07	4.92E-09	3.05E-11	4.20E-06
6816	392703	3750856	Sensitive	9.52E-05	5.97E-05	1.05E-06	4.04E-08	2.39E-10	3.45E-05
6817	390261	3752752	Sensitive	1.19E-05	7.46E-06	1.32E-07	5.04E-09	3.18E-11	4.31E-06
6823	390863	3751303	Sensitive	4.32E-05	2.71E-05	4.78E-07	1.83E-08	1.18E-10	1.56E-05
6834	390541	3749641	Sensitive	2.37E-05	1.48E-05	2.62E-07	1.00E-08	6.23E-11	8.57E-06
6837	391155	3749006	Sensitive	2.11E-05	1.32E-05	2.33E-07	8.93E-09	5.46E-11	7.62E-06
6847	391086	3750584	Sensitive	8.19E-05	5.13E-05	9.06E-07	3.47E-08	2.20E-10	2.96E-05

Table 11. Population Exposure Cancer Burden Summary

Anaplex Corporation
Facility ID 016951
Paramount, California

Cancer Risk	Population
	70-year Exposure
1 to <10 in a million	2,120,397
10 to <25 in a million	112,798
25 to <100 in a million	37,558
100 to <1000 in a million	6,540
>=1000 in a million	1
Total >= 1 in a million	2,277,294
Cancer Burden	9.7

Table 12. PMI, MEIR, MEIW, MEISR Cancer Risk by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source ID	PMI		MEIR		MEIW		Maximum Sensitive Receptor	
	Cancer Risk	Contribution	Cancer Risk	Contribution	Cancer Risk	Contribution	Cancer Risk	Contribution
SPRYBTH2	1.61E-01	99.6%	9.13E-04	98.0%	2.82E-03	99.4%	1.10E-04	96.8%
SPRYBTH3	2.36E-06	0.0%	1.68E-08	0.0%	6.43E-08	0.0%	1.96E-09	0.0%
SPRYBTH4	7.27E-06	0.0%	5.96E-08	0.0%	2.08E-07	0.0%	6.70E-09	0.0%
222BLR1	1.92E-08	0.0%	1.54E-09	0.0%	4.86E-10	0.0%	3.64E-10	0.0%
222BLR2	1.89E-08	0.0%	1.54E-09	0.0%	4.78E-10	0.0%	3.63E-10	0.0%
DGRSR	4.02E-08	0.0%	1.36E-09	0.0%	1.96E-09	0.0%	7.80E-11	0.0%
DGRBLR	5.64E-09	0.0%	4.10E-10	0.0%	1.60E-10	0.0%	7.97E-11	0.0%
DRYER3	2.07E-08	0.0%	7.19E-10	0.0%	6.29E-10	0.0%	1.69E-10	0.0%
DRYER4	9.75E-09	0.0%	8.00E-10	0.0%	2.56E-10	0.0%	1.59E-10	0.0%
ANODZPSH	5.35E-04	0.3%	1.70E-05	1.8%	1.54E-05	0.5%	3.38E-06	3.0%
PLATEPSH	6.35E-05	0.0%	8.23E-07	0.1%	1.25E-06	0.0%	1.69E-07	0.1%
SLVNTBTH	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
MASKING	4.45E-05	0.0%	3.51E-07	0.0%	7.85E-07	0.0%	7.11E-08	0.1%
ABRBLST	2.31E-06	0.0%	8.78E-08	0.0%	1.28E-07	0.0%	2.37E-08	0.0%
ANODZEVF	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
PLATEEVF	2.25E-06	0.0%	3.01E-08	0.0%	4.42E-08	0.0%	6.69E-09	0.0%

Table 13. PMI Cancer Risk by Substance and Pathway

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce	Contribution
6	391889	3750691	18540299	Cr(VI)	7.52E-04	4.71E-04	8.32E-06	3.19E-07	0.00E+00	2.72E-04	0%
6	391889	3750691	7440020	Nickel	2.10E-06	2.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	1333820	ChromiumTriOxid	1.01E-04	6.35E-05	1.12E-06	4.30E-08	0.00E+00	3.67E-05	0%
6	391889	3750691	373024	Ni Acetate	1.51E-08	1.51E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	10588019	SodiumDichromat	4.80E-04	3.00E-04	5.31E-06	2.03E-07	0.00E+00	1.74E-04	0%
6	391889	3750691	7440439	Cadmium	4.01E-06	4.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	1128	Lead cmp(inorg)	8.08E-07	4.99E-08	6.10E-07	1.48E-08	1.11E-08	1.22E-07	0%
6	391889	3750691	7439921	Lead	2.83E-10	1.75E-11	2.13E-10	5.19E-12	3.87E-12	4.28E-11	0%
6	391889	3750691	10294403	Barium Chromate	1.35E-03	8.44E-04	1.49E-05	5.72E-07	0.00E+00	4.88E-04	1%
6	391889	3750691	100414	Ethyl Benzene	3.06E-05	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	50000	Formaldehyde	7.31E-06	7.31E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	75092	Methylene Chlor	2.86E-05	2.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	7789062	StrontiumChrom	1.59E-01	9.93E-02	1.75E-03	6.72E-05	0.00E+00	5.74E-02	98%
6	391889	3750691	91203	Naphthalene	2.67E-05	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	75569	Propylene Oxide	2.44E-06	2.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	79016	TCE	4.02E-08	4.02E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	71432	Benzene	5.74E-09	5.74E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	1151	PAHs-w/o	6.47E-08	1.97E-09	7.35E-09	1.83E-09	1.75E-08	3.60E-08	0%
6	391889	3750691	75070	Acetaldehyde	3.08E-10	3.08E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	7440417	Beryllium	1.19E-09	1.19E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889	3750691	127184	Perc	2.25E-06	2.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Table 14. MEIR Cancer Risk by Substance and Pathway

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce	Contribution (%)
1567	392200	3750720	18540299	Cr(VI)	4.64E-06	2.90E-06	5.13E-08	1.97E-09	0.00E+00	1.68E-06	0%
1567	392200	3750720	7440020	Nickel	3.38E-08	3.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	1333820	ChromiumTriOxid	3.20E-06	2.00E-06	3.54E-08	1.36E-09	0.00E+00	1.16E-06	0%
1567	392200	3750720	373024	Ni Acetate	4.80E-10	4.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	10588019	SodiumDichromat	1.42E-05	8.91E-06	1.57E-07	6.03E-09	0.00E+00	5.15E-06	2%
1567	392200	3750720	7440439	Cadmium	5.20E-08	5.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	1128	Lead cmp(inorg)	4.59E-09	2.84E-10	3.46E-09	8.43E-11	6.29E-11	6.95E-10	0%
1567	392200	3750720	7439921	Lead	4.61E-12	2.85E-13	3.48E-12	8.47E-14	6.31E-14	6.98E-13	0%
1567	392200	3750720	10294403	Barium Chromate	7.66E-06	4.80E-06	8.47E-08	3.25E-09	0.00E+00	2.77E-06	1%
1567	392200	3750720	100414	Ethyl Benzene	1.86E-07	1.86E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	50000	Formaldehyde	4.17E-08	4.17E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	75092	Methylene Chlor	2.05E-07	2.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	7789062	StrontiumChrom	9.01E-04	5.64E-04	9.97E-06	3.82E-07	0.00E+00	3.26E-04	97%
1567	392200	3750720	91203	Naphthalene	2.12E-07	2.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	75569	Propylene Oxide	1.92E-08	1.92E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	79016	TCE	1.36E-09	1.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	71432	Benzene	3.88E-10	3.88E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	1151	PAHs-w/o	4.38E-09	1.34E-10	4.98E-10	1.24E-10	1.18E-09	2.44E-09	0%
1567	392200	3750720	75070	Acetaldehyde	2.09E-11	2.09E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	7440417	Beryllium	4.51E-11	4.51E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	392200	3750720	127184	Perc	3.01E-08	3.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Table 15. MEIW Cancer Risk by Substance and Pathway

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Contribution (%)
1391	391880	3750660	127184	Perc	4.42E-08	4.42E-08	0.00E+00	0.00E+00	0%
1391	391880	3750660	18540299	Cr(VI)	1.34E-05	1.32E-05	1.82E-07	1.26E-08	0%
1391	391880	3750660	7440020	Nickel	6.75E-08	6.75E-08	0.00E+00	0.00E+00	0%
1391	391880	3750660	1333820	ChromiumTriOxid	2.90E-06	2.85E-06	3.92E-08	2.72E-09	0%
1391	391880	3750660	373024	Ni Acetate	6.82E-10	6.82E-10	0.00E+00	0.00E+00	0%
1391	391880	3750660	10588019	SodiumDichromat	1.32E-05	1.30E-05	1.79E-07	1.24E-08	0%
1391	391880	3750660	7440439	Cadmium	1.18E-07	1.18E-07	0.00E+00	0.00E+00	0%
1391	391880	3750660	1128	Lead cmp(inorg)	8.07E-09	1.95E-09	5.54E-09	5.77E-10	0%
1391	391880	3750660	7439921	Lead	3.79E-12	9.17E-13	2.60E-12	2.71E-13	0%
1391	391880	3750660	10294403	Barium Chromate	2.36E-05	2.33E-05	3.20E-07	2.22E-08	1%
1391	391880	3750660	100414	Ethyl Benzene	8.48E-07	8.48E-07	0.00E+00	0.00E+00	0%
1391	391880	3750660	50000	Formaldehyde	2.02E-07	2.02E-07	0.00E+00	0.00E+00	0%
1391	391880	3750660	75092	Methylene Chlor	5.96E-07	5.96E-07	0.00E+00	0.00E+00	0%
1391	391880	3750660	7789062	StrontiumChrom	2.78E-03	2.74E-03	3.77E-05	2.61E-06	98%
1391	391880	3750660	91203	Naphthalene	5.15E-07	5.15E-07	0.00E+00	0.00E+00	0%
1391	391880	3750660	75569	Propylene Oxide	4.30E-08	4.30E-08	0.00E+00	0.00E+00	0%
1391	391880	3750660	79016	TCE	1.96E-09	1.96E-09	0.00E+00	0.00E+00	0%
1391	391880	3750660	71432	Benzene	5.19E-10	5.19E-10	0.00E+00	0.00E+00	0%
1391	391880	3750660	1151	PAHs-w/o	1.15E-09	1.87E-10	5.18E-10	4.49E-10	0%
1391	391880	3750660	75070	Acetaldehyde	2.79E-11	2.79E-11	0.00E+00	0.00E+00	0%
1391	391880	3750660	7440417	Beryllium	1.03E-10	1.03E-10	0.00E+00	0.00E+00	0%

Table 16. MEISR Cancer Risk by Substance and Pathway

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce	Contribution (%)
6728	391823.207	3750030.733	18540299	Cr(VI)	6.01E-07	3.76E-07	6.64E-09	2.55E-10	0.00E+00	2.18E-07	1%
6728	391823.207	3750030.733	7440020	Nickel	6.88E-09	6.88E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	1333820	ChromiumTriOxid	6.34E-07	3.97E-07	7.01E-09	2.69E-10	0.00E+00	2.30E-07	1%
6728	391823.207	3750030.733	373024	Ni Acetate	9.52E-11	9.52E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	10588019	SodiumDichromat	2.82E-06	1.77E-06	3.12E-08	1.20E-09	0.00E+00	1.02E-06	2%
6728	391823.207	3750030.733	7440439	Cadmium	1.07E-08	1.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	1128	Lead cmp(inorg)	5.54E-10	3.43E-11	4.18E-10	1.02E-11	7.59E-12	8.40E-11	0%
6728	391823.207	3750030.733	7439921	Lead	1.04E-12	6.41E-14	7.83E-13	1.91E-14	1.42E-14	1.57E-13	0%
6728	391823.207	3750030.733	10294403	Barium Chromate	9.25E-07	5.79E-07	1.02E-08	3.92E-10	0.00E+00	3.35E-07	1%
6728	391823.207	3750030.733	100414	Ethyl Benzene	2.21E-08	2.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	50000	Formaldehyde	5.05E-09	5.05E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	75092	Methylene Chlor	3.72E-08	3.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	7789062	StrontiumChrom	1.09E-04	6.81E-05	1.20E-06	4.61E-08	0.00E+00	3.94E-05	96%
6728	391823.207	3750030.733	91203	Naphthalene	4.00E-08	4.00E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	75569	Propylene Oxide	3.89E-09	3.89E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	79016	TCE	7.80E-11	7.80E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	71432	Benzene	8.78E-11	8.78E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	1151	PAHs-w/o	9.90E-10	3.02E-11	1.13E-10	2.80E-11	2.68E-10	5.51E-10	0%
6728	391823.207	3750030.733	75070	Acetaldehyde	4.72E-12	4.72E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	7440417	Beryllium	1.22E-11	1.22E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	127184	Perc	6.69E-09	6.69E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Table 17. PMI, MEIR, MEIW, MEISR Chronic HI by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source ID	PMI		MEIR		MEIW		MEISR	
	CHI	Contribution	CHI	Contribution	CHI	Contribution	CHI	Contribution
SPRYBTH2	7.08E-01	8.4%	1.08E-02	19.3%	2.15E-01	10.6%	1.76E-03	20.5%
SPRYBTH3	2.05E-02	0.2%	2.47E-04	0.4%	5.78E-03	0.3%	3.78E-05	0.4%
SPRYBTH4	2.36E-02	0.3%	2.92E-04	0.5%	6.70E-03	0.3%	4.38E-05	0.5%
222BLR1	9.16E-05	0.0%	7.64E-06	0.0%	1.08E-04	0.0%	1.36E-06	0.0%
222BLR2	9.11E-05	0.0%	7.69E-06	0.0%	1.11E-04	0.0%	1.35E-06	0.0%
DGRSR	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
DGRBLR	2.41E-05	0.0%	1.74E-06	0.0%	2.01E-05	0.0%	2.97E-07	0.0%
DRYER3	4.96E-05	0.0%	2.91E-06	0.0%	3.13E-05	0.0%	6.29E-07	0.0%
DRYER4	4.29E-05	0.0%	3.29E-06	0.0%	3.10E-05	0.0%	5.91E-07	0.0%
ANODZPSH	5.54E+00	65.9%	3.21E-02	57.3%	1.47E+00	72.6%	4.62E-03	53.9%
PLATEPSH	8.39E-01	10.0%	4.57E-03	8.1%	1.02E-01	5.0%	7.55E-04	8.8%
SLVNTBTH	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
MASKING	9.02E-02	1.1%	8.09E-04	1.4%	5.72E-02	2.8%	1.24E-04	1.4%
ABRBLST	7.16E-04	0.0%	5.21E-05	0.1%	8.74E-04	0.0%	1.08E-05	0.1%
ANODZEVF	1.12E-01	1.3%	7.16E-04	1.3%	3.06E-02	1.5%	1.08E-04	1.3%
PLATEEVP	1.08E+00	12.8%	6.44E-03	11.5%	1.36E-01	6.7%	1.11E-03	13.0%

Table 18. PMI Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution
3	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-03	0.00E+00	0.00E+00	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-02	6.83E-04	2.48E-05	0.00E+00	3.85E-04	0%
3	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.41E-03	0.00E+00	0.00E+00	5.27E-04	4.76E-06	1.15E-07	0.00E+00	1.23E-04	0%
3	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-02	8.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-01	0.00E+00	0.00E+00	1.26E-02	1.14E-04	2.75E-06	0.00E+00	6.80E-05	11%
3	1333820	ChromiumTriOxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-02	0.00E+00	0.00E+00	1.38E-03	1.25E-05	3.02E-07	0.00E+00	3.23E-04	8%
3	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-04	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	0.00E+00	0.00E+00	1.86E-04	1.68E-06	4.05E-08	0.00E+00	1.00E-06	0%
3	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5%
3	10588019	SodiumDichromat	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-02	0.00E+00	0.00E+00	6.13E-03	5.54E-05	1.34E-06	0.00E+00	1.44E-03	0%
3	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	55%
3	108883	Toluene	0.00E+00	7.67E-02	0.00E+00	0.00E+00	0.00E+00	7.67E-02	7.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
3	1330207	Xylenes	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	1.15E-01	0.00E+00	0.00E+00	5.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	1.05E-05	2.55E-08	0.00E+00	1.79E-05	1%
3	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8%
3	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-01	0.00E+00	0.00E+00	9.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E+00	1.97E-02	7.13E-04	0.00E+00	1.11E-02	2%
3	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-03	0.00E+00	0.00E+00	6.76E-04	6.11E-06	1.48E-07	0.00E+00	1.58E-04	0%
3	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
3	1175	Silica, Crystln	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
3	7789062	StrontiumChrom	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.68E-01	0.00E+00	0.00E+00	7.94E-02	7.18E-04	1.74E-05	0.00E+00	1.86E-02	5%
3	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
3	7440417	Beryllium	0.00E+00	0.00E+00	2.03E-05	0.00E+00	8.62E-07	0.00E+00	2.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-07	1.29E-09	4.67E-11	0.00E+00	3.91E-10	0%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 19. MEIR Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution
2115	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.93E-05	0.00E+00	0.00E+00	4.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-03	9.32E-06	3.38E-07	0.00E+00	5.26E-06	0%
2115	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-05	0.00E+00	0.00E+00	6.75E-06	6.10E-08	1.47E-09	0.00E+00	1.58E-06	0%
2115	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.41E-05	5.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-03	0.00E+00	0.00E+00	7.06E-05	6.38E-07	1.54E-08	0.00E+00	3.82E-07	9%
2115	1333820	ChromiumTriOxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.75E-05	0.00E+00	0.00E+00	8.00E-06	7.23E-08	1.75E-09	0.00E+00	1.88E-06	7%
2115	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-06	7.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E-05	0.00E+00	0.00E+00	1.08E-06	9.73E-09	2.35E-10	0.00E+00	5.82E-09	0%
2115	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4%
2115	10588019	SodiumDichromat	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-04	0.00E+00	0.00E+00	3.54E-05	3.20E-07	7.74E-09	0.00E+00	8.30E-06	0%
2115	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	48%
2115	108883	Toluene	0.00E+00	8.72E-04	0.00E+00	0.00E+00	0.00E+00	8.72E-04	8.72E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
2115	1330207	Xylenes	0.00E+00	1.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-04	0.00E+00	1.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	6.27E-04	0.00E+00	0.00E+00	3.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-06	5.74E-08	1.39E-10	0.00E+00	9.74E-08	1%
2115	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7%
2115	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-04	0.00E+00	0.00E+00	5.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	1.22E-04	4.41E-06	0.00E+00	6.87E-05	2%
2115	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	1.03E-05	9.33E-08	2.25E-09	0.00E+00	2.42E-06	0%
2115	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
2115	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5%
2115	1175	Silica, Crystln	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
2115	7789062	StrontiumChrom	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	0.00E+00	0.00E+00	1.21E-03	1.10E-05	2.65E-07	0.00E+00	2.84E-04	11%
2115	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
2115	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7440417	Beryllium	0.00E+00	0.00E+00	1.48E-06	0.00E+00	6.27E-08	0.00E+00	1.48E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-08	9.36E-11	3.39E-12	0.00E+00	2.84E-11	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

INH = inhalation

MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 20. MEIW Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution
1659	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	0.00E+00	0.00E+00	4.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-02	1.11E-04	1.58E-05	0.00E+00	0.00E+00	0%
1659	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-05	0.00E+00	0.00E+00	1.57E-04	7.78E-07	7.41E-08	0.00E+00	0.00E+00	0%
1659	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-03	1.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	0.00E+00	0.00E+00	2.14E-03	1.06E-05	1.01E-06	0.00E+00	0.00E+00	8%
1659	1333820	ChromiumTriOxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-05	0.00E+00	0.00E+00	3.64E-04	1.81E-06	1.72E-07	0.00E+00	0.00E+00	9%
1659	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-05	3.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-03	0.00E+00	0.00E+00	4.92E-05	2.44E-07	2.33E-08	0.00E+00	0.00E+00	0%
1659	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3%
1659	10588019	SodiumDichromat	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-04	0.00E+00	0.00E+00	1.58E-03	7.85E-06	7.48E-07	0.00E+00	0.00E+00	0%
1659	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	60%
1659	108883	Toluene	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	3.74E-02	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
1659	1330207	Xylenes	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-03	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	8.47E-03	0.00E+00	0.00E+00	7.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-04	7.01E-07	6.68E-09	0.00E+00	0.00E+00	0%
1659	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4%
1659	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-02	0.00E+00	0.00E+00	9.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E-01	2.18E-03	3.12E-04	0.00E+00	0.00E+00	2%
1659	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-05	0.00E+00	0.00E+00	2.05E-04	1.02E-06	9.71E-08	0.00E+00	0.00E+00	0%
1659	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3%
1659	1175	Silica, Crystln	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
1659	7789062	StrontiumChrom	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-03	0.00E+00	0.00E+00	2.41E-02	1.20E-04	1.14E-05	0.00E+00	0.00E+00	6%
1659	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
1659	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1659	7440417	Beryllium	0.00E+00	0.00E+00	2.48E-05	0.00E+00	4.93E-07	0.00E+00	2.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-07	8.63E-10	1.23E-10	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

INH = inhalation

MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 21. MEISR Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution
6728	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-05	0.00E+00	0.00E+00	7.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-04	1.48E-06	5.37E-08	0.00E+00	8.37E-07	0%
6728	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	0.00E+00	0.00E+00	1.09E-06	9.85E-09	2.38E-10	0.00E+00	2.55E-07	0%
6728	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-05	7.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E-04	0.00E+00	0.00E+00	1.12E-05	1.01E-07	2.44E-09	0.00E+00	6.04E-08	9%
6728	1333820	ChromiumTriOxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	0.00E+00	0.00E+00	1.15E-06	1.04E-08	2.51E-10	0.00E+00	2.70E-07	7%
6728	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-07	1.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-05	0.00E+00	0.00E+00	1.55E-07	1.40E-09	3.38E-11	0.00E+00	8.36E-10	0%
6728	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5%
6728	10588019	SodiumDichromat	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-05	0.00E+00	0.00E+00	5.12E-06	4.63E-08	1.12E-09	0.00E+00	1.20E-06	0%
6728	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	45%
6728	108883	Toluene	0.00E+00	1.37E-04	0.00E+00	0.00E+00	0.00E+00	1.37E-04	1.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
6728	1330207	Xylenes	0.00E+00	2.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-05	0.00E+00	2.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	5.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-06	9.48E-09	2.29E-11	0.00E+00	1.61E-08	1%
6728	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8%
6728	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	0.00E+00	0.00E+00	9.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-03	1.95E-05	7.09E-07	0.00E+00	1.10E-05	2%
6728	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05	0.00E+00	0.00E+00	1.68E-06	1.52E-08	3.67E-10	0.00E+00	3.93E-07	0%
6728	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
6728	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6%
6728	1175	Silica, Crystln	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
6728	7789062	StrontiumChrom	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-03	0.00E+00	0.00E+00	1.97E-04	1.78E-06	4.31E-08	0.00E+00	4.62E-05	12%
6728	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
6728	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7440417	Beryllium	0.00E+00	0.00E+00	3.06E-07	0.00E+00	1.30E-08	0.00E+00	3.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-09	1.94E-11	7.02E-13	0.00E+00	5.88E-12	0%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kideneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiraotry system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index
 INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 22. PMI, MEIR, MEIW, MEISR 8-Hour Chronic HI by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source ID	PMI		MEIR		MEIW		MEISR	
	8HR CHI	Contribution						
SPRYBTH2	4.34E-01	85.3%	2.46E-03	69.8%	9.35E-02	83.6%	2.98E-04	59.2%
SPRYBTH3	9.30E-03	1.8%	6.63E-05	1.9%	1.98E-03	1.8%	7.71E-06	1.5%
SPRYBTH4	8.35E-03	1.6%	6.85E-05	1.9%	1.87E-03	1.7%	7.70E-06	1.5%
222BLR1	1.58E-05	0.0%	1.27E-06	0.0%	1.04E-05	0.0%	3.00E-07	0.1%
222BLR2	1.55E-05	0.0%	1.27E-06	0.0%	1.03E-05	0.0%	2.99E-07	0.1%
DGRSR	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
DGRBLR	4.65E-06	0.0%	3.37E-07	0.0%	3.44E-06	0.0%	6.57E-08	0.0%
DRYER3	1.70E-05	0.0%	5.92E-07	0.0%	1.35E-05	0.0%	1.39E-07	0.0%
DRYER4	8.02E-06	0.0%	6.58E-07	0.0%	5.50E-06	0.0%	1.31E-07	0.0%
ANODZPSH	9.64E-03	1.9%	3.07E-04	8.7%	3.40E-03	3.0%	6.08E-05	12.1%
PLATEPSH	4.73E-02	9.3%	6.13E-04	17.4%	1.08E-02	9.7%	1.25E-04	25.0%
SLVNTBTH	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
MASKING	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
ABRBLST	2.32E-04	0.0%	8.81E-06	0.2%	1.57E-04	0.1%	2.38E-06	0.5%
ANODZEV	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
PLATEEVP	5.52E-05	0.0%	7.38E-07	0.0%	1.31E-05	0.0%	1.64E-07	0.0%

Table 23. PMI 8-Hour Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
6	7440020	Nickel	0.00E+00	0.00E+00	5.67E-02	0.00E+00	0.00E+00	0.00E+00	5.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	11%
6	373024	Ni Acetate	0.00E+00	0.00E+00	4.08E-04	0.00E+00	0.00E+00	0.00E+00	4.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9%
6	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	11%
6	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	69%
6	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 24. MEIR 8-Hour Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
1567	7440020	Nickel	0.00E+00	0.00E+00	9.16E-04	0.00E+00	0.00E+00	0.00E+00	9.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	26%
1567	373024	Ni Acetate	0.00E+00	0.00E+00	1.30E-05	0.00E+00	0.00E+00	0.00E+00	1.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7%
1567	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9%
1567	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	57%
1567	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1567	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 25. MEIW 8-Hour Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
1391	7440020	Nickel	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	13%
1391	373024	Ni Acetate	0.00E+00	0.00E+00	1.44E-04	0.00E+00	0.00E+00	0.00E+00	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1391	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9%
1391	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	11%
1391	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	67%
1391	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
1391	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 26. MEISR 8-Hour Chronic HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
6728	7440020	Nickel	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	37%
6728	373024	Ni Acetate	0.00E+00	0.00E+00	2.58E-06	0.00E+00	0.00E+00	0.00E+00	2.58E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
6728	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6%
6728	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8%
6728	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	48%
6728	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

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ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 27. PMI, MEIR, MEIW, MEISR Acute HI by Source

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Source ID	PMI		MEIR		MEIW		MEISR	
	AHI	Contribution	AHI	Contribution	AHI	Contribution	AHI	Contribution
SPRYBTH2	1.45E-01	0.6%	4.90E-03	6.6%	1.45E-01	0.6%	1.41E-04	1.0%
SPRYBTH3	1.02E-02	0.0%	5.66E-04	0.8%	1.02E-02	0.0%	1.39E-05	0.1%
SPRYBTH4	1.03E-02	0.0%	5.98E-04	0.8%	1.03E-02	0.0%	1.43E-05	0.1%
222BLR1	4.12E-04	0.0%	1.56E-05	0.0%	4.12E-04	0.0%	2.70E-06	0.0%
222BLR2	4.24E-04	0.0%	1.55E-05	0.0%	4.24E-04	0.0%	2.69E-06	0.0%
DGRSR	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
DGRBLR	8.41E-05	0.0%	1.47E-05	0.0%	8.41E-05	0.0%	6.75E-07	0.0%
DRYER3	1.82E-04	0.0%	7.08E-06	0.0%	1.82E-04	0.0%	1.59E-06	0.0%
DRYER4	1.42E-04	0.0%	2.79E-05	0.0%	1.42E-04	0.0%	1.33E-06	0.0%
ANODZPSH	1.97E-01	0.8%	7.06E-03	9.5%	1.97E-01	0.8%	7.75E-04	5.7%
PLATEPSH	8.21E-02	0.3%	5.81E-03	7.8%	8.21E-02	0.3%	6.89E-04	5.0%
SLVNTBTH	2.34E+01	98.0%	5.28E-02	71.2%	2.34E+01	98.0%	1.17E-02	86.0%
MASKING	5.50E-03	0.0%	1.72E-04	0.2%	5.50E-03	0.0%	1.98E-05	0.1%
ABRBLST	7.51E-06	0.0%	5.10E-07	0.0%	7.51E-06	0.0%	9.81E-08	0.0%
ANODZEV	5.27E-03	0.0%	1.89E-04	0.3%	5.27E-03	0.0%	2.07E-05	0.2%
PLATEEVP	2.77E-02	0.1%	1.96E-03	2.6%	2.77E-02	0.1%	2.32E-04	1.7%

Table 28. PMI and MEIW Acute HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
17	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.25E-03	0.00E+00	9.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	1310732	Sodium Hydroxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E-02	7.61E-02	7.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
17	108883	Toluene	0.00E+00	9.51E-03	0.00E+00	0.00E+00	0.00E+00	9.51E-03	9.51E-03	0.00E+00	9.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	1330207	Xylenes	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7440508	Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.50E-04	0.00E+00	8.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-03	0.00E+00	3.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7697372	Nitric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00	1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	67630	Isopropyl Alcoh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.89E-02	0.00E+00	4.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	78933	MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E+01	0.00E+00	2.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	98%
17	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	108952	Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-03	0.00E+00	2.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-04	5.09E-04	0.00E+00	5.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-06	0.00E+00	5.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.42E-04	0.00E+00	6.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04	0.00E+00	5.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	7440622	Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-07	0.00E+00	3.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
17	127184	Perc	0.00E+00	6.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-06	0.00E+00	6.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

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BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 29. MEIR Acute HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
2115	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-04	0.00E+00	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	1310732	Sodium Hydroxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.02E-03	5.02E-03	5.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7%
2115	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	10%
2115	108883	Toluene	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	3.44E-04	3.44E-04	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	1330207	Xylenes	0.00E+00	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-04	0.00E+00	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
2115	7440508	Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.01E-05	0.00E+00	6.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7697372	Nitric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3%
2115	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-04	0.00E+00	4.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1%
2115	67630	Isopropyl Alcoh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-03	0.00E+00	1.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
2115	78933	MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-02	0.00E+00	5.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	73%
2115	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
2115	108952	Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.06E-05	0.00E+00	9.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-05	1.59E-05	0.00E+00	1.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-07	0.00E+00	3.53E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-05	0.00E+00	4.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-05	0.00E+00	3.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	7440622	Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-08	0.00E+00	2.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	127184	Perc	0.00E+00	4.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-07	0.00E+00	4.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 30. MEISR Acute HI by Substance

Anaplex Corporation
 Facility ID 016951
 Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
6728	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	1310732	Sodium Hydroxid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-04	5.92E-04	5.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4%
6728	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6%
6728	108883	Toluene	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	1.42E-05	1.42E-05	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	1330207	Xylenes	0.00E+00	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-05	0.00E+00	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7440508	Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.13E-06	0.00E+00	7.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-05	0.00E+00	2.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7697372	Nitric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2%
6728	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-05	0.00E+00	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	67630	Isopropyl Alcoh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-05	0.00E+00	4.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	78933	MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-02	0.00E+00	1.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	86%
6728	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	108952	Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E-06	0.00E+00	7.69E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-06	1.83E-06	0.00E+00	1.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E-08	0.00E+00	3.93E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-06	0.00E+00	4.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-06	0.00E+00	4.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	7440622	Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-09	0.00E+00	4.21E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	127184	Perc	0.00E+00	5.48E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-08	0.00E+00	5.48E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kidneys HI

GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI

RESP = respiratory system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 31. TAC Emissions Rates by Source Anaplex Corporation Facility ID 016951 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Volume	ANODZEV	Anodizing Tank Evaporation	1101	Fluorides and Compounds	3.65E-02	5.25E-07	4.17E-06	5.25E-07
Volume	ANODZEV	Anodizing Tank Evaporation	112345	Diethylene Glycol Monobutyl Ether	6.99E-01	1.01E-05	7.98E-05	1.01E-05
Volume	ANODZEV	Anodizing Tank Evaporation	7664393	Hydrofluoric Acid	3.00E+01	4.32E-04	3.43E-03	4.32E-04
Volume	ANODZEV	Anodizing Tank Evaporation	7697372	Nitric Acid	1.06E+01	1.52E-04	1.21E-03	1.52E-04
Volume	ANODZEV	Anodizing Tank Evaporation	7664382	Phosphoric Acid	6.01E+00	8.64E-05	6.86E-04	8.64E-05
Volume	ANODZEV	Anodizing Tank Evaporation	7664939	Sulfuric Acid	2.80E-04	4.03E-09	3.20E-08	4.03E-09
Volume	ANODZEV	Anodizing Tank Evaporation	108883	Toluene	4.38E-01	6.30E-06	5.00E-05	6.30E-06
Volume	ANODZEV	Anodizing Tank Evaporation	1330207	Xylene	2.65E-01	3.81E-06	3.02E-05	3.81E-06
Volume	ANODZPSH	Anodizing Tank	7440473	Chromium & Compounds (Other Than Hexavalent)	2.99E-03	4.31E-08	5.41E-06	6.82E-07
Volume	ANODZPSH	Anodizing Tank	57125	Cyanide Compounds	3.63E-03	5.21E-08	2.42E-06	3.04E-07
Volume	ANODZPSH	Anodizing Tank	1101	Fluorides and Compounds	1.30E-01	1.87E-06	1.51E-03	1.91E-04
Volume	ANODZPSH	Anodizing Tank	18540299	Hexavalent Chromium Compounds (Other)	4.51E-03	6.49E-08	3.01E-06	3.79E-07
Volume	ANODZPSH	Anodizing Tank	7439965	Manganese & Compounds	1.96E-05	2.81E-10	3.76E-06	4.73E-07
Volume	ANODZPSH	Anodizing Tank	7440020	Nickel & Compounds	1.23E-01	1.77E-06	7.70E-05	9.71E-06
Volume	ANODZPSH	Anodizing Tank	1333820	Chromium Trioxide	7.73E-02	1.11E-06	4.71E-04	5.94E-05
Volume	ANODZPSH	Anodizing Tank	112345	Diethylene Glycol Monobutyl Ether	4.19E-02	6.02E-07	4.69E-05	5.91E-06
Volume	ANODZPSH	Anodizing Tank	373024	Nickel Acetate	1.64E-02	2.36E-07	1.03E-05	1.29E-06
Volume	ANODZPSH	Anodizing Tank	7664382	Phosphoric Acid	2.36E-02	3.39E-07	2.85E-04	3.59E-05
Volume	ANODZPSH	Anodizing Tank	10588019	Sodium Dichromate	4.30E-01	6.19E-06	8.04E-04	1.01E-04
Volume	ANODZPSH	Anodizing Tank	1310732	Sodium Hydroxide	5.60E-01	8.05E-06	4.45E-04	5.61E-05
Volume	ANODZPSH	Anodizing Tank	7664939	Sulfuric Acid	1.32E+02	1.90E-03	1.20E-01	1.51E-02
Volume	ANODZPSH	Anodizing Tank	108883	Toluene	1.39E-05	2.00E-10	6.97E-08	8.78E-09
Volume	ANODZPSH	Anodizing Tank	1330207	Xylene	2.84E-05	4.08E-10	1.42E-07	1.79E-08
Volume	ANODZPSH	Anodizing Tank	1314132	Zinc Oxide	1.48E-03	2.13E-08	7.40E-06	9.33E-07
Volume	PLATEEVP	Plating Tank Evaporation	112345	Diethylene Glycol Monobutyl Ether	5.85E-02	8.42E-07	6.68E-06	8.42E-07
Volume	PLATEEVP	Plating Tank Evaporation	111762	Ethylene Glycol Monobutyl Ether	7.23E-01	1.04E-05	8.25E-05	1.04E-05
Volume	PLATEEVP	Plating Tank Evaporation	7647010	Hydrochloric Acid	1.70E+02	2.45E-03	1.94E-02	2.45E-03
Volume	PLATEEVP	Plating Tank Evaporation	7664393	Hydrofluoric Acid	2.92E+01	4.20E-04	3.34E-03	4.20E-04
Volume	PLATEEVP	Plating Tank Evaporation	7697372	Nitric Acid	2.13E+02	3.06E-03	2.43E-02	3.06E-03
Volume	PLATEEVP	Plating Tank Evaporation	7664382	Phosphoric Acid	6.14E+01	8.84E-04	7.01E-03	8.84E-04
Volume	PLATEEVP	Plating Tank Evaporation	7664939	Sulfuric Acid	5.36E-03	7.70E-08	6.11E-07	7.70E-08
Volume	PLATEEVP	Plating Tank Evaporation	127184	Tetrachloroethylene	1.26E+01	1.82E-04	1.44E-03	1.82E-04
Volume	PLATEPSH	Plating Tank	7440439	Cadmium & Compounds	3.54E-02	5.09E-07	1.28E-03	1.62E-04
Volume	PLATEPSH	Plating Tank	7440508	Copper & Compounds	1.28E+00	1.84E-05	1.22E-03	1.53E-04
Volume	PLATEPSH	Plating Tank	57125	Cyanide Compounds	2.69E+00	3.87E-05	9.78E-03	1.23E-03
Volume	PLATEPSH	Plating Tank	1128	Lead Compounds	1.21E-05	1.74E-10	2.33E-07	2.93E-08
Volume	PLATEPSH	Plating Tank	7439965	Manganese & Compounds	3.33E-03	4.79E-08	3.47E-05	4.37E-06
Volume	PLATEPSH	Plating Tank	7440020	Nickel & Compounds	2.54E-01	3.66E-06	9.02E-04	1.14E-04
Volume	PLATEPSH	Plating Tank	7440224	Silver & Compounds	6.67E-03	9.59E-08	3.32E-05	4.19E-06
Volume	PLATEPSH	Plating Tank	7440666	Zinc & Compounds	1.76E-02	2.53E-07	1.84E-04	2.31E-05
Volume	PLATEPSH	Plating Tank	6484522	Ammonium Nitrate	7.40E-03	1.06E-07	3.70E-05	4.66E-06
Volume	PLATEPSH	Plating Tank	1333820	Chromium Trioxide	5.24E-04	7.53E-09	7.56E-07	9.53E-08
Volume	PLATEPSH	Plating Tank	112345	Diethylene Glycol Monobutyl Ether	3.36E-03	4.83E-08	4.20E-06	5.29E-07
Volume	PLATEPSH	Plating Tank	7647010	Hydrochloric Acid	8.40E-02	1.21E-06	3.23E-04	4.07E-05
Volume	PLATEPSH	Plating Tank	7664393	Hydrofluoric Acid	5.83E-04	8.38E-09	6.07E-06	7.65E-07
Volume	PLATEPSH	Plating Tank	7439921	Lead	6.78E-05	9.75E-10	1.17E-07	1.48E-08
Volume	PLATEPSH	Plating Tank	7697372	Nitric Acid	3.20E-01	4.60E-06	1.76E-03	2.21E-04
Volume	PLATEPSH	Plating Tank	7664382	Phosphoric Acid	1.26E+01	1.81E-04	6.22E-02	7.84E-03
Volume	PLATEPSH	Plating Tank	10588019	Sodium Dichromate	2.30E-02	3.31E-07	5.74E-05	7.24E-06
Volume	PLATEPSH	Plating Tank	1310732	Sodium Hydroxide	4.35E+00	6.26E-05	5.81E-03	7.32E-04
Volume	PLATEPSH	Plating Tank	7664939	Sulfuric Acid	3.57E+00	5.14E-05	1.78E-02	2.24E-03
Volume	PLATEPSH	Plating Tank	1314132	Zinc Oxide	1.87E-03	2.69E-08	1.95E-05	2.46E-06
Capped Point	SPRYBTH2	Paint Booth #2	95636	1,2,4-Trimethylbenzene	9.58E-01	1.38E-05	4.79E-04	6.03E-05
Capped Point	SPRYBTH2	Paint Booth #2	80057	4,4'-Isopropylidenediphenol	1.08E+00	1.55E-05	5.39E-04	6.80E-05
Capped Point	SPRYBTH2	Paint Booth #2	7429905	Aluminum	1.26E-02	1.81E-07	6.30E-06	7.94E-07
Capped Point	SPRYBTH2	Paint Booth #2	1309644	Antimony Trioxide	9.86E-02	1.42E-06	4.93E-05	6.21E-06
Capped Point	SPRYBTH2	Paint Booth #2	10294403	Barium Chromate	2.64E-01	3.79E-06	1.32E-04	1.66E-05
Capped Point	SPRYBTH2	Paint Booth #2	7440393	Barium & Compounds	2.17E-01	3.12E-06	1.08E-04	1.37E-05
Capped Point	SPRYBTH2	Paint Booth #2	18540299	Hexavalent Chromium Compounds (Other)	2.96E-02	4.26E-07	1.48E-05	1.87E-06
Capped Point	SPRYBTH2	Paint Booth #2	7440484	Cobalt & Compounds	1.32E-05	1.89E-10	6.59E-09	8.30E-10
Capped Point	SPRYBTH2	Paint Booth #2	7440508	Copper & Compounds	3.74E-01	5.38E-06	1.87E-04	2.36E-05
Capped Point	SPRYBTH2	Paint Booth #2	98828	Cumene	1.92E-01	2.76E-06	9.58E-05	1.21E-05
Capped Point	SPRYBTH2	Paint Booth #2	34590948	Dipropylene Glycol Monomethyl Ether	2.56E-03	3.68E-08	1.28E-06	1.61E-07
Capped Point	SPRYBTH2	Paint Booth #2	1091	Epoxy Resins	1.31E+01	1.89E-04	6.57E-03	8.28E-04

Table 31. TAC Emissions Rates by Source Anaplex Corporation Facility ID 016951 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Capped Point	SPRYBTH2	Paint Booth #2	100414	Ethyl Benzene	9.38E+01	1.35E-03	4.69E-02	5.91E-03
Capped Point	SPRYBTH2	Paint Booth #2	111762	Ethylene Glycol Monobutyl Ether	1.61E+02	2.31E-03	8.03E-02	1.01E-02
Capped Point	SPRYBTH2	Paint Booth #2	2807309	Ethylene Glycol Monopropyl Ether	2.17E+00	3.12E-05	1.08E-03	1.36E-04
Capped Point	SPRYBTH2	Paint Booth #2	1101	Fluorides and Compounds	3.78E+00	5.44E-05	1.89E-03	2.38E-04
Capped Point	SPRYBTH2	Paint Booth #2	50000	Formaldehyde	1.14E+01	1.64E-04	5.69E-03	7.17E-04
Capped Point	SPRYBTH2	Paint Booth #2	822060	Hexamethylene Diisocyanate Monomer	8.55E-02	1.23E-06	4.28E-05	5.39E-06
Capped Point	SPRYBTH2	Paint Booth #2	123319	Hydroquinone	1.17E+00	1.69E-05	5.87E-04	7.40E-05
Capped Point	SPRYBTH2	Paint Booth #2	67630	IPA	3.79E+02	5.45E-03	1.89E-01	2.39E-02
Capped Point	SPRYBTH2	Paint Booth #2	1125	Isocyanates	1.20E+01	1.73E-04	6.02E-03	7.59E-04
Capped Point	SPRYBTH2	Paint Booth #2	1128	Lead Compounds	5.51E-02	7.92E-07	2.75E-05	3.47E-06
Capped Point	SPRYBTH2	Paint Booth #2	78933	MEK	5.75E+02	8.27E-03	2.88E-01	3.62E-02
Capped Point	SPRYBTH2	Paint Booth #2	67561	Methanol	4.81E+01	6.91E-04	2.40E-02	3.03E-03
Capped Point	SPRYBTH2	Paint Booth #2	75092	Methylene Chloride	8.63E+01	1.24E-03	4.31E-02	5.44E-03
Capped Point	SPRYBTH2	Paint Booth #2	101688	Methylene Diphenyl Diisocyanate	1.18E+00	1.69E-05	5.88E-04	7.41E-05
Capped Point	SPRYBTH2	Paint Booth #2	108101	MIBK	3.18E+02	4.57E-03	1.59E-01	2.00E-02
Capped Point	SPRYBTH2	Paint Booth #2	71363	n-Butanol	8.20E+00	1.18E-04	4.10E-03	5.17E-04
Capped Point	SPRYBTH2	Paint Booth #2	108952	Phenol	1.32E+01	1.90E-04	6.62E-03	8.34E-04
Capped Point	SPRYBTH2	Paint Booth #2	7664382	Phosphoric Acid	7.93E-02	1.14E-06	3.96E-05	4.99E-06
Capped Point	SPRYBTH2	Paint Booth #2	107982	Propylene Glycol Monomethyl Ether	1.03E+02	1.48E-03	5.15E-02	6.49E-03
Capped Point	SPRYBTH2	Paint Booth #2	108656	Propylene Glycol Monomethyl Ether Acetate	5.12E-02	7.37E-07	2.56E-05	3.23E-06
Capped Point	SPRYBTH2	Paint Booth #2	78922	Sec-Butyl Alcohol	3.92E+01	5.65E-04	1.96E-02	2.47E-03
Capped Point	SPRYBTH2	Paint Booth #2	1175	Silica	1.07E+01	1.54E-04	5.36E-03	6.75E-04
Capped Point	SPRYBTH2	Paint Booth #2	7789062	Strontium Chromate	2.49E+01	3.58E-04	1.25E-02	1.57E-03
Capped Point	SPRYBTH2	Paint Booth #2	540885	Tert-Butyl Acetate	2.18E+00	3.14E-05	1.09E-03	1.38E-04
Capped Point	SPRYBTH2	Paint Booth #2	108883	Toluene	5.97E+02	8.59E-03	2.98E-01	3.76E-02
Capped Point	SPRYBTH2	Paint Booth #2	1330207	Xylene	4.60E+02	6.62E-03	2.30E-01	2.90E-02
Capped Point	SPRYBTH2	Paint Booth #2	7440666	Zinc & Compounds	1.49E-01	2.15E-06	7.47E-05	9.41E-06
Capped Point	SPRYBTH3	Paint Booth #3	95636	1,2,4-Trimethylbenzene	3.22E+00	4.64E-05	1.61E-03	2.03E-04
Capped Point	SPRYBTH3	Paint Booth #3	80057	4,4'-Isopropylidenediphenol	6.88E-01	9.90E-06	3.44E-04	4.34E-05
Capped Point	SPRYBTH3	Paint Booth #3	7429905	Aluminum	6.24E-02	8.98E-07	3.12E-05	3.93E-06
Capped Point	SPRYBTH3	Paint Booth #3	7440393	Barium & Compounds	9.26E-03	1.33E-07	4.63E-06	5.83E-07
Capped Point	SPRYBTH3	Paint Booth #3	7440473	Chromium & Compounds (Other Than Hexavalent)	2.93E-02	4.22E-07	1.47E-05	1.85E-06
Capped Point	SPRYBTH3	Paint Booth #3	7440484	Cobalt & Compounds	9.20E-03	1.32E-07	4.60E-06	5.79E-07
Capped Point	SPRYBTH3	Paint Booth #3	100414	Ethyl Benzene	1.09E+01	1.57E-04	5.45E-03	6.87E-04
Capped Point	SPRYBTH3	Paint Booth #3	111762	Ethylene Glycol Monobutyl Ether	1.32E+00	1.89E-05	6.58E-04	8.29E-05
Capped Point	SPRYBTH3	Paint Booth #3	1101	Fluorides and Compounds	6.84E-01	9.85E-06	3.42E-04	4.31E-05
Capped Point	SPRYBTH3	Paint Booth #3	822060	Hexamethylene Diisocyanate Monomer	2.04E-01	2.94E-06	1.02E-04	1.29E-05
Capped Point	SPRYBTH3	Paint Booth #3	67630	IPA	1.10E+00	1.58E-05	5.50E-04	6.94E-05
Capped Point	SPRYBTH3	Paint Booth #3	1125	Isocyanates	3.28E+01	4.71E-04	1.64E-02	2.06E-03
Capped Point	SPRYBTH3	Paint Booth #3	78933	MEK	3.19E+02	4.59E-03	1.60E-01	2.01E-02
Capped Point	SPRYBTH3	Paint Booth #3	101688	Methylene Diphenyl Diisocyanate	3.93E-02	5.65E-07	1.96E-05	2.47E-06
Capped Point	SPRYBTH3	Paint Booth #3	108101	MIBK	5.63E+01	8.09E-04	2.81E-02	3.54E-03
Capped Point	SPRYBTH3	Paint Booth #3	71363	n-Butanol	1.23E+01	1.79E-04	6.21E-03	7.83E-04
Capped Point	SPRYBTH3	Paint Booth #3	107982	Propylene Glycol Monomethyl Ether	1.22E+02	1.76E-03	6.11E-02	7.69E-03
Capped Point	SPRYBTH3	Paint Booth #3	108656	Propylene Glycol Monomethyl Ether Acetate	3.47E+00	5.00E-05	1.74E-03	2.19E-04
Capped Point	SPRYBTH3	Paint Booth #3	1175	Silica	1.07E+00	1.54E-05	5.34E-04	6.73E-05
Capped Point	SPRYBTH3	Paint Booth #3	540885	Tert-Butyl Acetate	1.47E+00	2.12E-05	7.37E-04	9.29E-05
Capped Point	SPRYBTH3	Paint Booth #3	108883	Toluene	7.73E+01	1.11E-03	3.87E-02	4.87E-03
Capped Point	SPRYBTH3	Paint Booth #3	1330207	Xylene	4.73E+01	6.81E-04	2.37E-02	2.98E-03
Capped Point	SPRYBTH4	Paint Booth #4	95636	1,2,4-Trimethylbenzene	4.26E+00	6.13E-05	2.13E-03	2.69E-04
Capped Point	SPRYBTH4	Paint Booth #4	80057	4,4'-Isopropylidenediphenol	6.88E-01	9.90E-06	3.44E-04	4.34E-05
Capped Point	SPRYBTH4	Paint Booth #4	7429905	Aluminum	6.24E-02	8.98E-07	3.12E-05	3.93E-06
Capped Point	SPRYBTH4	Paint Booth #4	7440393	Barium & Compounds	9.26E-03	1.33E-07	4.63E-06	5.83E-07
Capped Point	SPRYBTH4	Paint Booth #4	7440473	Chromium & Compounds (Other Than Hexavalent)	2.93E-02	4.22E-07	1.47E-05	1.85E-06
Capped Point	SPRYBTH4	Paint Booth #4	7440484	Cobalt & Compounds	9.20E-03	1.32E-07	4.60E-06	5.79E-07
Capped Point	SPRYBTH4	Paint Booth #4	100414	Ethyl Benzene	1.70E+01	2.44E-04	8.49E-03	1.07E-03
Capped Point	SPRYBTH4	Paint Booth #4	111762	Ethylene Glycol Monobutyl Ether	1.32E+00	1.89E-05	6.58E-04	8.29E-05
Capped Point	SPRYBTH4	Paint Booth #4	1101	Fluorides and Compounds	6.84E-01	9.85E-06	3.42E-04	4.31E-05
Capped Point	SPRYBTH4	Paint Booth #4	822060	Hexamethylene Diisocyanate Monomer	2.04E-01	2.94E-06	1.02E-04	1.29E-05
Capped Point	SPRYBTH4	Paint Booth #4	67630	IPA	1.10E+00	1.58E-05	5.50E-04	6.94E-05
Capped Point	SPRYBTH4	Paint Booth #4	1125	Isocyanates	3.28E+01	4.71E-04	1.64E-02	2.06E-03
Capped Point	SPRYBTH4	Paint Booth #4	78933	MEK	3.19E+02	4.59E-03	1.60E-01	2.01E-02
Capped Point	SPRYBTH4	Paint Booth #4	101688	Methylene Diphenyl Diisocyanate	3.93E-02	5.65E-07	1.96E-05	2.47E-06
Capped Point	SPRYBTH4	Paint Booth #4	108101	MIBK	5.63E+01	8.09E-04	2.81E-02	3.54E-03

Table 31. TAC Emissions Rates by Source Anaplex Corporation Facility ID 016951 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Capped Point	SPRYBTH4	Paint Booth #4	91203	Naphthalene	1.48E+00	2.13E-05	7.42E-04	9.34E-05
Capped Point	SPRYBTH4	Paint Booth #4	71363	n-Butanol	1.24E+01	1.79E-04	6.21E-03	7.83E-04
Capped Point	SPRYBTH4	Paint Booth #4	107982	Propylene Glycol Monomethyl Ether	1.22E+02	1.76E-03	6.11E-02	7.69E-03
Capped Point	SPRYBTH4	Paint Booth #4	108656	Propylene Glycol Monomethyl Ether Acetate	3.47E+00	5.00E-05	1.74E-03	2.19E-04
Capped Point	SPRYBTH4	Paint Booth #4	1175	Silica	1.07E+00	1.54E-05	5.34E-04	6.73E-05
Capped Point	SPRYBTH4	Paint Booth #4	540885	Tert-Butyl Acetate	1.47E+00	2.12E-05	7.37E-04	9.29E-05
Capped Point	SPRYBTH4	Paint Booth #4	108883	Toluene	7.73E+01	1.11E-03	3.87E-02	4.87E-03
Capped Point	SPRYBTH4	Paint Booth #4	1330207	Xylene	7.14E+01	1.03E-03	3.57E-02	4.50E-03
Volume	MASKING	Masking Area - Paint and Solvent Use	67630	IPA	5.28E+00	7.59E-05	2.64E-03	3.33E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	78933	MEK	1.52E+02	2.19E-03	7.61E-02	9.58E-03
Volume	MASKING	Masking Area - Paint and Solvent Use	75092	Methylene Chloride	4.49E+02	6.45E-03	2.24E-01	2.83E-02
Volume	MASKING	Masking Area - Paint and Solvent Use	91203	Naphthalene	1.54E+01	2.21E-04	7.70E-03	9.70E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	108952	Phenol	1.06E+02	1.52E-03	5.28E-02	6.65E-03
Volume	MASKING	Masking Area - Paint and Solvent Use	108656	Propylene Glycol Monomethyl Ether Acetate	1.54E+01	2.21E-04	7.70E-03	9.70E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	75569	Propylene Oxide	1.52E+01	2.19E-04	7.61E-03	9.58E-04
Volume	MASKING	Masking Area - Paint and Solvent Use	108883	Toluene	6.14E+02	8.84E-03	3.07E-01	3.87E-02
Area	SLVNTBTH	Solvent Degreaser (Manual)	78933	MEK	3.44E+04	4.95E-01	1.72E+01	2.17E+00
Horizontal Point	DGRSR	Vapor Degreaser	67561	Methanol	5.44E+01	7.83E-04	2.72E-02	3.43E-03
Horizontal Point	DGRSR	Vapor Degreaser	79016	Trichloroethylene	5.44E-01	7.83E-06	2.72E-04	3.43E-05
Capped Point	222BLR1	Boiler 1	71432	Benzene	1.54E-02	2.22E-07	1.55E-05	1.95E-06
Capped Point	222BLR1	Boiler 1	50000	Formaldehyde	3.28E-02	4.72E-07	3.29E-05	4.14E-06
Capped Point	222BLR1	Boiler 1	1151	PAH	1.93E-04	2.78E-09	1.93E-07	2.44E-08
Capped Point	222BLR1	Boiler 1	91203	Naphthalene	5.79E-04	8.33E-09	5.80E-07	7.31E-08
Capped Point	222BLR1	Boiler 1	75070	Acetaldehyde	8.30E-03	1.19E-07	8.31E-06	1.05E-06
Capped Point	222BLR1	Boiler 1	107028	Acrolein	5.21E-03	7.49E-08	5.22E-06	6.58E-07
Capped Point	222BLR1	Boiler 1	7664417	Ammonia	6.18E+00	8.88E-05	6.19E-03	7.79E-04
Capped Point	222BLR1	Boiler 1	100414	Ethyl Benzene	1.83E-02	2.64E-07	1.84E-05	2.31E-06
Capped Point	222BLR1	Boiler 1	110543	Hexane	1.22E-02	1.75E-07	1.22E-05	1.53E-06
Capped Point	222BLR1	Boiler 1	115071	Propylene	1.41E+00	2.03E-05	1.41E-03	1.78E-04
Capped Point	222BLR1	Boiler 1	108883	Toluene	7.06E-02	1.02E-06	7.07E-05	8.91E-06
Capped Point	222BLR1	Boiler 1	1330207	Xylene	5.25E-02	7.55E-07	5.26E-05	6.62E-06
Capped Point	222BLR2	Boiler 2	71432	Benzene	1.54E-02	2.22E-07	1.55E-05	1.95E-06
Capped Point	222BLR2	Boiler 2	50000	Formaldehyde	3.28E-02	4.72E-07	3.29E-05	4.14E-06
Capped Point	222BLR2	Boiler 2	1151	PAH	1.93E-04	2.78E-09	1.93E-07	2.44E-08
Capped Point	222BLR2	Boiler 2	91203	Naphthalene	5.79E-04	8.33E-09	5.80E-07	7.31E-08
Capped Point	222BLR2	Boiler 2	75070	Acetaldehyde	8.30E-03	1.19E-07	8.31E-06	1.05E-06
Capped Point	222BLR2	Boiler 2	107028	Acrolein	5.21E-03	7.49E-08	5.22E-06	6.58E-07
Capped Point	222BLR2	Boiler 2	7664417	Ammonia	6.18E+00	8.88E-05	6.19E-03	7.79E-04
Capped Point	222BLR2	Boiler 2	100414	Ethyl Benzene	1.83E-02	2.64E-07	1.84E-05	2.31E-06
Capped Point	222BLR2	Boiler 2	110543	Hexane	1.22E-02	1.75E-07	1.22E-05	1.53E-06
Capped Point	222BLR2	Boiler 2	115071	Propylene	1.41E+00	2.03E-05	1.41E-03	1.78E-04
Capped Point	222BLR2	Boiler 2	108883	Toluene	7.06E-02	1.02E-06	7.07E-05	8.91E-06
Capped Point	222BLR2	Boiler 2	1330207	Xylene	5.25E-02	7.55E-07	5.26E-05	6.62E-06
Capped Point	DGRBLR	Degreaser Boiler	71432	Benzene	3.07E-03	4.42E-08	3.08E-06	3.88E-07
Capped Point	DGRBLR	Degreaser Boiler	50000	Formaldehyde	6.53E-03	9.39E-08	6.54E-06	8.24E-07
Capped Point	DGRBLR	Degreaser Boiler	1151	PAH	3.84E-05	5.52E-10	3.85E-08	4.85E-09
Capped Point	DGRBLR	Degreaser Boiler	91203	Naphthalene	1.15E-04	1.66E-09	1.15E-07	1.45E-08
Capped Point	DGRBLR	Degreaser Boiler	75070	Acetaldehyde	1.65E-03	2.38E-08	1.65E-06	2.08E-07
Capped Point	DGRBLR	Degreaser Boiler	107028	Acrolein	1.04E-03	1.49E-08	1.04E-06	1.31E-07
Capped Point	DGRBLR	Degreaser Boiler	7664417	Ammonia	1.23E+00	1.77E-05	1.23E-03	1.55E-04
Capped Point	DGRBLR	Degreaser Boiler	100414	Ethyl Benzene	3.65E-03	5.25E-08	3.65E-06	4.60E-07
Capped Point	DGRBLR	Degreaser Boiler	110543	Hexane	2.42E-03	3.48E-08	2.42E-06	3.05E-07
Capped Point	DGRBLR	Degreaser Boiler	115071	Propylene	2.81E-01	4.04E-06	2.81E-04	3.54E-05
Capped Point	DGRBLR	Degreaser Boiler	108883	Toluene	1.41E-02	2.02E-07	1.41E-05	1.77E-06
Capped Point	DGRBLR	Degreaser Boiler	1330207	Xylene	1.04E-02	1.50E-07	1.05E-05	1.32E-06
Capped Point	DRYER3	Dryer #3	71432	Benzene	6.18E-03	8.88E-08	6.19E-06	7.79E-07
Capped Point	DRYER3	Dryer #3	50000	Formaldehyde	1.31E-02	1.89E-07	1.31E-05	1.66E-06
Capped Point	DRYER3	Dryer #3	1151	PAH	7.72E-05	1.11E-09	7.73E-08	9.74E-09
Capped Point	DRYER3	Dryer #3	91203	Naphthalene	2.32E-04	3.33E-09	2.32E-07	2.92E-08
Capped Point	DRYER3	Dryer #3	75070	Acetaldehyde	3.32E-03	4.77E-08	3.32E-06	4.19E-07
Capped Point	DRYER3	Dryer #3	107028	Acrolein	2.08E-03	3.00E-08	2.09E-06	2.63E-07
Capped Point	DRYER3	Dryer #3	7664417	Ammonia	2.47E+00	3.55E-05	2.47E-03	3.12E-04
Capped Point	DRYER3	Dryer #3	100414	Ethyl Benzene	7.33E-03	1.05E-07	7.35E-06	9.26E-07
Capped Point	DRYER3	Dryer #3	110543	Hexane	4.86E-03	6.99E-08	4.87E-06	6.14E-07

Table 31. TAC Emissions Rates by Source Anaplex Corporation Facility ID 016951 Paramount, California

Source Type	Modeled Source ID	Source Description	CAS Number	Chemical Name	Annual Emissions (lbs/yr)	Annual Emissions (g/s)	Maximum Hourly Emissions (lbs/hr)	Maximum Hourly Emissions (g/s)
Capped Point	DRYER3	Dryer #3	115071	Propylene	5.64E-01	8.12E-06	5.65E-04	7.12E-05
Capped Point	DRYER3	Dryer #3	108883	Toluene	2.83E-02	4.06E-07	2.83E-05	3.57E-06
Capped Point	DRYER3	Dryer #3	1330207	Xylene	2.10E-02	3.02E-07	2.10E-05	2.65E-06
Capped Point	DRYER4	Dryer #4	71432	Benzene	6.18E-03	8.88E-08	6.19E-06	7.79E-07
Capped Point	DRYER4	Dryer #4	50000	Formaldehyde	1.31E-02	1.89E-07	1.31E-05	1.66E-06
Capped Point	DRYER4	Dryer #4	1151	PAH	7.72E-05	1.11E-09	7.73E-08	9.74E-09
Capped Point	DRYER4	Dryer #4	91203	Naphthalene	2.32E-04	3.33E-09	2.32E-07	2.92E-08
Capped Point	DRYER4	Dryer #4	75070	Acetaldehyde	3.32E-03	4.77E-08	3.32E-06	4.19E-07
Capped Point	DRYER4	Dryer #4	107028	Acrolein	2.08E-03	3.00E-08	2.09E-06	2.63E-07
Capped Point	DRYER4	Dryer #4	7664417	Ammonia	2.47E+00	3.55E-05	2.47E-03	3.12E-04
Capped Point	DRYER4	Dryer #4	100414	Ethyl Benzene	7.33E-03	1.05E-07	7.35E-06	9.26E-07
Capped Point	DRYER4	Dryer #4	110543	Hexane	4.86E-03	6.99E-08	4.87E-06	6.14E-07
Capped Point	DRYER4	Dryer #4	115071	Propylene	5.64E-01	8.12E-06	5.65E-04	7.12E-05
Capped Point	DRYER4	Dryer #4	108883	Toluene	2.83E-02	4.06E-07	2.83E-05	3.57E-06
Capped Point	DRYER4	Dryer #4	1330207	Xylene	2.10E-02	3.02E-07	2.10E-05	2.65E-06
Volume	ABRBLST	Abrasive Blasting	7429905	Aluminum	5.56E-02	8.00E-07	3.05E-05	3.85E-06
Volume	ABRBLST	Abrasive Blasting	7440417	Beryllium & Compounds	7.15E-05	1.03E-09	3.93E-08	4.95E-09
Volume	ABRBLST	Abrasive Blasting	7440439	Cadmium & Compounds	3.97E-05	5.71E-10	2.18E-08	2.75E-09
Volume	ABRBLST	Abrasive Blasting	7440484	Cobalt & Compounds	1.75E-04	2.51E-09	9.60E-08	1.21E-08
Volume	ABRBLST	Abrasive Blasting	7440473	Chromium & Compounds (Other Than Hexavalent)	6.75E-03	9.71E-08	3.71E-06	4.67E-07
Volume	ABRBLST	Abrasive Blasting	7440508	Copper & Compounds	2.22E-02	3.20E-07	1.22E-05	1.54E-06
Volume	ABRBLST	Abrasive Blasting	18540299	Hexavalent Chromium Compounds (Other)	1.43E-03	2.06E-08	7.85E-07	9.90E-08
Volume	ABRBLST	Abrasive Blasting	7439965	Manganese & Compounds	2.22E-03	3.20E-08	1.22E-06	1.54E-07
Volume	ABRBLST	Abrasive Blasting	7440020	Nickel & Compounds	4.77E-03	6.85E-08	2.62E-06	3.30E-07
Volume	ABRBLST	Abrasive Blasting	7439921	Lead	3.97E-05	5.71E-10	2.18E-08	2.75E-09
Volume	ABRBLST	Abrasive Blasting	7782492	Selenium & Compounds	5.96E-04	8.57E-09	3.27E-07	4.12E-08
Volume	ABRBLST	Abrasive Blasting	7440622	Vanadium (Fume or Dust)	2.98E-04	4.28E-09	1.64E-07	2.06E-08

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Abbreviations:

g/s = grams per second
 lbs/hr = pounds per hour

lbs/yr = pounds per year
 TAC = toxic air contaminant

Table 33. Modeled Source
Description Anaplex Corporation
Facility ID 016951
Paramount, California

Source	Source ID	Description
Anodizing Tanks	ANODZPSH, ANODZEV	A total of 31 tanks in the anodizing area contained toxic chemicals in 2016. Emissions resulted from evaporation, plating, sparging, and heating operations, and were released through roof vents and rollup doors on the east and west sides of the building. Emissions from these tanks were modeled as multiple volume sources representing the east building where the anodizing tanks are located. It was assumed that evaporation emissions occurred continuously (24 hours per day, 7 days per week) while plating, sparging, and heating emissions occurred only during operating hours (Monday through Friday, 6:00 AM to 2:00 PM); therefore evaporation emissions (Source ID = ANODZEV) were modeled as a volume source with continuous emissions, and plating, sparging, and heating emissions (Source ID = ANODZPSH) were summed and modeled using the same source parameters, but only for the period 6:00 AM to 2:00 PM, Monday through Friday.
		Emissions were calculated using a methodology provided by SCAQMD. Data used in the emission calculations included metal plating efficiencies, material densities and toxic chemical weight fractions (taken from manufacturer safety data sheets), toxic chemical vapor pressures, and tank operational data such as tank dimensions, solution temperature, number of heating cycles, air sparge rates, air sparge hours, rectifier amp ratings, and rectifier amp hours. Emissions from the anodizing tanks in 2016 were generally uncontrolled, with the exception of one of the tanks (Anodizing Tank 19) which used a fume suppressant that controlled particulate emissions at an estimated efficiency of 96.8%. Emission were revised in the Amended HRA to incorporate the SCAQMD's comments on the ATIR.
Plating Tanks	PLATEPSH, PLATEEVP	A total of 47 tanks in the plating area contained toxic chemicals in 2016. Similar to the anodizing tanks, emissions resulted from evaporation on a continuous basis and from plating, sparging, and heating during operating hours. Emissions from the plating tanks were released through roof vents and rollup doors on the east and west sides of the building and were modeled as volume sources representing the east building where the plating tanks are located. Evaporation emissions (Source ID = PLATEEVP) were modeled separately from plating, sparging, and heating emissions (Source ID = PLATEPSH) based on operating schedule.
		Emission from plating tanks were calculated as described above for anodizing tanks. No emission controls were assumed for the plating tanks in 2016. Emission for certain tanks were revised in the Amended HRA to incorporate the SCAQMD's comments on the ATIR.
Paint Spray Booths	SPRYBTH2, SPRYBTH3, SPRYBTH4	Three spray booths (#2, #3, and #4) were used to apply paint in 2016. All three booths are located in the east building, and emissions from each booth were directed to stacks on the building roof. Each stack was affixed with a raincap.
		Paint booth particulate emissions were calculated by multiplying the paint purchases by the toxic chemical weight fraction, applying an AQMD AER default 65% solids transfer efficiency, and applying a 90% PM control efficiency. The 90% PM control efficiency is the default value for the standard filter per SCAQMD's comment on the ATIR. VOC emissions were calculated by multiplying the paint usage by the toxic chemical weight fraction. In the sensitivity run, 95% PM control efficiency was assumed from Spray Booth #2 as described in Section 6.
		Emissions were assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM). In the sensitivity run, 1/3 rd of the purchased chromate-containing paint was assumed from Spray Booth #2 as described in Section 6.
Boilers	222BLR1, 222BLR2, DGRBLR	Three boilers (Boiler 1, Boiler 2, and the vapor degreaser boiler) were used at Anaplex in 2016. Boilers 1 and 2 are located outdoors adjacent to the west side of the east building; the degreaser boiler is located inside the west building. Combustion emissions from each boiler were vented to stacks with raincaps.
		Emissions were calculated by multiplying the natural gas usage by the SCAQMD toxic chemical emission factor for natural gas-fired external combustion equipment[1]. For annual emissions, natural gas usage was taken from natural gas invoices and divided among the combustion units based on equipment heat rating (MMBtu/hr). Hourly emissions assumed maximum hourly fuel usage based on equipment rating.
		Emissions from each boiler were assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).

**Table 33. Modeled Source
Description Anaplex Corporation
Facility ID 016951
Paramount, California**

Source	Source ID	Description
Vapor Degreaser	DGRSR	The vapor degreaser is located at the east side of the west building near a large rollup door. The degreaser vents to a carbon canister and was modeled as a stack with a horizontal release.
		Emissions were based on 2016 purchase records and toxic chemical quantities per manufacturer safety data sheets. The carbon canister was assumed to provide 95% control efficiency. Emissions were assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).
Drying Ovens	DRYER3, DRYER4	Two drying ovens (Dryer 3 and Dryer 4) were used at Anaplex in 2016. Dryer 3 is located inside the east building in the southwest corner and Dryer 4 is located in the central portion of the west building. Combustion emissions from each drying oven were vented to stacks with raincaps.
		Emissions were calculated as described above for the boilers. Emissions from each oven were assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).
Solvent Baths	SLVNTBTH	Two solvent cleaning stations located outdoors and adjacent to each other next to the northwest corner of the east building were modeled as a single fugitive area source.
		Emissions were based on 2016 purchase records and toxic chemical quantities per manufacturer safety data sheets. Emissions were uncontrolled and assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).
Masking Areas	MASKING	Emissions from hand applied paints and solvents occurred in several masking areas located throughout the east building. Emissions occurred through roof vents and rollup doors. These emissions were modeled as volume sources encompassing the entire east building.
		Emissions were based on 2016 purchase records and toxic chemical quantities per manufacturer safety data sheets. Hand-applied coating and solvent usages were assumed to have a solids transfer efficiency of 100% (only VOCs were emitted). Emissions were uncontrolled and assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).
Abrasive blasting	ABRBLST	Abrasive blasting took place in three blasting cabinets located roughly in the center of the west building. Emissions occurred through roof vents and rollup doors. These emissions were modeled volume sources encompassing the entire west building.
		Emissions were calculated based on abrasive material throughput, the AQMD PM emission factor for indoor grit blasting assuming 99% control efficiency from a baghouse, and the weight fraction of each toxic chemical based on analytical sample results.
		Abrasive material throughput was estimated from an equation in the AP-42 Section 13.2.6 Background Documentation using nozzle size and pressure. Operating time was estimated by Anaplex to be 7 hours per day, 5 days per week, 52 weeks per year.
		Emissions from abrasive blasting were assumed to occur during operating hours (Monday through Friday, 6:00 AM to 2:00 PM).

Note:

¹SCAQMD Supplemental Instructions: Reporting Procedures for AB2588 Facilities for Reporting Quadrennial Air Toxics Emissions Inventory, Appendix B, Table B-1, December 2016.

**Table 34. Modeled Source Parameters Anaplex Corporation
Facility ID 016951
Paramount, California**

Source Type	Source Description	Location	Modeled Source Group	Number of Sources	Building Height (m)	Release Height ¹ (m)	Volume Source Width (m)	Initial Vertical Dimension ² (m)	Initial Lateral Dimension ³ (m)	Exclusion Zone ⁴ (m)	X/Q Emission Rate (g/s)
Volume	Anodizing Tank	East Building	ANODZPSH	8	4.88	2.44	8.38	2.27	1.95	5.19	0.125
	Anodizing Tank Evaporation	East Building	ANODZ EVP	8	4.88	2.44	8.38	2.27	1.95	5.19	0.13
	Plating Tank	East Building	PLATEPSH	8	4.88	2.44	8.38	2.27	1.95	5.19	0.125
	Plating Tank Evaporation	East Building	PLATEEVP	8	4.88	2.44	8.38	2.27	1.95	5.19	0.13
	Masking Area - Paint and Solvent Use	East Building	MASKING	32	4.88	2.44	8.38	2.27	1.95	5.19	0.03125
	Abrasive Blasting	West Building	ABRBLST	20	5.79	2.90	8.38	2.69	1.95	5.19	0.05

Source Type	Source Description	Location	Modeled Source Group	Number of Sources	Release Height (m)	X Length (m)	Y Length (m)	Angle	Initial Lateral Dimension (m)	X/Q Emission Rate (g/s-m ²)
Area ⁵	Solvent Degreaser (Manual)	Outside	SLVNTBTH	1	0.91	7.62	3.66	0.00	0.00	0.036

Source Type	Source Description	Location	Modeled Source Group	Number of Sources	Stack Height (m)	Stack Temperature (K)	Stack Velocity (m/s)	Stack Diameter (m)	X/Q Emission Rate (g/s)
Capped Point ⁵	Boiler 1	East Building	222BLR1	1	5.72	477.59	2.01	0.41	1.00
	Boiler 2	East Building	222BLR2	1	5.72	477.59	2.01	0.41	1.00
	Degreaser Boiler	West Building	DGRBLR	1	6.96	466.48	0.69	0.30	1.00
	Dryer #3	East Building	DRYER3	1	5.18	458.15	3.09	0.20	1.00
	Dryer #4	West Building	DRYER4	1	7.24	458.15	3.09	0.20	1.00
	Paint Booth #2	East Building	SPRYBTH2	1	6.83	0.00	9.20	0.91	1.00
	Paint Booth #3	East Building	SPRYBTH3	1	6.71	0.00	18.74	0.66	1.00
	Paint Booth #4	East Building	SPRYBTH4	1	6.71	0.00	17.64	0.66	1.00
Horizontal Point ⁵	Vapor Degreaser	West Building	DGRSR	1	0.30	0.00	0.01	0.06	1.00

P:\A\Anaplex Paramount - C&F\1402\HRA-RRP 2018\Tables and Figures.xlsx]t4 Modeled Source Parameters

Notes:

¹ Release height is assumed to be half of the building height for volume sources

² Sigma Z: calculated as building height divided by 2.15

³ Sigma Y: calculated as volume source width divided by 4.3

⁴ (2.15 x Sigma Y) + 1 meter from the center of the volume source.

⁵ Modeled Source Parameters for area and point source types have not changed from HRA received by the SCAQMD on June 13, 2017.

Abbreviations:

g = gram m = meters

K = Kelvin s = seconds

Table 35. Modeled Sensitive Receptors Anaplex Corporation Facility ID 016951 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Schools				
Mark Twain Elementary School	5021 E Centralia St, Long Beach, CA 90808	6507	395044	3745024
Hoover Middle School	3501 Country Club Dr, Lakewood, CA 90712	6508	393464	3745074
Bethany Lutheran School	5100 E Arbor Rd, Long Beach, CA 90808	6509	395172	3745288
St Cyprian's School	5133 E Arbor Rd, Long Beach, CA 90808	6510	395226	3745397
Riley Elementary School	3319 Sandwood St, Lakewood, CA 90712	6511	393360	3745486
Cleveland Elementary School	4760 Hackett Ave, Lakewood, CA 90713	6512	397668	3745499
Barton Elementary School	1100 E Del Amo Blvd, Long Beach, CA 90807	6513	390978	3745709
Perry Lindsey Middle School	5075 Daisy Ave, Long Beach, CA 90805	6514	389048	3745899
Holmes Elementary School	5020 Barlin Ave, Lakewood, CA 90712	6515	393788	3746042
Gomper's K-8 School	5206 Briercrest Ave, Lakewood, CA 90713	6516	396179	3746325
Addams Elementary School	256 E Plymouth St, Long Beach, CA 90805	6517	389818	3746478
St Athanasius Catholic School	5377 Linden Ave, Long Beach, CA 90805	6518	390271	3746568
Lindbergh Elementary School	1022 E Market St, Long Beach, CA 90805	6519	390730	3746577
Intensive Learning Center School	4718 Michelson St, Lakewood, CA 90712	6520	394866	3746893
Buena Vista High School	3717 Michelson St, Lakewood, CA 90712	6521	393824	3746966
Stephen Foster Elementary School	5223 Bigelow St, Lakewood, CA 90712	6522	395437	3746968
Educare Preschool and Kindergarten School	5730 South St, Lakewood, CA 90713	6523	396320	3747121
Harte Elementary School	1671 E Phillips St, Long Beach, CA 90805	6524	391606	3747185
St Josephs High School	5825 Woodruff Ave, Lakewood, CA 90713	6525	396566	3747398
Esther Lindstrom Elementary School	5900 Canehill Ave, Lakewood, CA 90713	6526	397279	3747390
Mayfair High School	6000 Woodruff Ave, Lakewood, CA 90713	6527	396813	3747657
Captain Raymond Collins School	6125 Coke Ave, Long Beach, CA 90805	6528	393831	3747927
Craig Williams Elementary School	6144 Clark Ave, Lakewood, CA 90712	6529	395153	3747956
Valley Christian Middle School	18100 Dumont Ave, Cerritos, CA 90703	6530	397938	3748038
Thomas Jefferson Elementary School	10027 Rose St, Bellflower, CA 90706	6531	396403	3748340
Jordan Plus High School	171 W Bort St, Long Beach, CA 90805	6532	388508	3748539
Valley Christian High School	17700 Dumont Ave, Cerritos, CA 90703	6533	397979	3748433
Grant Elementary School	1225 E 64th St, Long Beach, CA 90805	6534	391239	3748530
Jordan High School	6500 Atlantic Ave, Long Beach, CA 90805	6535	390441	3748582
Gahr High School	11111 Artesia Blvd, Cerritos, CA 90703	6536	398787	3748711
Valley Christian Elementary School	17408 Grand Ave, Bellflower, CA 90706	6537	397126	3748868
Las Flores School	10039 Palm St, Bellflower, CA 90706	6538	396466	3749074
St Bernard School	9626 Park Street Bellflower, CA 90706	6539	395732	3749110
McKinley Elementary School	6822 Paramount Blvd., Long Beach, CA, 90805	6540	392799	3749321
Hamilton Middle School	1060 70th St, Long Beach, CA 90805	6541	390925	3749595
Somerset Continuation High School	9242 Laurel St, Bellflower, CA 90706	6542	394874	3749702
Bellflower Alternative Education Center School	16703 South Clark Ave., Bellflower, CA 90706-5203	6543	395084	3749707
Major Lynn Mokler School	8571 Flower St, Paramount, CA 90723	6544	393792	3749726
Robert F. Kennedy Elementary School	1305 S Oleander Ave, Compton, CA 90220	6545	386350	3749910
Ramona Elementary School	9351 Laurel St, Bellflower, CA 90706	6546	395099	3749834
Leona Jackson School	7220 Jackson St, Paramount, CA 90723	6547	391603	3750024
Wesley Gaines School	7340 Jackson St, Paramount, CA 90723	6548	391817	3750027
Emerson Elementary School	1011 E Caldwell St, Compton, CA 90221	6549	387995	3750082
Southlands Christian Academy School	16400 Woodruff Ave, Bellflower, CA 90706	6550	396709	3749983
Alondra Middle School	16200 Downey Ave, Paramount, CA 90723	6551	393695	3750170
Kelly Elementary School	2320 E Alondra Blvd, Compton, CA 90221	6552	389279	3750329
Roosevelt Middle School	1200 E Alondra Blvd, Compton, CA 90221	6553	388069	3750369
Frank J. Zamboni School	15733 Orange Ave, Paramount, CA 90723	6554	391060	3750653
Compton Early College High School	601 S Acacia Ave, Compton, CA 90220	6555	386524	3750757
Compton High School	601 S Acacia Ave, Compton, CA 90220	6556	386524	3750757
Adventists Union School	15548 Santa Ana Ave, Bellflower, CA 90706	6557	395026	3750753
Jefferson Elementary School	8600 Jefferson St, Paramount, CA 90723	6558	393789	3750832
Domiguez High School	15301 S San Jose Ave, Compton, CA 90221	6559	390647	3750924
Washington Elementary School	9725 Jefferson St, Bellflower, CA 90706	6560	395805	3750910
Abraham Lincoln School	15324 California, Paramount, CA, 90723	6561	392915	3750969
Mark Keppel School	6630 Mark Keppel St, Paramount, CA 90723	6562	390853	3751014
Anna M. Glazier Elementary School	10932 East Excelsior Dr, Norwalk, CA 90650	6563	398131	3750940
Nazarene Christian School	15014 Studebaker Rd, Norwalk, CA 90650	6564	398332	3750963
Frank E. Woodruff Elementary School	15332 Eucalyptus Ave, Bellflower, CA 90706	6565	396293	3750995
Bellflower High School	15301 McNab Ave, Bellflower, CA 90706	6566	396984	3750992
First Christian New Life Academy School	225 Santa Fe Ave, Compton, CA 90221	6567	387554	3751148
Clinton Elementary School	6500 E Compton Blvd, Compton, CA 90221	6568	390627	3751173
Loretta Lampton Elementary School	14716 Elmcroft Ave, Norwalk, CA 90650	6569	398752	3751158
Progressive Achievement Center School	302 N Long Beach Blvd, Compton, CA 90221	6570	388334	3751477
Albert Baxter Elementary School	14929 Cerritos Ave, Bellflower, CA 90706	6571	394526	3751418
Lifeline Education Charter School	357 E Palmer St, Compton, CA 90221	6572	387254	3751577
Our Lady of Victory School	601 E Palmer St, Compton, CA 90221	6573	387483	3751581
Our Lady of the Rosary School	14813 Paramount Blvd, Paramount, CA 90723	6574	392666	3751551
Bellflower United Methodist School	14527 Bellflower Blvd, Bellflower, CA 90706	6575	395916	3751618
Ernie Pyle School	14500 Woodruff Ave, Bellflower, CA 90706	6576	396909	3751619
Compton Unified ROP School	700 N Bullis Rd, Compton, CA 90221	6577	388465	3751803
Los Cerritos School	14626 Gundry Ave, Paramount, CA 90723	6578	391395	3751772
Roosevelt Elementary School	700 N Bradford Ave, Compton, CA 90221	6579	388823	3751809
Paramount Park Middle School	14608 Paramount Blvd, Paramount, CA 90723	6580	392890	3751762
Paramount High School	14429 Downey Ave, Paramount, CA 90723	6581	393459	3751819
Paramount Adult School	14507 Paramount Blvd, Paramount, CA 90723	6582	392689	3751835
Paramount Unified Community Day School	14507 Paramount Blvd, Paramount, CA 90723	6583	392682	3751837
Harry Wirtz Elementary School	8535 Contreras St, Paramount, CA 90723	6584	393613	3751872
Whaley Middle School	14401 S Gibson Ave, Compton, CA 90221	6585	389955	3751959
Mayo Elementary School	915 N Mayo Ave, Compton, CA 90221	6586	387817	3752015
Howard Tanner School	7210 Rosecrans Ave, Paramount, CA 90723	6587	391637	3752036
Today's Fresh Start-Compton School	2301 E Rosecrans Ave, Compton, CA 90221	6588	389135	3752144
Rosecrans Elementary School	1301 N Acacia Ave, Compton, CA 90222	6589	386387	3752191
Lynn Pace Elementary School	9625 Van Ruiten St, Bellflower, CA 90706	6590	395779	3752088
Corvallis Middle School	11032 Leffingwell Rd, Norwalk, CA 90650	6591	398476	3752237
Foster Elementary School	1620 N Pannes Ave, Compton, CA 90221	6592	388879	3752433

Table 35. Modeled Sensitive Receptors Anaplex Corporation Facility ID 016951 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Sea Compton High School	1705 N Culver Ave, Compton, CA 90222	6593	386432	3752498
St John Bosco High School	13640 Bellflower Blvd, Bellflower, CA 90706	6594	396115	3752396
St Phillip Neri School	12522 N Stoneacre Ave, Lynwood, CA 90262	6595	389602	3752725
New River Elementary School	13432 Halcourt Ave, Norwalk, CA 90650	6596	398159	3752633
D. D. Johnston Elementary School	13421 Fairford Ave, Norwalk, CA 90650	6597	398692	3752634
Janie P. Abbott Elementary School	5260 Clark St, Lynwood, CA 90262	6598	390242	3752750
Norwalk Christian Academy School	11005 Foster Rd, Norwalk, CA 90650	6599	398428	3752770
Carpenter Elementary School	9439 Foster Rd, Downey, CA 90242	6600	395274	3752815
Jefferson Elementary School	2508 E 133rd St, Compton, CA 90222	6601	386809	3752941
Lewis Elementary School	13220 Bellflower Blvd, Downey, CA 90242	6602	396058	3752852
Theodore Roosevelt School	13451 Merkel Ave, Paramount, CA 90723	6603	393061	3752892
Mark Twain Elementary School	12315 Thorson Ave, Lynwood, CA 90262	6604	389211	3753146
Kid Town USA School	13500 Paramount Blvd, South Gate, CA 90280	6605	392857	3753105
Anderson Elementary School	2210 E 130th St, Compton, CA 90222	6606	386068	3753291
Helen Keller Elementary School	3521 Palm Ave, Lynwood, CA 90262	6607	388308	3753312
Ward Elementary School	8851 Adoree St, Downey, CA 90242	6608	394522	3753324
Celerity Acharnar Charter School	310 E El Segundo Blvd, Compton, CA 90222	6609	386988	3753494
Lynwood Middle School	11224 Bullis Rd, Lynwood, CA 90262	6610	388727	3753503
Rosa Parks Elementary School	3900 Agnes Ave, Lynwood, CA 90262	6611	388876	3753578
Hollydale Elementary School	5511 Century Blvd, South Gate, CA 90280	6612	391553	3753660
Downey Adult School	12340 Woodruff Ave, Downey, CA 90241	6613	396910	3753681
Downey Community Day School	12340 Woodruff Ave, Downey, CA 90241	6614	396910	3753681
Lindbergh Elementary School	3300 Cedar Ave, Lynwood, CA 90262	6615	387806	3753818
Marco Antonio Firebaugh High School	5246 Martin Luther King Jr Blvd, Lynwood, CA 90262	6616	390661	3753795
St Pius X- St Matthias Academy School	7851 Gardendale St, Downey, CA 90242	6617	392774	3753826
Columbus Continuation School	12330 Woodruff Ave, Downey, CA 90241	6618	396898	3753797
Gauldin Elementary School	9724 Spry St, Downey, CA 90242	6619	396465	3753862
Sussman Middle School	12500 Birchdale Ave, Downey, CA 90242	6620	394759	3753917
Dr. Ralph Bunche Middle School	12338 S Mona Blvd, Compton, CA 90222	6621	386564	3754091
Martin Luther King Elementary School	2270 E 122nd St, Compton, CA 90222	6622	386266	3754102
Wilson Elementary School	11700 School St, Lynwood, CA 90262	6623	388511	3754093
Pathway Independent Study School	11300 Wright Rd, Lynwood, CA 90262	6624	390947	3754066
Vista High School	11300 Wright Rd, Lynwood, CA 90262	6625	390941	3754073
Imperial Elementary School	8133 Imperial Hwy, Downey, CA 90242	6626	393924	3754245
Lynwood Adult School	11277 Atlantic Ave, Lynwood, CA 90262	6627	390306	3754326
Will Rogers Elementary School	11220 Duncan Ave, Lynwood, CA 90262	6628	390709	3754338
Washington Elementary School	4225 Sanborn Ave, Lynwood, CA 90262	6629	390025	3754457
Studebaker Elementary School	11800 Halcourt Ave, Norwalk, CA 90650	6630	398257	3754386
Lynwood Alternative School	11387 Bullis Road Lynwood, CA 90262	6631	389013	3754543
Alameda Elementary School	8613 Alameda St, Downey, CA 90242	6632	395074	3754494
Hosler Middle School	11300 Spruce St, Lynwood, CA 90262	6633	388885	3754684
St Raymonds School	12320 Paramount Blvd, Downey, CA 90242	6634	393881	3754688
Lakeside Middle School	11000 Kenney St, Norwalk, CA 90650	6635	398597	3754642
Lynwood High School	4050 E Imperial Hwy, Lynwood, CA 90262	6636	389975	3755036
Kirkwood Christian School	11115 Pangborn Ave, Downey, CA 90241	6637	397054	3755103
Lincoln Elementary School	11031 State St, Lynwood, CA 90262	6638	387529	3755368
Lugo Elementary School	4345 Pendleton Ave, Lynwood, CA 90262	6639	390539	3755368
St Emydius Catholic School	10990 California Ave, Lynwood, CA 90262	6640	388358	3755404
Ritter Elementary School	11108 Watts Ave, Los Angeles, CA 90059	6641	386590	3755509
Roosevelt Elementary School	10835 Mallison Ave, Lynwood, CA 90262	6642	389045	3755564
Thurgood Marshall Elementary School	3593 Martin Luther King Jr Blvd, Lynwood, CA 90262	6643	388712	3755632
Cesar Chavez Middle School	3898 Abbot Rd, Lynwood, CA 90262	6644	388632	3755640
Warren High School	8141 De Palma St, Downey, CA 90241	6645	394625	3755674
San Miguel Catholic School	2270 E 108th St, Los Angeles, CA 90059	6646	386186	3755860
Old River Elementary School	11995 Old River School Rd, Downey, CA 90242	6647	393096	3755844
Rio San Gabriel Elementary School	9338 Gotham St, Downey, CA 90241	6648	397202	3755873
Downey High School	11040 Brookshire Ave, Downey, CA 90241	6649	395774	3755950
Stauffer Middle School	11985 Old River School Rd, Downey, CA 90242	6650	393060	3756008
Weigand Avenue Elementary School	10401 Weigand Ave, Los Angeles, CA 90002	6651	386318	3756364
Legacy High School	5225 Tweedy Blvd, South Gate, CA 90280	6652	391092	3756337
Simon Rodia Continuation School	2701 Sequoia Dr, South Gate, CA 90280	6653	386978	3756446
Doty Middle School	10301 Woodruff Ave, Downey, CA 90241	6654	397210	3756344
Tweedy Elementary School	9724 Pinehurst Ave, South Gate, CA 90280	6655	390772	3756507
Williams Elementary School	7530 Arnett St, Downey, CA 90241	6656	393866	3756522
Bryson Elementary School	4470 Missouri Ave, South Gate, CA 90280	6657	389773	3756602
Jordan High School	2265 E 103rd St, Los Angeles, CA 90002	6658	386257	3756651
Montara Avenue Elementary School	10018 Montara Ave, South Gate, CA 90280	6659	387437	3756660
Southeast High School	2720 Tweedy Blvd, South Gate, CA 90280	6660	387017	3756723
San Miguel Avenue Elementary School	9801 San Miguel Ave, South Gate, CA 90280	6661	389006	3756750
Southeast Middle School	2560 Tweedy Blvd, South Gate, CA 90280	6662	386776	3756796
Madison Elementary School	9820 Madison Ave, South Gate, CA 90280	6663	387796	3756819
Soledad Charter School	3616 Missouri Ave, South Gate, CA 90280	6664	388577	3756847
Victoria Elementary School	3320 Missouri Ave, South Gate, CA 90280	6665	388087	3756881
Hospitals				
Bellflower Health Center	10005 Flower St, Bellflower, CA 90706	6666	396337	3749729
Los Angeles Community Hospital at Bellflower	9542 Artesia Blvd, Bellflower, CA 90706	6667	395508	3748797
College Hospital	10802 College Pl, Cerritos, CA 90703	6668	398006	3749881
PIH Hospital - Downey	11500 Brookshire Ave, Downey, CA 90241	6669	395479	3755451
Kaiser Foundation Hospital - Downey	9333 Imperial Hwy, Downey, CA 90242	6670	395639	3753789
Los Angeles County/Rancho Los Amigos National Rehab Center	7601 Imperial Hwy, Downey, CA 90242	6671	392947	3754975
Lakewood Regional Medical Center	3700 E South St, Lakewood, CA 90805	6672	393771	3747191
La Casa Psychiatric Health Facility	6060 Paramount Boulevard	6673	392982	3747803
St. Francis Medical Center	3630 E Imperial Hwy #104, Lynwood, CA 90262	6674	388784	3755044
Coast Plaza Hospital	13100 Studebaker Rd, Norwalk, CA 90650	6675	398450	3753009
Promise Hospital of East Los Angeles-Suburban Campus	16453 Colorado Ave, Paramount, CA 90723	6676	392517	3749932
Physician's Surgery Center	8200 Firestone Blvd, Downey, CA 90241	6677	395126	3756156
Daycare Centers				

Table 35. Modeled Sensitive Receptors Anaplex Corporation Facility ID 016951 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Abbott Preschool	5260 E. Clark Street, Lynwood, CA 90262	6678	390261	3752752
Abundance of Life Day Care Center	6100 Long Beach Blvd., Long Beach, CA 90805	6679	389009	3747928
Addams CDC	256 E. Plymouth St., Long Beach, CA 90805	6680	389855	3746531
Alondra Preschool	16200 S. Downey Avenue, Paramount, CA 90723	6681	393593	3750179
Anderson State Preschool	2210 E. 130th Street, Compton, CA 90220	6682	386065	3753324
Around The World Learning Center	10441 Lakewood Blvd., Downey, CA 90241	6683	396538	3756475
Barton Child Development Center	1100 East Del Amo Blvd., Long Beach, CA 90807	6684	390931	3745717
Bellflower Child Development Center	9447 Flower St., Bellflower, CA 90706	6685	395285	3749681
Bellflower II Child Development Center	14523 Bellflower Blvd., Bellflower, CA 90706	6686	395917	3751669
Bellflower III Child Development Center	14527 Bellflower Blvd., Bellflower, CA 90706	6687	395916	3751618
Bellflower Unified School Dist.-Las Flores School	10039 E. Palm Street, Bellflower, CA 90706	6688	396474	3749073
Bellflower Unified School District-Woodruff School	15332 S. Eucalyptus, Bellflower, CA 90706	6689	396329	3750940
Bellflower United Methodist Preschool	14527 Bellflower Blvd., Bellflower, CA 90706	6690	395916	3751618
Bellflower USD-Williams Child Care Center	6144 Clark Ave, Lakewood, CA 90712	6691	395197	3748001
Bethany Lutheran Church Preschool	4644 Clark Ave, Long Beach, CA 90808	6692	395146	3745286
Bundle of Joy Daycare #3	4835 Long Beach Blvd., Long Beach, CA 90805	6693	389597	3745560
Calvary Chapel Christian Preschool	12808 Woodruff Avenue, Downey, CA 90242	6694	396893	3753391
Canaan Preschool	17200 Clark Avenue, Bellflower, CA 90706	6695	395160	3748981
Carmelitos Head Start	5250 Via Pasillo, Long Beach, CA 90805	6696	390486	3746295
Cerritos College Child Development Center	11110 Alondra Blvd, Norwalk, CA 90650	6697	398528	3750136
Children R Us Child Development Center Inc.	4611 E. Compton Blvd., E. Rancho Dominguez, CA 90241	6698	389791	3751313
Children's Academy of Success	10839 La Reina Avenue, Downey, CA 90241	6699	395303	3756525
The Children's Collective - Casa Dominguez	15711 S. Atlantic Ave, E. Rancho Dominguez, CA 90241	6700	389662	3750632
Collins State Preschool	6125 Coke Street, Long Beach, CA 90805	6701	393852	3747914
Columbia Plaza Early Childhood Education Center	12830 Columbia Way, Downey, CA 90242	6702	395304	3753313
Compton College Child Dev. Day Care Ctr.	1111 E. Artesia Blvd., Compton, CA 90221	6703	388054	3749390
Creative Beginnings Infant Center	10910 Paramount Blvd., Downey, CA 90241	6704	395031	3756609
Creative Beginnings Preschool	10819 New Street, Downey, CA 90241	6705	395413	3756508
Creative Beginnings Preschool	10910 Paramount Blvd., Downey, CA 90241	6706	395031	3756609
Creative Day Academy	8740 Ramona Street, Bellflower, CA 90706	6707	394057	3748610
Creative Minds Christian Academy	6380 Orange Avenue, Long Beach, CA 90805	6708	391135	3748423
Crystal Stairs Inc- Wonderland	1223 South Willowbrook Avenue, Compton, CA 90220	6709	386821	3750025
Crystal Stairs Inc.-Willowbrook	1215 North Willowbrook Avenue, Compton, CA 90222	6710	386678	3752231
Crystal Stairs-Dollarhide	1108 N. Oleander Ave., Compton, CA 90222	6711	386313	3752167
The Cultural Caboose	1037 South Street, Long Beach, CA 90805	6712	390816	3747271
Curtis Care Infant Development Program	12114 Paramount Boulevard, Downey, CA 90242	6713	394077	3755109
David's Heart Enrichment Center	2244 N. Bullis Rd, Compton, CA 90221	6714	388504	3752927
Dorothy Ahrens Nursery School	4960 Long Beach Blvd, Long Beach, CA 90805	6715	389602	3745713
Downey United Methodist Church Nursery School	10801 S Downey Ave, Downey, CA 90241	6716	395512	3756474
The Easter's Nest	11815 Long Beach Blvd., Lynwood, CA 90262	6717	388154	3754025
Educare Preschool	5730 South St., Lakewood, CA 90713	6718	396343	3747151
Ella Fitzgerald CDC/Drew Child Development Corpora	2590 Industry Way, Lynwood, CA 90262	6719	386616	3754320
Emerson State Preschool	1011 E. Caldwell Street, Compton, CA 90221	6720	387965	3750056
Emmanuel Preschool	15941 Virginia Ave., Paramount, CA 90723	6721	393187	3750336
Ernie Pyle School-Bellflower U.S.D.	14500 S. Woodruff Ave., Bellflower, CA 90706	6722	396834	3751624
First Baptist Church of Lakewood Preschool	5336 Arbor Road, Long Beach, CA 90808	6723	395681	3745305
First Christian Church	17003 S. Clark Ave, Bellflower, CA 90706	6724	395101	3749422
First Evangelical Church of Cerritos	11330 E. 166th St., Cerritos, CA 90703	6725	398944	3749425
Foster State Preschool	1620 N. Pannes Street, Compton, CA 90221	6726	388808	3752425
Fun 2 Learn Pre-School	5942 Orange Ave, Long Beach, CA 90805	6727	391120	3747631
Gaines Elementary School CDC	7340 E. Jackson Street, Paramount, CA 90723	6728	391823	3750031
Gaines State Preschool	7340 E. Jackson Street, Paramount, CA 90723	6729	391823	3750031
Giant Steps Childrens Center	6951 Obispo Ave., Long Beach, CA 90805	6730	393097	3749531
Glazier Elementary School	10932 E. Excelsior Dr., Norwalk, CA 90650	6731	398079	3751016
Golden West Preschool	10248 Alondra Blvd., Bellflower, CA 90706	6732	396829	3750408
Grant Child Development Center	6405 Walnut Ave, Long Beach, CA 90805	6733	391488	3748503
Hart Head Start	1671 E. Phillips Street, Long Beach, CA 90805	6734	391606	3747192
Hellen Keller Pre-School	3521 Palm Avenue, Lynwood, CA 90262	6735	388296	3753298
Hollydale Preschool	5511 Century Blvd., South Gate, CA 90280	6736	391533	3753588
Holmes Child Development Center	5020 Barlin Avenue, Lakewood, CA 90712	6737	393755	3746053
Honey's Little Angels Child Development Center	5600 N. Paramount Blvd., Long Beach, CA 90805	6738	392728	3747031
HSA Pasitos Head Start Champion PS	13431 Paramount Blvd, South Gate, CA 90280	6739	392798	3753189
HSA Pasitos Head Start Legend Pre School	10125 California Avenue, South Gate, CA 90280	6740	388356	3756432
Immanuel Drew Child Development Corporation	506 E. Laurel Street, Compton, CA 90221	6741	387479	3751039
Independent Steps After School Program	3581 E. Imperial Hwy, Lynwood, CA 90262	6742	388544	3755127
Jackson Child Development Center	8535 Contreras St., Paramount, CA 90723	6743	393549	3751856
Jefferson State Preschool	2508 E. 133rd Street, Compton, CA 90220	6744	386711	3753010
Johnston Elementary School	13421 S. Fairfield Ave., Norwalk, CA 90650	6745	398705	3752558
Keppel State Preschool	6630 Mark Keppel Street, Paramount, CA 90723	6746	390852	3751042
Kid Town Usa Preschool-Montessori Academy	13500 Paramount Blvd., South Gate, CA 90280	6747	392859	3753109
Kidzables Learning Center	6424 Long Beach Blvd, Long Beach, CA 90805	6748	388875	3748506
Kiddie Crest Academy	13067 Paramount Boulevard, South Gate, CA 90280	6749	392988	3753547
Kids First Learning Center - Downey	13200 Columbia Avenue, Downey, CA 90242	6750	395193	3752957
Kids Forum Preschool	4523 Tweedy Blvd., South Gate, CA 90280	6751	389859	3756470
Kidz R Us Community Child Care Center Inc.	1115 E. Market, Long Beach, CA 90805	6752	390964	3746660
Kinder Prep Preschool Center	3208 Flower Street, Lynwood, CA 90262	6753	387761	3754525
King State Preschool	2270 E. 122nd St, Compton, CA 90222	6754	386149	3754094
Kirkwood Christian Schools	10822 Brookshire Avenue, Downey, CA 90241	6755	395893	3756218
Lakewood Child Development Center	5225 Hayter Ave., Lakewood, CA 90712	6756	393940	3746407
The Laughter N Learning Center	5600 Atlantic Ave., Long Beach, CA 90805	6757	390407	3747069
LBUSD Starr King Head Start	145 E. Artesia, Long Beach, CA 90805	6758	388851	3748945
LBUSD-Riley CDC-California State Ps Program	3319 Sandwood Street, Lakewood, CA 90712	6759	393356	3745477
The Learning Tree Child Care Center	800 1/2 No. Acacia, Compton, CA 90220	6760	386564	3751899
Lincoln Preschool	11031 State Street, Lynwood, CA 90262	6761	387538	3755369
Lindbergh Childrens Center	12120 Lindbergh Road, Lynwood, CA 90262	6762	387708	3753887
Lindbergh Pre-School	3300 Cedar Ave, Lynwood, CA 90262	6763	387830	3753841
Long Beach City College CDC	4630 Clark Ave, Long Beach, CA 90808	6764	395130	3745191

Table 35. Modeled Sensitive Receptors Anaplex Corporation Facility ID 016951 Paramount, California

Description	Address	Receptor Number	UTM Coordinates	
			(m)	(m)
Los Angeles Speech And Language Therapy Center	4764 Tweedy Boulevard, South Gate, CA 90280	6765	390263	3756355
Lugo Preschool	4345 Pendleton Street, Lynwood, CA 90262	6766	390529	3755347
M A W Children's Ctr	5510 Clark Ave, Lakewood, CA 90712	6767	395170	3746757
M.A.W. Children's Centers	5510 N. Clark Ave., Lakewood, CA 90712	6768	395170	3746757
Maria Montessori House of Children	9036 East Imperial Highway, Downey, CA 90242	6769	394958	3753508
Mark Twain Pre-School	12315 Thorson Avenue, Lynwood, CA 90262	6770	389272	3753137
Mckinley Child Development Center	6822 Paramount Blvd., Long Beach, CA 90805	6771	392768	3749324
Mckinley Head Start	6822 Paramount Blvd., Long Beach, CA 90805	6772	392768	3749324
Mokler Children's Center	8571 East Flower, Paramount, CA 90723	6773	393771	3749702
Montessori Children's Academy	7515 Firestone Boulevard, Downey, CA 90241	6774	394121	3756914
Montessori House of South Gate	10108 California Avenue, South Gate, CA 90280	6775	388428	3756447
Montessori School-Eureka	5306 E. Arbor Rd, Long Beach, CA 90808	6776	395457	3745285
NLMUSD Head Start/State PS-New River Elementary	13432 S. Halcourt Avenue, Norwalk, CA 90650	6777	398106	3752576
Optimal Child Development Center	1300 East Palmer Avenue, Compton, CA 90221	6778	388184	3751516
Park Place Early Education Campus/CA Childrens Ac.	12217 Atalntic Ave, Lynwood, CA 90262	6779	389783	3752964
Pasitos Hollydale Early Head Start	12221 Industrial Avenue, South Gate, CA 90280	6780	392377	3753377
Pasitos San Miguel Pre-Kindergarten Academy	9801 San Miguel Avenue, South Gate, CA 90280	6781	389024	3756742
Plymouth Head Start	495 E. Plymouth Street, Long Beach, CA 90805	6782	390270	3756547
Powell CDC CA State Preschool Program	150 Victoria St., Long Beach, CA 90805	6783	388705	3747825
Rainbow Drew Child Development Corporation	12611 S. Willowbrook Ave, Compton, CA 90222	6784	386032	3753707
Rancho Los Amigos Children's Center	7755 Golondrinas Street, Downey, CA 90242	6785	392903	3754389
Roosevelt Preschool	10835 Mallison Avenue, Lynwood, CA 90262	6786	389084	3755498
Roosevelts State Preschool	700 N Bradfield Ave, Compton, CA 90221	6787	388673	3751746
Rosa Parks Pre-School	3900 Agnes Avenue, Lynwood, CA 90262	6788	388905	3753605
Rosecrans State Preschool	1301 N. Acacia Street, Compton, CA 90220	6789	386387	3752208
SAGA Child Development Learning Academy Inc.	3801 Cortland Street, Lynwood, CA 90262	6790	388974	3754218
San Miguel Elementary School Cssp	9801 San Miguel Avenue, South Gate, CA 90280	6791	389023	3756740
Southland Christian Preschool	16400 Woodruff Ave, Bellflower, CA 90706	6792	396704	3749983
St Timothy Episcopal Church/Bundle of Joy Infant	312 Oleander Avenue, Compton, CA 90220	6793	386448	3751007
St. Bernard School	9626 Park Street, Bellflower, CA 90706	6794	395656	3749225
St. Dominic Savio Pre K	9750 Foster Road, Bellflower, CA 90706	6795	396067	3752680
St. Timothy Lutheran Infant Center	4645 Woodruff Avenue, Lakewood, CA 90713	6796	396632	3745274
St. Timothy Lutheran Preschool Day Care	4645 Woodruff Ave, Lakewood, CA 90713	6797	396632	3745274
St. Timothy's Episcopal Church And Day School	312 S. Oleander Ave., Compton, CA 90220	6798	386448	3751007
Sunlite Preschool	9020 Imperial Hwy, Downey, CA 90242	6799	394940	3753501
Sunshine Day Care	2038 E. Compton Blvd., Compton, CA 90221	6800	388969	3751251
Sunshine Day Care Center	12070 Santa Fe Avenue, Lynwood, CA 90262	6801	387471	3753646
Team Pinnacle Sports	2270 East 122nd Street, Compton, CA 90222	6802	386149	3754094
Thomas Jefferson C.C.C.-Bellflower U.S.D.	9980 E. Cedar, Bellflower, CA 90706	6803	396337	3748408
Thurgood Marshall Pre-School	3593 Martin L. King Jr. Blvd., Lynwood, CA 90262	6804	388630	3755640
Trinity Child Development Center	1806-1810 E. Compton, Compton, CA 90221	6805	388745	3751283
Trinity Lutheran Preschool & Day Nursery	11609 S. Studebaker Road, Norwalk, CA 90650	6806	398361	3754587
Trinity Unlimited Child Care Center	825 S. Chester Avenue, Compton, CA 90221	6807	387686	3750495
Tutor Time Child Care Learning Center	6504 E. South Street, Lakewood, CA 90713	6808	397646	3746907
Twain Child Development Center	4666 Sunfield Ave., Long Beach, CA 90808	6809	395003	3745268
Tweedy Pasitos School Readiness Program	9724 Pinehurst, South Gate, CA 90280	6810	390735	3756475
Twigs To Trees Child Development Center	15108 Studebaker Road, Norwalk, CA 90650	6811	398329	3750897
United Faith Community Day Care Center	6934 Long Beach Blvd., Long Beach, CA 90805	6812	388640	3749502
Valley Christian Infant Center	10012 Ramona Ave., Bellflower, CA 90706	6813	396398	3748613
Valley Christian Preschool	10012 Ramona Street, Bellflower, CA 90706	6814	396398	3748613
Valley Christian Preschool-Grand	17408 Grand Avenue, Bellflower, CA 90706	6815	397107	3748873
Volunteers of America of Los Angeles	15509 Paramount Boulevard, Paramount, CA 90723	6816	392703	3750856
Volunteers of America - Abbot Head Start	5260 E. Clark Avenue, Lynwood, CA 90262	6817	390261	3752752
Volunteers of America - Bright Stars Head Start	3340 Sanborn Avenue, Lynwood, CA 90262	6818	388200	3754850
Volunteers of America - Chester Head Start	804 E. Rosecrans Avenue, Compton, CA 90221	6819	387675	3752073
Volunteers of America - Greater Emmanuel Head Start	3740 Imperial Hwy, Lynwood, CA 90262	6820	389274	3755258
Volunteers of America - Happy Days Head Start	4207 Carlin Avenue, Lynwood, CA 90262	6821	389375	3753062
Volunteers of America - Mona House Head Start	13124 Mona Boulevard, Compton, CA 90222	6822	386680	3753160
Volunteers of America - Paramount Head Start	6719 Somerset Boulevard, Paramount, CA 90723	6823	390863	3751303
Volunteers of America - Small World Head Start	502 N. Bowen Avenue, Compton, CA 90221	6824	388358	3751646
Washington Preschool	4225 Sanborn Avenue, Lynwood, CA 90262	6825	390024	3754448
Washington School-Bellflower USD	9725 E. Jefferson St., Bellflower, CA 90706	6826	395798	3750896
Whitewood Child Development Center	5511 Whitewood Ave, Lakewood, CA 90712	6827	394920	3746835
Will Rogers Children's Center	11250 Duncan, Lynwood, CA 90262	6828	390608	3754265
Will Rogers Preschool	11220 Duncan Avenue, Lynwood, CA 90262	6829	390700	3754360
Wilson Preschool	11700 School Street, Lynwood, CA 90262	6830	388461	3754127
Wiz Child Center	225 W. Alondra Blvd, Compton, CA 90220	6831	386642	3750501
Wonderland Preschool	10440 Artesia Blvd., Bellflower, CA 90706	6832	397178	3748553
YMCA GLB - Weingart-Lakewood - Gompers Site	5206 Briercreech, Lakewood, CA 90713	6833	396133	3746339
YMCA GLB 70th St State Preschool	700 East 70th St., Long Beach, CA 90805	6834	390541	3749641
YMCA GLB Creative Beginnings Preschool	5610 Linden Avenue, Long Beach, CA 90805	6835	390294	3747120
YMCA GLB Fairfield Family Site	4949 Atlantic Avenue, Long Beach, CA 90805	6836	390323	3745680
YMCA GLB First Friendships State Preschool	6650 Orange Avenue, Long Beach, CA 90805	6837	391155	3749006
YMCA GLB Intensive Learning Center Site	4718 Michelson Street, Lakewood, CA 90712	6838	394825	3746901
YMCA GLB Lindstrom Site	5900 Canehill Avenue, Lakewood, CA 90713	6839	397312	3747409
YMCA GLB Mayne St State Preschool	9630 Mayne Street, Bellflower, CA 90706	6840	395691	3750011
YMCA GLB Stephen Foster State SA Site	5223 Bigelow, Lakewood, CA 90712	6841	395403	3746949
YMCA of GLB Los Cerritos Branch	15530 Woodruff Avenue, Bellflower, CA 90706	6842	396719	3750746
YMCA of Metropolitan L.A. Downey - Imperial	8133 E. Imperial Hwy, Downey, CA 90242	6843	393893	3754225
YMCA of Metropolitan L.A. Downey - Rio San Gabriel	9338 Gotham Street, Downey, CA 90241	6844	397212	3755805
Young Horizons-Grisham Site	11 W. 49th Street, Long Beach, CA 90805	6845	389478	3745617
YWCA of Greater Los Angeles - Compton C.D.C.	1600 E. Compton Blvd., Compton, CA 90221	6846	388553	3751255
Zamboni Preschool	15733 Orange Avenue, Paramount, CA 90723	6847	391086	3750584

Table 36. PMI, MEIR, MEIW, and Sensitive Receptor Annual Average Concentrations Anaplex Corporation Facility ID 016951 Paramount, California

Pollutant	CAS Number	Annual Average Concentration (mg/m ³)					
		PMI		MEIW		MEIR	MEISR
		Cancer Risk 8-hr Chronic HI	Chronic HI	Cancer 8-hr Chronic HI	Chronic HI	Cancer Chronic HI 8-hr Chronic HI	Cancer Chronic HI 8-hr Chronic HI
		Rec #6	Rec #3	Rec #1391	Rec #1660	Rec #2115	Rec #6728
1,2,4-Trimethylbenzene	95636	1.66E-01	8.28E-02	4.30E-02	3.11E-02	8.61E-04	8.86E-05
4,4'-Isopropylidenediphenol	80057	5.44E-02	2.31E-02	1.38E-02	8.67E-03	2.46E-04	2.59E-05
Acetaldehyde	75070	4.42E-05	4.95E-05	2.75E-05	4.58E-05	1.99E-06	2.42E-07
Acrolein	107028	2.78E-05	3.11E-05	1.73E-05	2.88E-05	1.25E-06	1.52E-07
Aluminum	7429905	2.80E-03	1.42E-03	7.62E-04	5.61E-04	1.77E-05	2.01E-06
Ammonia	7664417	3.29E-02	3.69E-02	2.05E-02	3.41E-02	1.48E-03	1.80E-04
Ammonium Nitrate	6484522	5.79E-05	1.95E-04	1.14E-05	1.85E-05	6.23E-07	7.54E-08
Antimony Trioxide	1309644	2.16E-03	7.14E-04	5.38E-04	2.68E-04	7.98E-06	8.80E-07
Barium & Compounds	7440393	6.04E-03	2.07E-03	1.51E-03	7.75E-04	2.29E-05	2.51E-06
Barium Chromate	10294403	1.42E-03	4.69E-04	3.54E-04	1.76E-04	5.24E-06	5.78E-07
Benzene	71432	8.23E-05	9.21E-05	5.12E-05	8.53E-05	3.70E-06	4.51E-07
Beryllium & Compounds	7440417	1.27E-07	8.17E-08	8.24E-08	6.63E-08	4.74E-09	7.35E-10
Cadmium & Compounds	7440439	2.77E-04	9.32E-04	5.44E-05	8.85E-05	2.98E-06	3.61E-07
Chromium & Compounds (Other Than Hexavalent)	7440473	1.13E-03	6.74E-04	3.00E-04	2.45E-04	6.74E-06	7.13E-07
Chromium Trioxide	1333820	1.18E-04	1.11E-03	3.65E-05	2.49E-04	3.79E-06	3.95E-07
Cobalt & Compounds	7440484	3.50E-04	1.83E-04	9.10E-05	6.92E-05	1.90E-06	1.94E-07
Copper & Compounds	7440508	1.98E-02	3.69E-02	4.43E-03	4.43E-03	1.45E-04	1.72E-05
Cumene	98828	5.02E-03	1.66E-03	1.25E-03	6.23E-04	1.86E-05	2.05E-06
Cyanide Compounds	57125	2.11E-02	7.09E-02	4.13E-03	6.75E-03	2.27E-04	2.74E-05
Diethylene Glycol Monobutyl Ether	112345	4.48E-03	2.94E-02	1.52E-03	7.61E-03	1.83E-04	2.76E-05
Dipropylene Glycol Monomethyl Ether	34590948	6.72E-05	2.22E-05	1.67E-05	8.33E-06	2.48E-07	2.74E-08
Epoxy Resins	1091	3.44E-01	1.14E-01	8.58E-02	4.27E-02	1.27E-03	1.40E-04
Ethyl Benzene	100414	2.98E+00	1.09E+00	7.50E-01	4.09E-01	1.20E-02	1.29E-03
Ethylene Glycol Monobutyl Ether	111762	4.27E+00	1.45E+00	1.06E+00	5.35E-01	1.60E-02	1.77E-03
Ethylene Glycol Monopropyl Ether	2807309	5.68E-02	1.88E-02	1.42E-02	7.04E-03	2.10E-04	2.31E-05
Fluorides and Compounds	1101	1.26E-01	5.14E-02	3.17E-02	1.86E-02	5.28E-04	5.73E-05
Formaldehyde	50000	2.98E-01	9.88E-02	7.44E-02	3.72E-02	1.11E-03	1.22E-04
Hexamethylene Diisocyanate Monomer	822060	1.00E-02	4.81E-03	2.58E-03	1.81E-03	5.02E-05	5.19E-06
Hexane	110543	6.48E-05	7.26E-05	4.03E-05	6.72E-05	2.92E-06	3.55E-07
Hexavalent Chromium Compounds (Other)	18540299	7.93E-04	3.82E-04	1.99E-04	1.25E-04	3.39E-06	3.75E-07
Hydrochloric Acid	7647010	2.13E+00	6.14E+00	5.05E-01	7.75E-01	3.68E-02	6.35E-03
Hydrofluoric Acid	7664393	5.20E-01	2.18E+00	1.43E-01	4.37E-01	1.35E-02	2.16E-03
Hydroquinone	123319	3.08E-02	1.02E-02	7.68E-03	3.82E-03	1.14E-04	1.25E-05
IPA	67630	1.00E+01	3.39E+00	2.49E+00	1.29E+00	3.74E-02	4.12E-03
Isocyanates	1125	1.56E+00	7.57E-01	4.02E-01	2.85E-01	7.88E-03	8.14E-04
Lead	7439921	6.01E-07	1.83E-06	1.50E-07	2.06E-07	8.33E-09	1.10E-09
Lead Compounds	1128	1.44E-03	4.78E-04	3.60E-04	1.79E-04	5.34E-06	5.88E-07
Manganese & Compounds	7439965	3.00E-05	9.07E-05	7.68E-06	1.05E-05	4.29E-07	5.69E-08
MEK	78933	7.18E+01	1.02E+02	2.95E+01	2.40E+02	3.20E+00	6.50E-01
Methanol	67561	1.76E+00	1.22E+00	5.34E-01	6.37E-01	1.69E-02	1.09E-03
Methylene Chloride	75092	8.67E+00	8.13E+00	1.25E+00	4.82E+00	4.86E-02	5.40E-03
Methylene Diphenyl Diisocyanate	101688	3.23E-02	1.10E-02	8.07E-03	4.12E-03	1.22E-04	1.34E-05
MIBK	108101	1.05E+01	3.88E+00	2.63E+00	1.46E+00	4.23E-02	4.57E-03
Naphthalene	91203	2.47E-01	2.68E-01	3.05E-02	1.61E-01	1.53E-03	1.69E-04
n-Butanol	71363	6.86E-01	3.18E-01	1.76E-01	1.20E-01	3.34E-03	3.48E-04
Nickel & Compounds	7440020	2.35E-03	1.01E-02	5.06E-04	1.40E-03	3.33E-05	3.84E-06
Nickel Acetate	373024	1.56E-05	1.49E-04	4.88E-06	3.36E-05	5.10E-07	5.31E-08
Nitric Acid	7697372	2.72E+00	8.09E+00	6.51E-01	1.08E+00	4.85E-02	8.31E-03
PAH	1151	1.03E-06	1.15E-06	6.40E-07	1.07E-06	4.63E-08	5.63E-09
Phenol	108952	1.86E+00	1.85E+00	2.47E-01	1.11E+00	1.08E-02	1.20E-03
Phosphoric Acid	7664382	9.00E-01	2.77E+00	2.13E-01	3.72E-01	1.58E-02	2.63E-03
Propylene	115071	7.52E-03	8.42E-03	4.68E-03	7.79E-03	3.38E-04	4.12E-05
Propylene Glycol Monomethyl Ether	107982	7.34E+00	3.33E+00	1.88E+00	1.25E+00	3.50E-02	3.66E-03
Propylene Glycol Monomethyl Ether Acetate	108656	3.53E-01	3.23E-01	5.81E-02	1.82E-01	2.10E-03	2.27E-04
Propylene Oxide	75569	2.17E-01	2.50E-01	2.32E-02	1.54E-01	1.36E-03	1.52E-04
Sec-Butyl Alcohol	78922	1.03E+00	3.40E-01	2.56E-01	1.28E-01	3.80E-03	4.19E-04
Selenium & Compounds	7782492	1.05E-06	6.81E-07	6.86E-07	5.52E-07	3.95E-08	6.12E-09
Silica	1175	3.22E-01	1.14E-01	8.06E-02	4.29E-02	1.26E-03	1.37E-04
Silver & Compounds	7440224	5.22E-05	1.75E-04	1.02E-05	1.67E-05	5.61E-07	6.79E-08
Sodium Dichromate	10588019	5.62E-04	4.92E-03	1.67E-04	1.08E-03	1.68E-05	1.76E-06
Sodium Hydroxide	1310732	3.57E-02	1.30E-01	7.18E-03	1.43E-02	4.19E-04	4.98E-05
Strontium Chromate	7789062	1.67E-01	5.52E-02	4.16E-02	2.07E-02	6.17E-04	6.80E-05
Sulfuric Acid	7664939	4.08E-01	3.72E+00	1.24E-01	8.25E-01	1.27E-02	1.33E-03
Tert-Butyl Acetate	540885	1.13E-01	4.83E-02	2.88E-02	1.82E-02	5.14E-04	5.42E-05
Tetrachloroethylene	127184	1.58E-01	4.56E-01	3.74E-02	5.75E-02	2.73E-03	4.71E-04
Toluene	108883	2.74E+01	1.68E+01	5.60E+00	8.74E+00	1.29E-01	1.41E-02
Trichloroethylene	79016	4.97E-03	8.08E-03	2.20E-03	4.81E-03	1.22E-04	5.79E-06
Vanadium (Fume or Dust)	7440622	5.27E-07	3.40E-07	3.43E-07	2.76E-07	1.97E-08	3.06E-09
Xylene	1330207	1.43E+01	5.18E+00	3.59E+00	1.94E+00	5.69E-02	6.17E-03
Zinc & Compounds	7440666	4.06E-03	1.76E-03	1.00E-03	5.30E-04	1.60E-05	1.77E-06
Zinc Oxide	1314132	1.52E-05	7.21E-05	3.37E-06	1.11E-05	2.38E-07	2.69E-08

Table 37. PMI, MEIR, MEIW, and Sensitive Receptor Hourly Average Concentrations Anaplex Corporation Facility ID 016951 Paramount, California

Pollutant	CAS Number	Hourly Average Concentration ($\mu\text{g}/\text{m}^3$)		
		PMI and MEIW	MEIR	MEISR
		Acute HI		
		Rec #17	Rec #2115	Rec #6728
1,2,4-Trimethylbenzene	95636	2.63E+00	1.16E-01	3.30E-03
4,4'-Isopropylidenediphenol	80057	8.58E-01	3.24E-02	9.65E-04
Acetaldehyde	75070	2.34E-03	2.03E-04	1.77E-05
Acrolein	107028	1.47E-03	1.28E-04	1.12E-05
Aluminum	7429905	4.41E-02	2.01E-03	7.71E-05
Ammonia	7664417	1.74E+00	1.51E-01	1.32E-02
Ammonium Nitrate	6484522	2.87E-03	2.37E-04	2.81E-05
Antimony Trioxide	1309644	3.44E-02	1.01E-03	3.27E-05
Barium & Compounds	7440393	9.56E-02	2.90E-03	9.30E-05
Barium Chromate	10294403	2.26E-02	6.64E-04	2.15E-05
Benzene	71432	4.36E-03	3.80E-04	3.31E-05
Beryllium & Compounds	7440417	2.31E-06	1.57E-07	3.02E-08
Cadmium & Compounds	7440439	9.94E-02	8.19E-03	9.71E-04
Chromium & Compounds (Other Than Hexavalent)	7440473	1.85E-02	8.69E-04	2.97E-05
Chromium Trioxide	1333820	3.94E-02	1.63E-03	1.79E-04
Cobalt & Compounds	7440484	5.47E-03	2.57E-04	7.25E-06
Copper & Compounds	7440508	2.51E-01	1.24E-02	1.08E-03
Cumene	98828	7.99E-02	2.35E-03	7.61E-05
Cyanide Compounds	57125	7.60E-01	6.26E-02	7.41E-03
Diethylene Glycol Monobutyl Ether	112345	2.12E-02	9.12E-04	1.01E-04
Dipropylene Glycol Monomethyl Ether	34590948	1.07E-03	3.14E-05	1.02E-06
Epoxy Resins	1091	5.48E+00	1.61E-01	5.22E-03
Ethyl Benzene	100414	4.75E+01	1.54E+00	4.82E-02
Ethylene Glycol Monobutyl Ether	111762	6.78E+01	2.00E+00	6.49E-02
Ethylene Glycol Monopropyl Ether	2807309	9.04E-01	2.65E-02	8.60E-04
Fluorides and Compounds	1101	2.23E+00	7.54E-02	3.14E-03
Formaldehyde	50000	4.76E+00	1.40E-01	4.59E-03
Hexamethylene Diisocyanate Monomer	822060	1.57E-01	6.73E-03	1.93E-04
Hexane	110543	3.43E-03	2.99E-04	2.60E-05
Hexavalent Chromium Compounds (Other)	18540299	1.29E-02	3.86E-04	1.45E-05
Hydrochloric Acid	7647010	1.53E+00	1.26E-01	1.50E-02
Hydrofluoric Acid	7664393	8.11E-01	4.42E-02	5.03E-03
Hydroquinone	123319	4.90E-01	1.44E-02	4.67E-04
IPA	67630	1.59E+02	4.69E+00	1.53E-01
Isocyanates	1125	2.45E+01	1.06E+00	3.03E-02
Lead	7439921	1.04E-05	8.36E-07	1.05E-07
Lead Compounds	1128	2.30E-02	6.75E-04	2.20E-05
Manganese & Compounds	7439965	3.37E-03	2.52E-04	3.00E-05
MEK	78933	3.04E+05	6.74E+02	1.53E+02
Methanol	67561	6.54E+01	4.20E+00	5.00E-02
Methylene Chloride	75092	8.24E+01	2.51E+00	2.01E-01
Methylene Diphenyl Diisocyanate	101688	5.14E-01	1.55E-02	4.98E-04
MIBK	108101	1.66E+02	5.46E+00	1.70E-01
Naphthalene	91203	2.05E+00	7.08E-02	6.31E-03
n-Butanol	71363	1.08E+01	4.46E-01	1.29E-02
Nickel & Compounds	7440020	8.26E-02	6.29E-03	7.42E-04
Nickel Acetate	373024	5.50E-04	2.28E-05	2.49E-06
Nitric Acid	7697372	2.22E+00	1.75E-01	2.06E-02
PAH	1151	5.43E-05	4.74E-06	4.13E-07
Phenol	108952	1.65E+01	5.04E-01	4.45E-02
Phosphoric Acid	7664382	5.57E+00	4.50E-01	5.32E-02
Propylene	115071	3.97E-01	3.46E-02	3.01E-03
Propylene Glycol Monomethyl Ether	107982	1.15E+02	4.66E+00	1.36E-01
Propylene Glycol Monomethyl Ether Acetate	108656	3.68E+00	1.47E-01	8.46E-03
Propylene Oxide	75569	1.58E+00	4.93E-02	5.66E-03
Sec-Butyl Alcohol	78922	1.64E+01	4.80E-01	1.56E-02
Selenium & Compounds	7782492	1.92E-05	1.31E-06	2.51E-07
Silica	1175	5.11E+00	1.61E-01	5.09E-03
Silver & Compounds	7440224	2.58E-03	2.12E-04	2.52E-05
Sodium Dichromate	10588019	5.32E-02	2.27E-03	2.50E-04
Sodium Hydroxide	1310732	5.23E-01	4.01E-02	4.73E-03
Strontium Chromate	7789062	2.66E+00	7.79E-02	2.53E-03
Sulfuric Acid	7664939	2.07E+01	9.12E-01	1.01E-01
Tert-Butyl Acetate	540885	1.79E+00	6.78E-02	2.02E-03
Tetrachloroethylene	127184	1.12E-01	9.23E-03	1.09E-03
Toluene	108883	3.58E+02	1.14E+01	5.26E-01
Trichloroethylene	79016	4.54E-01	3.61E-02	3.10E-04
Vanadium (Fume or Dust)	7440622	9.64E-06	6.56E-07	1.26E-07
Xylene	1330207	2.28E+02	7.30E+00	2.29E-01
Zinc & Compounds	7440666	7.66E-02	3.01E-03	1.99E-04
Zinc Oxide	1314132	2.17E-03	1.40E-04	1.62E-05

Table 38. HARP2 Calculate Risk
Options Anaplex Corporation
Facility ID 016951
Paramount, California

HARP2 Risk Analyses Screen/Option Title		Residential Cancer Risk	Population-wide Cancer Risk	Residential Chronic Risk	Residential 8-Hour Chronic Risk	Worker Cancer Risk
Risk Scenario	Analysis Type	Cancer Risk	Cancer Risk	Chronic Risk (Non-cancer)	8-Hour Chronic Risk (Non-cancer)	Cancer Risk
	Receptor Type	Individual Resident	Population-wide	Individual Resident	Individual Resident	Worker
	Exposure Duration	30 Year	70 Year	N/A	N/A	25 year
	Intake Rate Percentile	RMP using the Derived Method	RMP using the Derived Method	OEHHA Derived Method	OEHHA Derived Method	OEHHA Derived Method
Pathways to Evaluate	Tab "Pathways to Evaluate"	User Defined: Inhalation, Soil ingestion, Dermal, Mother's milk, and Homegrown produce Deposition rate of 0.02 m/s	User Defined: Inhalation, Soil ingestion, Dermal, Mother's milk, and Homegrown produce Deposition rate of 0.02 m/s	User Defined: Inhalation, Soil ingestion, Dermal, Mother's milk, and Homegrown produce Deposition rate of 0.02 m/s	Used Defaults (Inhalation Only)	Worker Pathways Deposition rate of 0.02 m/s
	Tab "Inh"	Fraction at time at home: check box selected for "Apply fraction of time at residence to age bins greater than or equal to 16 years"	Used Defaults (No Change)	Fraction at time at home: check box selected for "Apply fraction of time at residence to age bins greater than or equal to 16 years"	Fraction at time at home: check box selected for "Apply fraction of time at residence to age bins greater than or equal to 16 years"	Sources operating 24/7: Used Defaults (No Change) Sources operation 8/5/52: Worker Adjustment Factor 4.2
	Tab "Soil"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)	N/A	Used Defaults (No Change)
	Tab "Derm"	Select a climate: Warm	Select a climate: Warm	Select a climate: Warm	N/A	Select a climate: Warm
	Tab "MMik"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)	N/A	N/A
	Tab "HG Produce"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)	N/A	N/A

**Table 38. HARP2 Calculate Risk
Options Anaplex Corporation
Facility ID 016951
Paramount, California**

HARP2 Risk Analyses Screen/Option Title		Worker Chronic Risk	Worker 8-Hour Chronic Risk	Acute Risk
Risk Scenario	Analysis Type	Chronic Risk (Non-cancer)	8-Hour Chronic Risk (Non-cancer)	Acute Risk (Non-cancer)
	Receptor Type	Worker	Worker	N/A
	Exposure Duration	N/A	N/A	N/A
	Intake Rate Percentile	OEHHA Derived Method	N/A	N/A
Pathways to Evaluate	Tab "Pathways to Evaluate"	Worker Pathways Deposition rate of 0.02 m/s	Used Defaults (Inhalation Only)	Used Defaults (No Change)
	Tab "Inh"	Used Defaults (No Change)	Used Defaults (No Change)	Used Defaults (No Change)
	Tab "Soil"	N/A	N/A	N/A
	Tab "Derm"	Select a climate: Warm	N/A	N/A
	Tab "MMik"	N/A	N/A	N/A
	Tab "HG Produce"	N/A	N/A	N/A

P:\A\Anaplex Paramount - C&F\1402\HRA-RRP 2018\Tables and Figures.xlsx]t8 HARP2 Options

Note:

- Options selected based on SCAQMD's AB 2588 & Rule 1402 Supplemental Guidelines dated November 4, 2016.

**Table 39. Risk and Hazard Index
Summary Anaplex Corporation
Facility ID 016951
Paramount, California**

Receptor Location	Value	Receptor Number	UTM Coordinates (NAD83)		
			Easting (m)	Northing (m)	Description
Cancer Risk (Per Million)					
Point of maximum impact (PMI)	93,625	6	391889.3	3750691.1	Fenceline, southern boundary
Maximally Exposed Individual Resident (MEIR)	356	2115	392040.0	3750920.0	200 m NE of facility boundary
Maximally Exposed Individual Worker (MEIW)	5,133	1391	391880.0	3750660.0	32 m S of facility boundary
Maximally Exposed Individual Sensitive Receptor (MEISR)	39.2	6728	391823.2	3750030.7	661 m south of facility boundary (Receptor IDs 6728 and 6729 have same coordinates)
Substances Accounting for 90% of Cancer Risk:	Strontium chromate (residential and offsite worker)				
Processes Accounting for 90% of Cancer Risk:	Spray Booth 2 (Strontium chromate)				
Cancer Burden	3.6			--	
Number of people exposed to > 1 per million cancer risk for a 70-yr exposure	1,198,675			--	
Maximum distance to edge of 70-year, 1 x 10 ⁻⁶ cancer risk isopleth (meters)	12,913			--	
Chronic Hazard Index					
Location	Value	Receptor Number	UTM Coordinates (NAD83)		
			Easting (m)	Northing (m)	Toxicological Endpoint
Point of maximum impact (PMI)	6.9	3	391906.3	3750724.7	Respiratory system
Maximally Exposed Individual Resident (MEIR)	0.03	2115	392040.0	3750920.0	Respiratory system
Maximally Exposed Individual Worker (MEIW)	1.5	1660	391900.0	3750760.0	Respiratory system
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.0037	6728	391823.2	3750030.7	Respiratory system
Substances Accounting for 90% of Chronic Hazard Index:	Sulfuric acid, hydrogen chloride, strontium chromate, nickel & compounds, phosphoric acid, chromium trioxide, MDI (residential) Sulfuric acid, chromium trioxide, strontium chromate, nickel & compounds, hydrogen chloride, phosphoric acid, MDI (offsite worker)				
8-Hr Chronic Hazard Index					
Location	Value	Receptor Number	UTM Coordinates (NAD83)		
			Easting (m)	Northing (m)	Toxicological Endpoint
Point of maximum impact (PMI)	0.27	6	391889.3	3750691.1	Respiratory system
Maximally Exposed Individual Resident (MEIR)	0.0015	2115	392040.0	3750920.0	Respiratory system
Maximally Exposed Individual Worker (MEIW)	0.067	1391	391880.0	3750660.0	Respiratory system
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.00016	6728	391823.2	391823.2	Respiratory system
Substances Accounting for 90% of 8-hour Chronic Hazard Index:	MDI and nickel & compounds (residential) MDI, nickel & compounds, formaldehyde (offsite worker)				
Acute Hazard Index					
Location	Value	Receptor Number	UTM Coordinates (NAD83)		
			Easting (m)	Northing (m)	Toxicological Endpoint
Point of maximum impact (PMI)	24	17	391872.7	3750758.4	Respiratory system
Maximally Exposed Individual Resident (MEIR)	0.071	2115	392040.0	3750920.0	Respiratory system
Maximally Exposed Individual Worker (MEIW)	24	17	391872.7	3750758.4	Respiratory system
Maximally Exposed Individual Sensitive Receptor (MEISR)	0.014	6728	391823.2	3750030.7	Respiratory system
Substances Accounting for 90% of Acute Hazard Index:	Methyl ethyl ketone (residential and offsite worker)				

Table 40. Sensitive Receptors with Cancer Risk Greater Than or Equal to Ten in a Million
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	X	Y	Receptor Type	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce
6541	390924.552	3749594.969	Schools	1.07E-05	6.72E-06	1.19E-07	4.55E-09	2.80E-11	3.88E-06
6547	391603.37	3750023.923	Schools	3.37E-05	2.11E-05	3.72E-07	1.43E-08	8.46E-11	1.22E-05
6548	391817.25	3750027.474	Schools	3.88E-05	2.43E-05	4.29E-07	1.65E-08	9.47E-11	1.40E-05
6554	391059.795	3750652.951	Schools	2.62E-05	1.64E-05	2.89E-07	1.11E-08	7.10E-11	9.47E-06
6559	390646.548	3750924.302	Schools	1.32E-05	8.30E-06	1.46E-07	5.62E-09	3.58E-11	4.79E-06
6561	392915.097	3750969.1	Schools	2.41E-05	1.51E-05	2.66E-07	1.02E-08	6.23E-11	8.71E-06
6562	390852.611	3751013.757	Schools	1.70E-05	1.07E-05	1.88E-07	7.21E-09	4.64E-11	6.15E-06
6568	390627.303	3751172.607	Schools	1.21E-05	7.55E-06	1.33E-07	5.11E-09	3.26E-11	4.36E-06
6574	392666.42	3751550.689	Schools	1.80E-05	1.13E-05	1.99E-07	7.64E-09	4.73E-11	6.52E-06
6578	391395.178	3751771.747	Schools	1.63E-05	1.02E-05	1.80E-07	6.90E-09	4.46E-11	5.89E-06
6580	392889.731	3751762.202	Schools	1.22E-05	7.66E-06	1.35E-07	5.18E-09	3.21E-11	4.42E-06
6582	392688.956	3751834.557	Schools	1.33E-05	8.36E-06	1.47E-07	5.65E-09	3.51E-11	4.82E-06
6583	392682.228	3751836.63	Schools	1.34E-05	8.38E-06	1.48E-07	5.67E-09	3.52E-11	4.84E-06
6587	391637.15	3752036.251	Schools	1.38E-05	8.66E-06	1.53E-07	5.86E-09	3.76E-11	5.00E-06
6676	392516.607	3749932.038	Hospitals	2.00E-05	1.25E-05	2.21E-07	8.47E-09	4.91E-11	7.23E-06
6721	393187.185	3750336.354	Daycare Centers	1.38E-05	8.63E-06	1.52E-07	5.83E-09	3.46E-11	4.98E-06
6728	391823.207	3750030.733	Daycare Centers	3.92E-05	2.46E-05	4.33E-07	1.66E-08	9.55E-11	1.42E-05
6729	391823.207	3750030.733	Daycare Centers	3.92E-05	2.46E-05	4.33E-07	1.66E-08	9.55E-11	1.42E-05
6746	390851.596	3751042.137	Daycare Centers	1.68E-05	1.05E-05	1.86E-07	7.12E-09	4.58E-11	6.07E-06
6816	392703.148	3750856.157	Daycare Centers	3.74E-05	2.34E-05	4.13E-07	1.58E-08	9.47E-11	1.35E-05
6823	390863.06	3751303.418	Daycare Centers	1.48E-05	9.25E-06	1.63E-07	6.25E-09	4.02E-11	5.34E-06
6847	391085.932	3750584.493	Daycare Centers	2.72E-05	1.71E-05	3.01E-07	1.15E-08	7.36E-11	9.85E-06

Table 41. Population Exposure Cancer Burden Summary
Anaplex Corporation
Facility ID 016951
Paramount, California

Cancer Risk	Population	
	70-year Exposure	30-year Exposure
1 to <10 in a million	1,156,643	895,528
10 to <25 in a million	29,494	23,143
25 to <100 in a million	11,825	8,077
100 to <1000 in a million	713	232
>=1000 in a million	0	0
Total >= 1 in a million	1,198,675	926,980
Cancer Burden	3.6	-

Table 42. PMI, MEIR, MEIW, MEISR Cancer Risk by Source
Anaplex Corporation
Facility ID 016951
Paramount, California

Source ID	PMI		MEIR		MEIW		Maximum Sensitive Receptor	
	Cancer Risk	Contribution	Cancer Risk	Contribution	Cancer Risk	Contribution	Cancer Risk	Contribution
SPRYBTH2	9.32E-02	99.5%	3.44E-04	96.6%	5.11E-03	99.5%	3.80E-05	96.8%
SPRYBTH3	1.28E-06	0.0%	6.51E-09	0.0%	1.14E-07	0.0%	6.73E-10	0.0%
SPRYBTH4	3.97E-06	0.0%	2.28E-08	0.0%	3.68E-07	0.0%	2.31E-09	0.0%
222BLR1	2.17E-08	0.0%	1.05E-09	0.0%	8.16E-10	0.0%	1.27E-10	0.0%
222BLR2	2.13E-08	0.0%	1.05E-09	0.0%	7.88E-10	0.0%	1.26E-10	0.0%
DGRSR	2.35E-08	0.0%	5.79E-10	0.0%	3.64E-09	0.0%	2.74E-11	0.0%
DGRBLR	4.55E-09	0.0%	2.26E-10	0.0%	2.11E-10	0.0%	2.76E-11	0.0%
DRYER3	1.67E-08	0.0%	4.82E-10	0.0%	1.06E-09	0.0%	5.82E-11	0.0%
DRYER4	7.70E-09	0.0%	4.29E-10	0.0%	1.52E-10	0.0%	5.51E-11	0.0%
ANODZPSH	3.41E-04	0.4%	1.11E-05	3.1%	2.35E-05	0.5%	1.16E-06	3.0%
PLATEPSH	4.46E-05	0.0%	4.79E-07	0.1%	2.02E-06	0.0%	5.80E-08	0.1%
SLVNTBTH	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
MASKING	3.49E-05	0.0%	2.19E-07	0.1%	1.30E-06	0.0%	2.44E-08	0.1%
ABRBLST	1.40E-06	0.0%	5.24E-08	0.0%	2.01E-07	0.0%	8.14E-09	0.0%
ANODZEVF	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
PLATEEVP	2.25E-06	0.0%	3.88E-08	0.0%	4.42E-08	0.0%	6.69E-09	0.0%

Table 43. PMI Cancer Risk by Substance and Pathway
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce	Contribution
6	391889.3	3750691.1	18540299	Cr(VI)	4.37E-04	2.74E-04	4.83E-06	1.85E-07	0.00E+00	1.58E-04	0%
6	391889.3	3750691.1	7440020	Nickel	1.45E-06	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	1333820	Chromium Trioxide	6.48E-05	4.06E-05	7.17E-07	2.75E-08	0.00E+00	2.35E-05	0%
6	391889.3	3750691.1	373024	Ni Acetate	9.62E-09	9.62E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	10588019	Sodium Dichromate	3.10E-04	1.94E-04	3.43E-06	1.31E-07	0.00E+00	1.12E-04	0%
6	391889.3	3750691.1	7440439	Cadmium	2.81E-06	2.81E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	1128	Lead cmp(inorg)	4.69E-07	2.90E-08	3.54E-07	8.61E-09	6.42E-09	7.10E-08	0%
6	391889.3	3750691.1	7439921	Lead	1.95E-10	1.21E-11	1.47E-10	3.58E-12	2.67E-12	2.95E-11	0%
6	391889.3	3750691.1	10294403	Barium Chromate	7.82E-04	4.90E-04	8.65E-06	3.32E-07	0.00E+00	2.83E-04	1%
6	391889.3	3750691.1	100414	Ethyl Benzene	1.76E-05	1.76E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	50000	Formaldehyde	4.24E-06	4.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	75092	Methylene Chloride	2.05E-05	2.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	7789062	Strontium Chromate	9.20E-02	5.76E-02	1.02E-03	3.90E-05	0.00E+00	3.33E-02	98%
6	391889.3	3750691.1	91203	Naphthalene	2.00E-05	2.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	75569	Propylene Oxide	1.91E-06	1.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	79016	TCE	2.35E-08	2.35E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	71432	Benzene	5.57E-09	5.57E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	1151	PAHs-w/o	6.27E-08	1.92E-09	7.13E-09	1.78E-09	1.70E-08	3.50E-08	0%
6	391889.3	3750691.1	75070	Acetaldehyde	2.99E-10	2.99E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	7440417	Beryllium	7.19E-10	7.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6	391889.3	3750691.1	127184	Perc	2.25E-06	2.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Table 44. MEIR Cancer Risk by Substance and Pathway
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce	Contribution (%)
2115	392040	3750920	18540299	Cr(VI)	1.87E-06	1.17E-06	2.07E-08	7.92E-10	0.00E+00	6.77E-07	1%
2115	392040	3750920	7440020	Nickel	2.05E-08	2.05E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	1333820	Chromium Trioxide	2.09E-06	1.31E-06	2.31E-08	8.86E-10	0.00E+00	7.57E-07	1%
2115	392040	3750920	373024	Ni Acetate	3.14E-10	3.14E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	10588019	Sodium Dichromate	9.25E-06	5.79E-06	1.02E-07	3.92E-09	0.00E+00	3.35E-06	3%
2115	392040	3750920	7440439	Cadmium	3.03E-08	3.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	1128	Lead cmp(inorg)	1.73E-09	1.07E-10	1.31E-09	3.18E-11	2.37E-11	2.62E-10	0%
2115	392040	3750920	7439921	Lead	2.70E-12	1.67E-13	2.04E-12	4.97E-14	3.70E-14	4.10E-13	0%
2115	392040	3750920	10294403	Barium Chromate	2.89E-06	1.81E-06	3.20E-08	1.23E-09	0.00E+00	1.05E-06	1%
2115	392040	3750920	100414	Ethyl Benzene	7.04E-08	7.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	50000	Formaldehyde	1.58E-08	1.58E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	75092	Methylene Chloride	1.15E-07	1.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	7789062	Strontium Chromate	3.40E-04	2.13E-04	3.76E-06	1.44E-07	0.00E+00	1.23E-04	95%
2115	392040	3750920	91203	Naphthalene	1.25E-07	1.25E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	75569	Propylene Oxide	1.20E-08	1.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	79016	TCE	5.79E-10	5.79E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	71432	Benzene	2.51E-10	2.51E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	1151	PAHs-w/o	2.82E-09	8.62E-11	3.21E-10	8.00E-11	7.64E-10	1.57E-09	0%
2115	392040	3750920	75070	Acetaldehyde	1.35E-11	1.35E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	7440417	Beryllium	2.69E-11	2.69E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
2115	392040	3750920	127184	Perc	3.88E-08	3.88E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Table 45. MEIW Cancer Risk by Substance and Pathway
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Contribution (%)
1391	391880	3750660	18540299	Cr(VI)	2.41E-05	2.40E-05	1.21E-07	8.40E-09	0.47%
1391	391880	3750660	7440020	Nickel	1.09E-07	1.09E-07	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	1333820	Chromium Trioxide	4.42E-06	4.40E-06	2.22E-08	1.54E-09	0.09%
1391	391880	3750660	373024	Ni Acetate	1.05E-09	1.05E-09	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	10588019	Sodium Dichromate	2.03E-05	2.02E-05	1.02E-07	7.05E-09	0.40%
1391	391880	3750660	7440439	Cadmium	1.93E-07	1.93E-07	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	1128	Lead cmp(inorg)	7.67E-09	3.57E-09	3.72E-09	3.87E-10	0.00%
1391	391880	3750660	7439921	Lead	3.19E-12	1.49E-12	1.55E-12	1.61E-13	0.00%
1391	391880	3750660	10294403	Barium Chromate	4.28E-05	4.26E-05	2.15E-07	1.49E-08	0.83%
1391	391880	3750660	100414	Ethyl Benzene	1.54E-06	1.54E-06	0.00E+00	0.00E+00	0.03%
1391	391880	3750660	50000	Formaldehyde	3.69E-07	3.69E-07	0.00E+00	0.00E+00	0.01%
1391	391880	3750660	75092	Methylene Chloride	1.03E-06	1.03E-06	0.00E+00	0.00E+00	0.02%
1391	391880	3750660	7789062	Strontium Chromate	5.04E-03	5.01E-03	2.53E-05	1.75E-06	98.13%
1391	391880	3750660	91203	Naphthalene	8.66E-07	8.66E-07	0.00E+00	0.00E+00	0.02%
1391	391880	3750660	75569	Propylene Oxide	7.12E-08	7.12E-08	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	79016	TCE	3.64E-09	3.64E-09	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	71432	Benzene	1.21E-09	1.21E-09	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	1151	PAHs-w/o	1.23E-09	5.90E-10	4.43E-10	1.99E-10	0.00%
1391	391880	3750660	75070	Acetaldehyde	6.51E-11	6.51E-11	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	7440417	Beryllium	1.64E-10	1.64E-10	0.00E+00	0.00E+00	0.00%
1391	391880	3750660	127184	Perc	4.42E-08	4.42E-08	0.00E+00	0.00E+00	0.00%

Table 46. MEISR Cancer Risk by Substance and Pathway
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	X	Y	Pollutant CAS number	Pollutant Abbreviation	Total Risk	Inhalation	Soil	Dermal	Mother's Milk	Homegrown Produce	Contribution
6728	391823.207	3750030.733	18540299	Cr(VI)	2.07E-07	1.29E-07	2.29E-09	8.77E-11	0.00E+00	7.49E-08	1%
6728	391823.207	3750030.733	7440020	Nickel	2.36E-09	2.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	1333820	Chromium Trioxide	2.18E-07	1.36E-07	2.41E-09	9.23E-11	0.00E+00	7.88E-08	1%
6728	391823.207	3750030.733	373024	Ni Acetate	3.27E-11	3.27E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	10588019	Sodium Dichromate	9.70E-07	6.07E-07	1.07E-08	4.11E-10	0.00E+00	3.51E-07	2%
6728	391823.207	3750030.733	7440439	Cadmium	3.66E-09	3.66E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	1128	Lead cmp(inorg)	1.91E-10	1.18E-11	1.44E-10	3.51E-12	2.61E-12	2.89E-11	0%
6728	391823.207	3750030.733	7439921	Lead	3.56E-13	2.20E-14	2.69E-13	6.55E-15	4.88E-15	5.40E-14	0%
6728	391823.207	3750030.733	10294403	Barium Chromate	3.18E-07	1.99E-07	3.52E-09	1.35E-10	0.00E+00	1.15E-07	1%
6728	391823.207	3750030.733	100414	Ethyl Benzene	7.62E-09	7.62E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	50000	Formaldehyde	1.74E-09	1.74E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	75092	Methylene Chloride	1.28E-08	1.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	7789062	Strontium Chromate	3.75E-05	2.35E-05	4.14E-07	1.59E-08	0.00E+00	1.36E-05	96%
6728	391823.207	3750030.733	91203	Naphthalene	1.37E-08	1.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	75569	Propylene Oxide	1.34E-09	1.34E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	79016	TCE	2.74E-11	2.74E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	71432	Benzene	3.05E-11	3.05E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	1151	PAHs-w/o	3.44E-10	1.05E-11	3.91E-11	9.73E-12	9.29E-11	1.91E-10	0%
6728	391823.207	3750030.733	75070	Acetaldehyde	1.64E-12	1.64E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	7440417	Beryllium	4.18E-12	4.18E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%
6728	391823.207	3750030.733	127184	Perc	6.69E-09	6.69E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0%

Table 47. PMI, MEIR, MEIW, MEISR Chronic Risk by Source
Anaplex Corporation
Facility ID 016951
Paramount, California

Source ID	PMI		MEIR		MEIW		MEISR	
	CHI	Contribution	CHI	Contribution	CHI	Contribution	CHI	Contribution
SPRYBTH2	4.74E-01	6.9%	5.30E-03	17.4%	1.78E-01	12.2%	5.84E-04	15.7%
SPRYBTH3	1.22E-02	0.2%	1.24E-04	0.4%	4.75E-03	0.3%	1.28E-05	0.3%
SPRYBTH4	1.42E-02	0.2%	1.47E-04	0.5%	5.15E-03	0.4%	1.49E-05	0.4%
222BLR1	1.03E-04	0.0%	3.90E-06	0.0%	9.95E-05	0.0%	4.73E-07	0.0%
222BLR2	1.06E-04	0.0%	3.93E-06	0.0%	1.02E-04	0.0%	4.71E-07	0.0%
DGRSR	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
DGRBLR	1.84E-05	0.0%	8.44E-07	0.0%	1.47E-05	0.0%	1.03E-07	0.0%
DRYER3	4.24E-05	0.0%	1.80E-06	0.0%	3.70E-05	0.0%	2.17E-07	0.0%
DRYER4	3.04E-05	0.0%	1.60E-06	0.0%	2.45E-05	0.0%	2.05E-07	0.0%
ANODZPSH	4.45E+00	64.7%	1.52E-02	49.9%	1.00E+00	68.5%	1.58E-03	42.6%
PLATEPSH	6.71E-01	9.8%	2.15E-03	7.0%	6.37E-02	4.4%	2.60E-04	7.0%
SLVNTBTH	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
MASKING	7.01E-02	1.0%	3.83E-04	1.3%	4.32E-02	2.9%	4.26E-05	1.1%
ABRBLST	4.11E-04	0.0%	2.38E-05	0.1%	3.34E-04	0.0%	3.70E-06	0.1%
ANODZEVP	1.12E-01	1.6%	7.16E-04	2.3%	3.04E-02	2.1%	1.08E-04	2.9%
PLATEEVP	1.07E+00	15.6%	6.44E-03	21.1%	1.35E-01	9.3%	1.11E-03	29.8%

Table 48. PMI Chronic HI by Substance
Anaplex Corporation
Facility ID O16951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution	
3	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%	
3	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%	
3	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-04	4.24E-06	1.02E-07	0.00E+00	1.10E-04	0.0%	
3	7440417	Beryllium	0.00E+00	0.00E+00	1.17E-05	0.00E+00	4.95E-07	0.00E+00	1.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-08	7.39E-10	2.68E-11	0.00E+00	2.24E-10	0.0%	
3	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	9.21E-02	0.00E+00	0.00E+00	4.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.32E-04	8.42E-06	2.04E-08	0.00E+00	1.43E-05	0.3%	
3	1333820	Chromium Trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	2.60E-04	8.1%	
3	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-04	3.45E-06	8.35E-08	0.00E+00	8.95E-05	0.0%	
3	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-02	4.64E-04	1.68E-05	0.00E+00	2.62E-04	0.1%	
3	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%	
3	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.9%	
3	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-01	0.00E+00	0.00E+00	9.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E+00	1.97E-02	7.13E-04	0.00E+00	1.11E-02	2.3%	
3	101688	MeDiphenDiisoc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.0%	
3	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%	
3	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%	
3	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-04	1.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.49E-04	1.35E-06	3.26E-08	0.00E+00	8.06E-07	0.2%	
3	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	7.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-01	0.00E+00	0.00E+00	0.00E+00	1.01E-02	9.10E-05	2.20E-06	0.00E+00	5.45E-05	10.5%
3	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.8%	
3	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%	
3	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%	
3	1175	Silica, Crystlin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.6%	
3	10589019	Sodium Dichromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E-02	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.4%	
3	7789062	Strontium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-01	0.00E+00	0.00E+00	0.00E+00	1.29E-02	4.0%	
3	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E+00	0.00E+00	0.00E+00	0.00E+00	54.0%	
3	108883	Toluene	0.00E+00	5.61E-02	0.00E+00	0.00E+00	0.00E+00	5.61E-02	5.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.8%	
3	1330207	Xylenes	0.00E+00	7.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.41E-03	0.00E+00	7.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%	

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 49. MEIR Chronic HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution
2115	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.39E-05	0.00E+00	0.00E+00	5.24E-06	4.74E-08	1.15E-09	0.00E+00	1.23E-06	0.1%
2115	7440417	Beryllium	0.00E+00	0.00E+00	6.77E-07	0.00E+00	2.87E-08	0.00E+00	6.77E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-09	4.28E-11	1.55E-12	0.00E+00	1.30E-11	0.0%
2115	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	2.95E-04	0.00E+00	0.00E+00	1.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-06	2.70E-08	6.52E-11	0.00E+00	4.57E-08	0.5%
2115	1333820	Chromium Trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-05	0.00E+00	0.00E+00	3.79E-06	3.43E-08	8.29E-10	0.00E+00	8.89E-07	6.2%
2115	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-05	0.00E+00	0.00E+00	3.39E-06	3.06E-08	7.40E-10	0.00E+00	7.94E-07	0.1%
2115	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-05	0.00E+00	0.00E+00	2.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-04	4.77E-06	1.73E-07	0.00E+00	2.69E-06	0.1%
2115	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%
2115	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	13.4%
2115	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.61E-04	0.00E+00	0.00E+00	5.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	1.22E-04	4.41E-06	0.00E+00	6.87E-05	3.1%
2115	101688	MeDiphenDisocyc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.0%
2115	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.6%
2115	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.41E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-07	3.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-05	0.00E+00	0.00E+00	5.10E-07	4.61E-09	1.11E-10	0.00E+00	2.76E-09	0.1%
2115	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-05	2.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	0.00E+00	0.00E+00	3.33E-05	3.01E-07	7.26E-09	0.00E+00	1.80E-07	7.8%
2115	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.4%
2115	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
2115	1175	Silica, Crystlin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.4%
2115	10598019	Sodium Dichromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	1.68E-05	1.52E-07	3.67E-09	0.00E+00	3.93E-06	0.3%
2115	7789062	Strontium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.51E-03	0.00E+00	0.00E+00	6.17E-04	5.57E-06	1.35E-07	0.00E+00	1.45E-04	10.1%
2115	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	41.6%
2115	108883	Toluene	0.00E+00	4.30E-04	0.00E+00	0.00E+00	0.00E+00	4.30E-04	4.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.4%
2115	1330207	Xylenes	0.00E+00	8.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.13E-05	0.00E+00	8.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.3%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 50. MEIW Chronic HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution
1660	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
1660	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
1660	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-04	8.74E-07	8.32E-08	0.00E+00	0.00E+00	0.1%
1660	7440417	Beryllium	0.00E+00	0.00E+00	9.47E-06	0.00E+00	1.88E-07	0.00E+00	9.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-08	3.29E-10	4.71E-11	0.00E+00	0.00E+00	0.0%
1660	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	5.31E-03	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-05	4.40E-07	4.19E-09	0.00E+00	0.00E+00	0.3%
1660	1333820	Chromium Trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04	1.24E-06	1.18E-07	0.00E+00	0.00E+00	8.5%
1660	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	6.23E-07	5.94E-08	0.00E+00	0.00E+00	0.0%
1660	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	4.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02	9.24E-05	1.32E-05	0.00E+00	0.00E+00	0.1%
1660	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.3%
1660	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.9%
1660	764393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-02	0.00E+00	0.00E+00	9.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-01	2.17E-03	3.10E-04	0.00E+00	0.00E+00	2.1%
1660	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.5%
1660	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.2%
1660	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
1660	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-05	2.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-05	1.67E-07	1.59E-08	0.00E+00	0.00E+00	0.2%
1660	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.92E-04	9.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	6.95E-06	6.62E-07	0.00E+00	0.00E+00	6.8%
1660	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.6%
1660	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
1660	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%
1660	1175	Silica, Crystlin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.0%
1660	10588019	Sodium Dichromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-03	5.35E-06	5.09E-07	0.00E+00	0.00E+00	0.4%
1660	7789062	Strontium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-02	1.03E-04	9.79E-06	0.00E+00	0.00E+00	7.1%
1660	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	56.4%
1660	108883	Toluene	0.00E+00	2.91E-02	0.00E+00	0.00E+00	0.00E+00	2.91E-02	2.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.74E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.0%
1660	1330207	Xylenes	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-03	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI
 MDI = Methylene diphenyl diisocyanate

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 51. MEISR Chronic HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	INH_CONC	SOIL_DOSE	DERMAL_DOSE	MMILK_DOSE	CROP_DOSE	Contribution			
6728	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%			
6728	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%			
6728	10294403	Barium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.04E-06	0.00E+00	0.00E+00	5.78E-07	5.22E-09	1.26E-10	0.00E+00	1.35E-07	0.1%
6728	7440417	Beryllium	0.00E+00	0.00E+00	1.05E-07	0.00E+00	4.45E-09	0.00E+00	1.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E-10	6.64E-12	2.41E-13	0.00E+00	2.02E-12	0.0%			
6728	7440439	Cadmium	0.00E+00	0.00E+00	0.00E+00	3.57E-05	0.00E+00	0.00E+00	1.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-07	3.26E-09	7.88E-12	0.00E+00	5.54E-09	0.5%			
6728	1333820	Chromium Trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-06	0.00E+00	0.00E+00	3.95E-07	3.57E-09	8.63E-11	0.00E+00	9.25E-08	5.3%			
6728	18540299	Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-06	0.00E+00	0.00E+00	3.75E-07	3.39E-09	8.20E-11	0.00E+00	8.79E-08	0.1%			
6728	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-06	0.00E+00	0.00E+00	2.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.73E-05	5.18E-07	1.88E-08	0.00E+00	2.92E-07	0.1%			
6728	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%			
6728	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	18.9%			
6728	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	0.00E+00	0.00E+00	9.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-03	1.95E-05	7.09E-07	0.00E+00	1.10E-05	4.2%			
6728	101688	MeDiphenDisocyc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.5%			
6728	91203	Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.5%			
6728	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%			
6728	373024	Ni Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E-08	3.79E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E-06	0.00E+00	0.00E+00	5.31E-08	4.80E-10	1.16E-11	0.00E+00	2.87E-10	0.1%			
6728	7440020	Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-06	2.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-04	0.00E+00	0.00E+00	3.84E-06	3.47E-08	8.38E-10	0.00E+00	2.08E-08	7.4%			
6728	7664382	Phosphoric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	10.1%			
6728	115071	Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%			
6728	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%			
6728	1175	Silica, Crystln	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.2%			
6728	10588019	Sodium Dichromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.80E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	0.00E+00	0.00E+00	1.76E-06	1.59E-08	3.84E-10	0.00E+00	4.12E-07	0.2%			
6728	7789062	Strontium Chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-04	0.00E+00	0.00E+00	6.80E-05	6.14E-07	1.48E-08	0.00E+00	1.59E-05	9.1%			
6728	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	35.7%			
6728	108883	Toluene	0.00E+00	4.72E-05	0.00E+00	0.00E+00	0.00E+00	4.72E-05	4.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.3%			
6728	1330207	Xylenes	0.00E+00	8.82E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-06	0.00E+00	8.82E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%			

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kideneys HI
 GILV = gastrointestinal System and liver HI
 REPRO/DEVEL = reproduction and developmental HI
 RESP = respiraotry system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI
 ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard Index
 INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 52. PMI, MEIR, MEIW, MEISR 8-Hour Chronic HI by Source
Anaplex Corporation
Facility ID 016951
Paramount, California

Source ID	PMI		MEIR		MEIW		MEISR	
	8HR CHI	Contribution						
SPRYBTH2	2.26E-01	82.2%	8.35E-04	57.6%	5.63E-02	85.2%	9.20E-05	56.7%
SPRYBTH3	4.89E-03	1.8%	2.49E-05	1.7%	1.25E-03	1.9%	2.57E-06	1.6%
SPRYBTH4	4.41E-03	1.6%	2.54E-05	1.7%	0.00E+00	0.0%	2.57E-06	1.6%
222BLR1	1.78E-05	0.0%	8.61E-07	0.1%	9.33E-06	0.0%	1.04E-07	0.1%
222BLR2	1.75E-05	0.0%	8.68E-07	0.1%	9.01E-06	0.0%	1.04E-07	0.1%
DGRSR	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
DGRBLR	3.75E-06	0.0%	1.86E-07	0.0%	2.42E-06	0.0%	2.27E-08	0.0%
DRYER3	1.38E-05	0.0%	3.97E-07	0.0%	1.21E-05	0.0%	4.79E-08	0.0%
DRYER4	6.33E-06	0.0%	3.53E-07	0.0%	3.99E-06	0.0%	4.53E-08	0.0%
ANODZPSH	6.15E-03	2.2%	2.01E-04	13.8%	1.92E-03	2.9%	2.09E-05	12.9%
PLATEPSH	3.32E-02	12.1%	3.57E-04	24.6%	6.50E-03	9.8%	4.32E-05	26.6%
SLVNTBTH	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
MASKING	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
ABRBLST	1.41E-04	0.1%	5.26E-06	0.4%	9.15E-05	0.1%	8.17E-07	0.5%
ANODZEV	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%
PLATEEVP	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%

Table 53. PMI 8-Hour Chronic HI by Substance
Anaplex Corporation
Facility ID 016951

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
6	7440020	Nickel	0.00E+00	0.00E+00	3.92E-02	0.00E+00	0.00E+00	0.00E+00	3.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	14.3%
6	373024	Ni Acetate	0.00E+00	0.00E+00	2.60E-04	0.00E+00	0.00E+00	0.00E+00	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	12.1%
6	101688	MDI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	73.5%
6	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%

Abbreviations:

CV = cardiovascular system HI

CNS = central nervous system HI

IMMUN = immune system HI

KIDNEY = kideney HI

GILV = gastrointestinal System and liver HI

MDI = Methylene diphenyl diisocyanate

REPRO/DEVEL = reproduction and developmental HI

RESP = respiraotry system HI

SKIN = skin HI

EYE = eye HI

BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI

BLOOD = blood HI

ODOR = response to odors HI

GENERAL = general toxicity HI

MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 54. MEIR 8-Hour Chronic HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
2115	7440020	Nickel	0.00E+00	0.00E+00	5.54E-04	0.00E+00	0.00E+00	0.00E+00	5.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	38.2%
2115	373024	Ni Acetate	0.00E+00	0.00E+00	8.50E-06	0.00E+00	0.00E+00	0.00E+00	8.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.6%
2115	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.5%
2115	101688	MDI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	52.6%
2115	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI
 MDI = Methylene diphenyl diisocyanate

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 55. MEIW 8-Hour Chronic HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
1391	7440020	Nickel	0.00E+00	0.00E+00	8.43E-03	0.00E+00	0.00E+00	0.00E+00	8.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	12.5%
1391	373024	Ni Acetate	0.00E+00	0.00E+00	8.14E-05	0.00E+00	0.00E+00	0.00E+00	8.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
1391	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	12.3%
1391	101688	MDI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	75.0%
1391	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
1391	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kidneys HI
 GILV = gastrointestinal System and liver HI
 MDI = Methylene diphenyl diisocyanate

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiratory system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 56. MEISR 8-Hour Chronic HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
6728	7440020	Nickel	0.00E+00	6.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	39.4%
6728	373024	Ni Acetate	0.00E+00	8.84E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.5%
6728	50000	Formaldehyde	0.00E+00	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.4%
6728	101688	MDI	0.00E+00	8.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	51.5%
6728	75070	Acetaldehyde	0.00E+00	8.07E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	107028	Acrolein	0.00E+00	2.17E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%

Abbreviations:

CV = cardiovascular sys; REPRO/DEVEL = reproduction and developmental | ENDO = endocrine system HI
 CNS = central nervous ; RESP = respiraotry system HI | BLOOD = blood HI
 IMMUN = immune systc SKIN = skin HI | ODOR = response to odors HI
 KIDNEY = kideney HI | EYE = eye HI | GENERAL = general toxicity HI
 GILV = qastrointestinal BONE/TEETH = bones and teeth HI | MAXHI = maximum hazard index
 MDI = Methylene diphenyl diisocyanate

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway).

Table 57. PMI, MEIR, MEIW, MEISR Acute Risk by Source
Anaplex Corporation
Facility ID 016951
Paramount, California

Source ID	PMI		MEIR		MEIW		MEISR	
	AHI	Contribution	AHI	Contribution	AHI	Contribution	AHI	Contribution
SPRYBTH2	1.38E-01	0.6%	4.05E-03	5.7%	1.38E-01	0.6%	1.73E-04	1.3%
SPRYBTH3	1.02E-02	0.0%	4.85E-04	0.7%	1.02E-02	0.0%	1.38E-05	0.1%
SPRYBTH4	1.11E-02	0.0%	5.14E-04	0.7%	1.11E-02	0.0%	1.42E-05	0.1%
222BLR1	3.89E-04	0.0%	1.52E-05	0.0%	3.89E-04	0.0%	3.08E-06	0.0%
222BLR2	3.84E-04	0.0%	1.52E-05	0.0%	3.84E-04	0.0%	3.08E-06	0.0%
DGRSR	0.00E+00	0.0%	0.00E+00	0.0%	0.00E+00	0.0%	1.11E-06	0.0%
DGRBLR	6.85E-05	0.0%	1.35E-05	0.0%	6.85E-05	0.0%	7.70E-07	0.0%
DRYER3	1.75E-04	0.0%	2.95E-05	0.0%	1.75E-04	0.0%	1.46E-06	0.0%
DRYER4	1.22E-04	0.0%	2.58E-05	0.0%	1.22E-04	0.0%	1.33E-06	0.0%
ANODZPSH	1.71E-01	0.7%	7.06E-03	10.0%	1.71E-01	0.7%	7.74E-04	5.6%
PLATEPSH	7.05E-02	0.3%	5.81E-03	8.2%	7.05E-02	0.3%	6.88E-04	5.0%
SLVNTBTH	2.34E+01	98.2%	5.06E-02	71.3%	2.34E+01	98.2%	1.17E-02	85.8%
MASKING	5.49E-03	0.0%	1.72E-04	0.2%	5.49E-03	0.0%	1.97E-05	0.1%
ABRBLST	7.50E-06	0.0%	5.10E-07	0.0%	7.50E-06	0.0%	9.80E-08	0.0%
ANODZEVP	4.57E-03	0.0%	1.89E-04	0.3%	4.57E-03	0.0%	2.07E-05	0.2%
PLATEEVP	2.38E-02	0.1%	1.96E-03	2.8%	2.38E-02	0.1%	2.32E-04	1.7%

Table 58. PMI and MEIW Acute HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
17	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-03	0.00E+00	9.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	111762	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-03	0.00E+00	4.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	7664393	Nitric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-03	0.00E+00	3.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	108952	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-03	0.00E+00	2.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	7440508	Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	7647010	Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-04	0.00E+00	7.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	107028	Sodium Hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-04	0.00E+00	5.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	7664417	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-04	0.00E+00	5.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	75569	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-04	5.08E-04	0.00E+00	5.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	127184	Perc	0.00E+00	5.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-06	0.00E+00	5.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	75070	Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-06	0.00E+00	4.97E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	7440622	Isopropyl Alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-07	0.00E+00	3.21E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	78933	MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E+01	0.00E+00	2.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	98.3%
17	7664939	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.7%
17	1310732	Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-02	6.54E-02	6.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.3%
17	67630	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-02	0.00E+00	4.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%
17	101688	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%
17	7697372	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
17	1330207	NH3	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-02	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	108883	Vanadium	0.00E+00	9.68E-03	0.00E+00	0.00E+00	0.00E+00	9.68E-03	9.68E-03	0.00E+00	9.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	57125	Cyanide cmpds	0.00E+00	2.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	7440020	Nickel	0.00E+00	0.00E+00	4.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	373024	Ni Acetate	0.00E+00	0.00E+00	2.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	67561	Methanol	0.00E+00	2.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	75092	Methylene Chlor	5.89E-03	5.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
17	71432	Benzene	0.00E+00	0.00E+00	1.61E-04	0.00E+00	0.00E+00	1.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-04	0.00E+00	0.00E+00	0.0%

Abbreviations:

CV = cardiovascular system HI
CNS = central nervous system HI
IMMUN = immune system HI
KIDNEY = kideneys HI
GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
RESP = respiration system HI
SKIN = skin HI
EYE = eye HI
BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
BLOOD = blood HI
ODOR = response to odors HI
GENERAL = general toxicity HI
MAXHI = maximum hazard index

INH = inhalation
MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway). Ordered by RESP HI (highest to lowest).

Table 59. MEIR Acute HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
2115	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-04	0.00E+00	3.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%
2115	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.3%
2115	7697372	Nitric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.9%
2115	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	10.7%
2115	108883	Toluene	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	3.09E-04	3.09E-04	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%
2115	1330207	Xylenes	0.00E+00	3.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-04	0.00E+00	3.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.5%
2115	1310732	Sodium Hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.02E-03	5.02E-03	5.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.1%
2115	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-04	0.00E+00	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%
2115	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.01E-05	0.00E+00	6.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
2115	127184	Perc	0.00E+00	4.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-07	0.00E+00	4.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	7440508	Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%
2115	67630	Isopropyl Alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.1%
2115	78933	MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-02	0.00E+00	5.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	73.1%
2115	101688	MeDiphenDiisocy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.8%
2115	108952	Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-05	0.00E+00	8.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
2115	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-05	1.59E-05	0.00E+00	1.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-07	0.00E+00	4.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-05	0.00E+00	5.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
2115	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E-05	0.00E+00	4.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
2115	7440622	Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-08	0.00E+00	2.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	57125	Cyanide cmpds	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	7440020	Nickel	0.00E+00	0.00E+00	3.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	373024	Ni Acetate	0.00E+00	0.00E+00	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	67561	Methanol	0.00E+00	1.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	75092	Methylene Chlor	1.79E-04	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
2115	71432	Benzene	0.00E+00	0.00E+00	1.41E-05	0.00E+00	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.0%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kideneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiraotry system HI
 SKIN = skin HI
 EYE = eye HI
 BONE/TEETH = bones and teeth HI

ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway). Ordered by RESP HI (highest to lowest).

Table 60. MEISR Acute HI by Substance
Anaplex Corporation
Facility ID 016951
Paramount, California

Receptor ID	CAS Number	Chemical Name	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	Contribution
6728	1101	Fluorides&cmpds	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6728	7664393	HF	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-05	0.00E+00	2.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.2%
6728	7697372	Nitric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.8%
6728	7664939	Sulfuric Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.2%
6728	108883	Toluene	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	1.42E-05	1.42E-05	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6728	1330207	Xylenes	0.00E+00	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-05	0.00E+00	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6728	1310732	Sodium Hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E-04	5.91E-04	5.91E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.3%
6728	111762	EGBE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-06	0.00E+00	4.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	7647010	HCl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-06	0.00E+00	7.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6728	127184	Perc	0.00E+00	5.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-08	0.00E+00	5.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	7440508	Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6728	67630	Isopropyl Alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-05	0.00E+00	4.79E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4%
6728	78933	MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-02	0.00E+00	1.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	86.4%
6728	101688	MeDiphenDiisoc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.3%
6728	108952	Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.68E-06	0.00E+00	7.68E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.1%
6728	75569	Propylene Oxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-06	1.83E-06	0.00E+00	1.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	75070	Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-08	0.00E+00	3.78E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	107028	Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	7664417	NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-06	0.00E+00	4.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	7440622	Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-09	0.00E+00	4.20E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	57125	Cyanide cmpds	0.00E+00	2.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	7440020	Nickel	0.00E+00	0.00E+00	3.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	373024	Ni Acetate	0.00E+00	0.00E+00	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	50000	Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	67561	Methanol	0.00E+00	1.79E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	75092	Methylene Chlor	1.44E-05	1.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0%
6728	71432	Benzene	0.00E+00	0.00E+00	1.23E-06	0.00E+00	0.00E+00	1.23E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-06	0.00E+00	0.00E+00	0.0%

Abbreviations:

CV = cardiovascular system HI
 CNS = central nervous system HI
 IMMUN = immune system HI
 KIDNEY = kideneys HI
 GILV = gastrointestinal System and liver HI

REPRO/DEVEL = reproduction and developmental HI
 RESP = respiration system HI
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ENDO = endocrine system HI
 BLOOD = blood HI
 ODOR = response to odors HI
 GENERAL = general toxicity HI
 MAXHI = maximum hazard index

INH = inhalation
 MMILK = Mother's Milk

Note:

1. Chemicals with RESP HI are shown (MAXHI pathway). Ordered by RESP HI (highest to lowest).

**Table 61. Cancer Risk Summary for Alternate
HRA Anaplex Corporation
Facility ID 016951
Paramount, California**

Location	Risk	Receptor #
<i>Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records</i>		
<i>Filter control efficiency = 90%</i>		
Point of Maximum Impact (PMI)	93,625	6
Maximally Exposed Individual Resident (MEIR)	356	2115
Maximally Exposed Individual Worker (MEIW)	5,133	1391
Maximally Exposed Individual Sensitive Receptor (MEISR)	39	6728
<i>Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records</i>		
<i>Manufacturer filter control efficiency = 95%</i>		
Point of Maximum Impact (PMI)	31,499	6
Maximally Exposed Individual Resident (MEIR)	127	2115
Maximally Exposed Individual Worker (MEIW)	1730	1391
Maximally Exposed Individual Sensitive Receptor (MEISR)	14	6728
<i>Actual Spray Booth #2 Chromate-Containing Paint Usage</i>		
<i>Manufacturer spray booth filter control efficiency = 95%</i>		
Point of Maximum Impact (PMI)	15,971	6
Maximally Exposed Individual Resident (MEIR)	69	2115
Maximally Exposed Individual Worker (MEIW)	879	1391
Maximally Exposed Individual Sensitive Receptor (MEISR)	8	6728

Table 62. HRA Results Compared to SCAQMD Rule 1402 Risk Levels
Anaplex Corporation
Facility ID 016951
Paramount, California

Health End Point	HRA Results	SCAQMD Rule 1402 Action Risk Level	Exceed Rule 1402 Action Level?	SCAQMD Public Notification Level	Exceed Public Notification Level
Cancer (per million)	5,133	25	Yes	10	Yes
Cancer Burden	3.6	0.5	Yes	-	-
Chronic HI	1.46	3	No	1	Yes
Acute HI	24	3	Yes	1	Yes
Ambient Air Lead Concentration ¹	0.1157	-	-	0.15	No

Note:

¹ The Notification Risk Level for lead is the more stringent of either the NAAQS for lead or an ambient lead concentration limit in an applicable SCAQMD rule. The modeled maximum one-hour average concentration of lead at the PMI was below the NAAQS (a quarterly average standard) and any applicable SCAQMD rules.

FIGURES



Z:\Projects\Anaplex\GIS\Revised_Sep_2018\Figure 1_Site Location.mxd

Legend
 Site Boundary



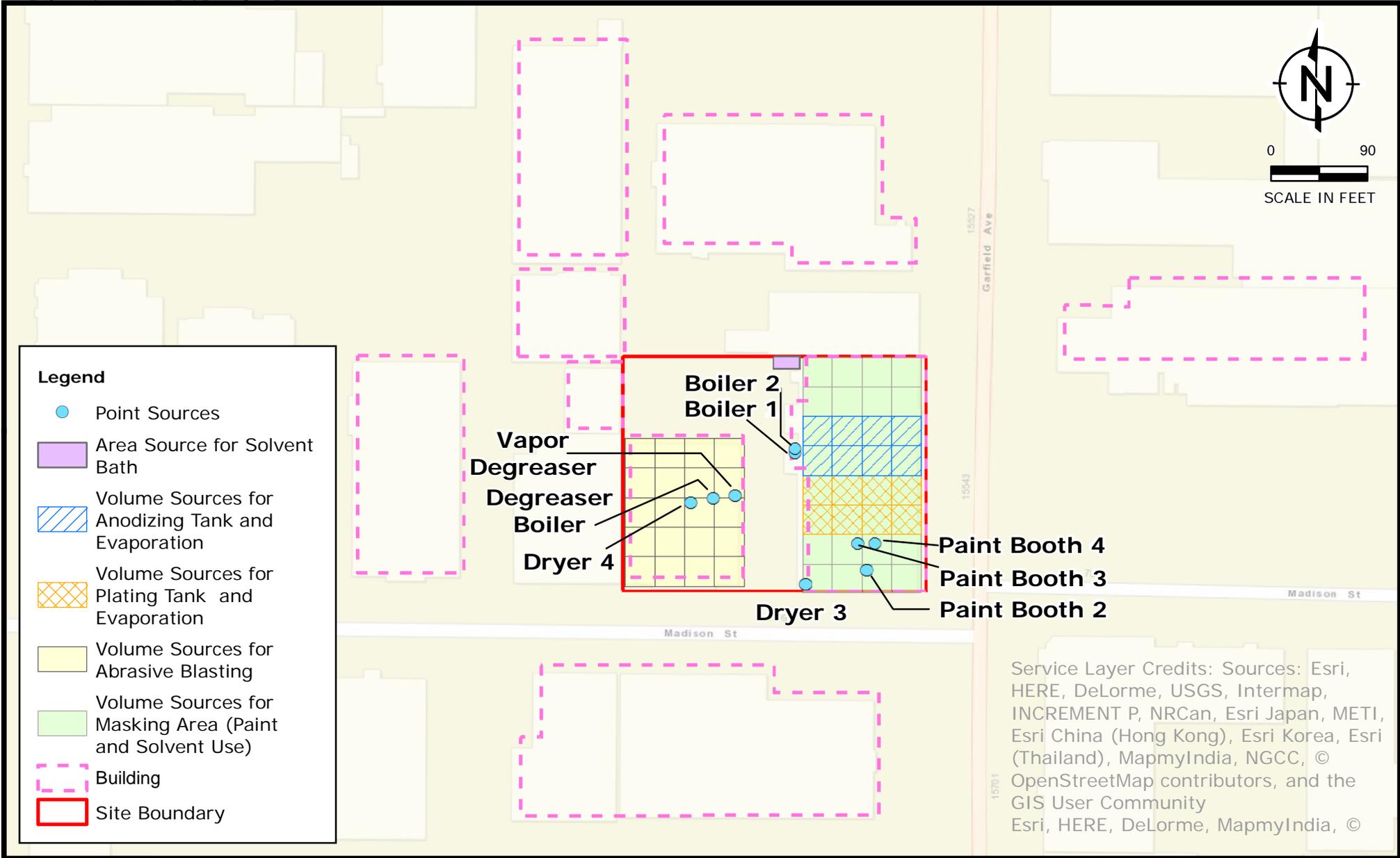
Site Location
 Anaplex Corporation
 15547 Garfield Ave
 Paramount, California

FIGURE
1

PROJECT: 1690003769

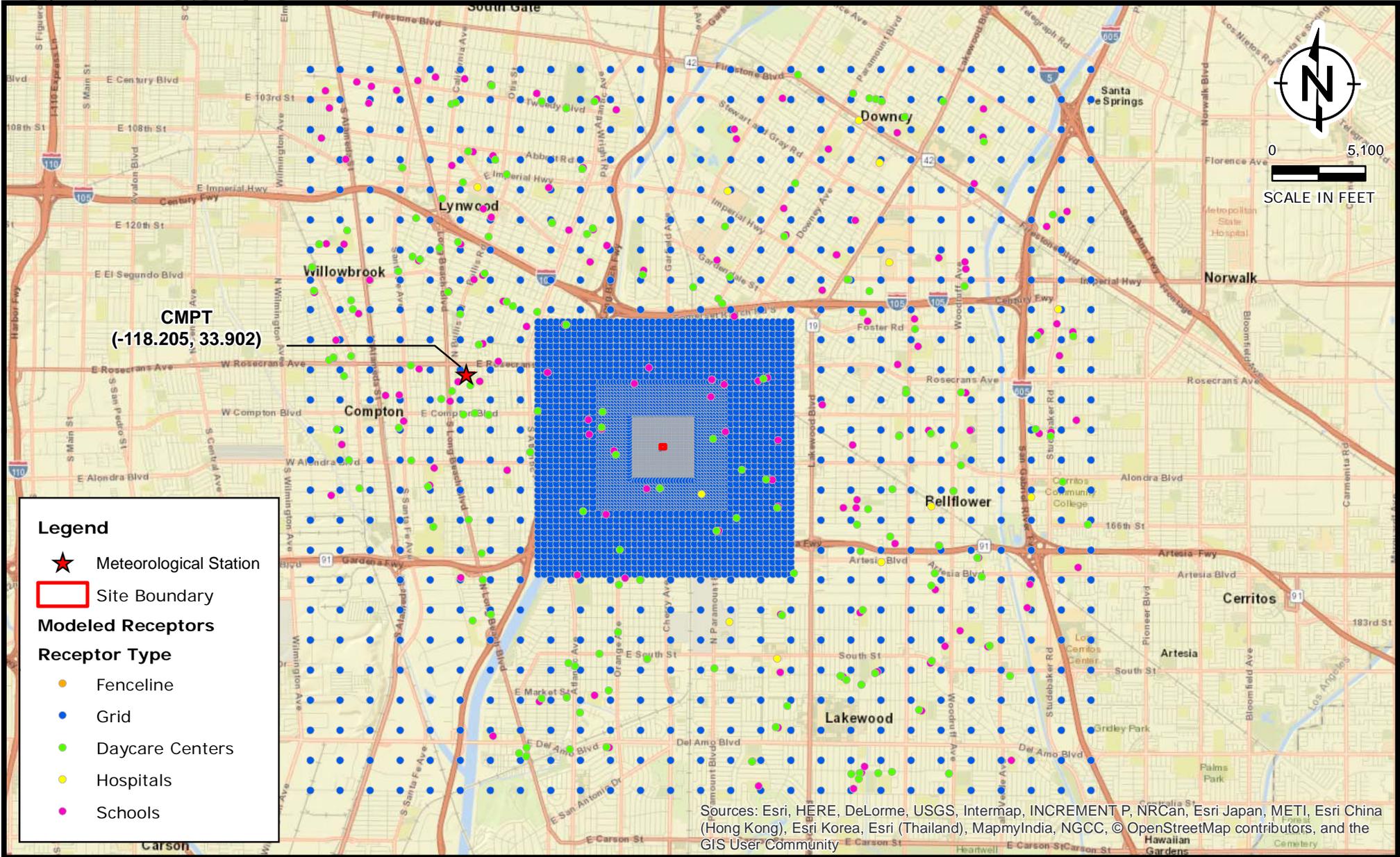
DRAFTED BY: MG

DATE: 9/21/2018



Site Plot Plan with Sources and Buildings

**FIGURE
2**



Legend

- ★ Meteorological Station
- Site Boundary

Modeled Receptors

Receptor Type

- Fenceline
- Grid
- Daycare Centers
- Hospitals
- Schools

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

RAMBOLL

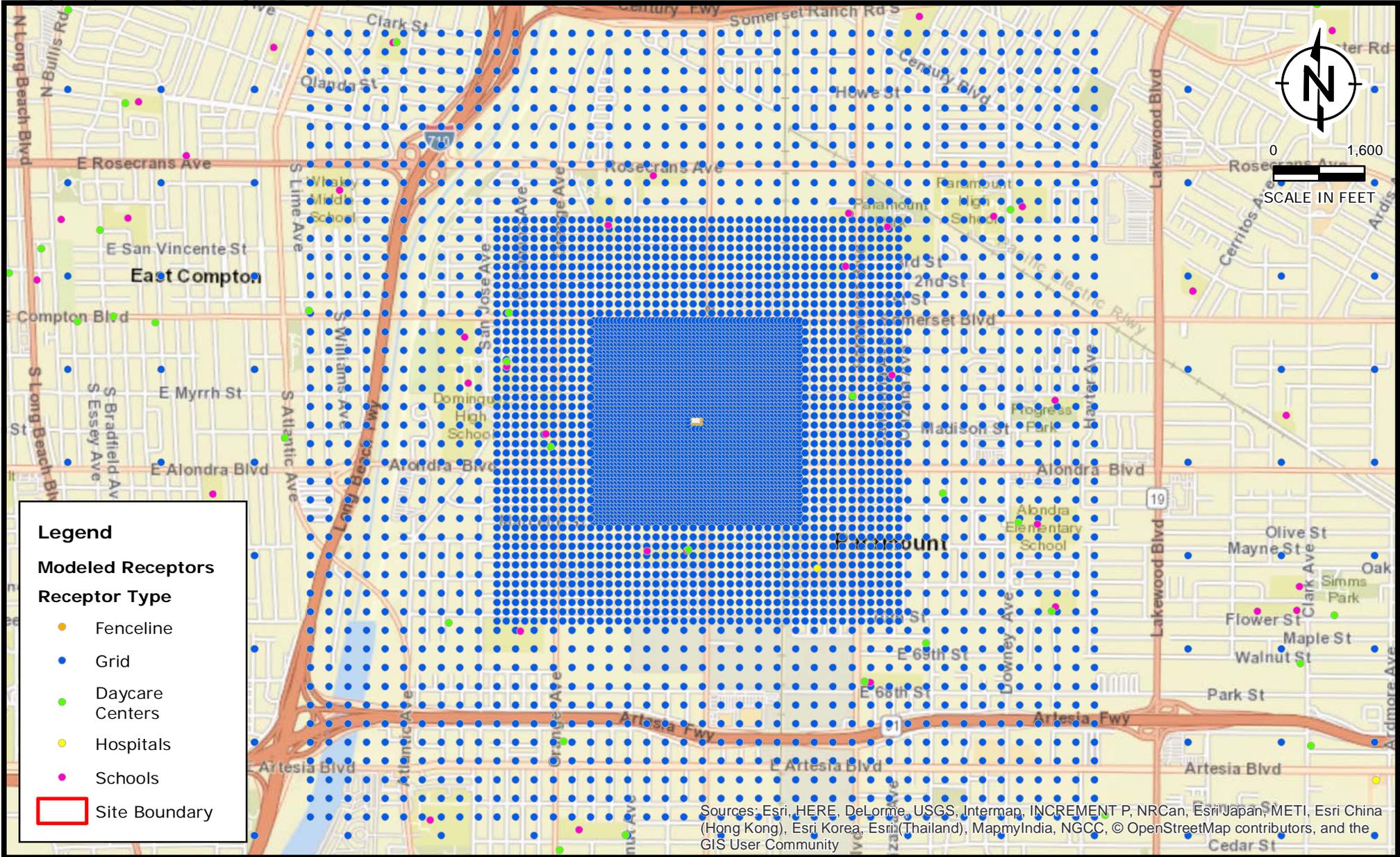
DRAFTED BY: MG DATE: 9/21/2018

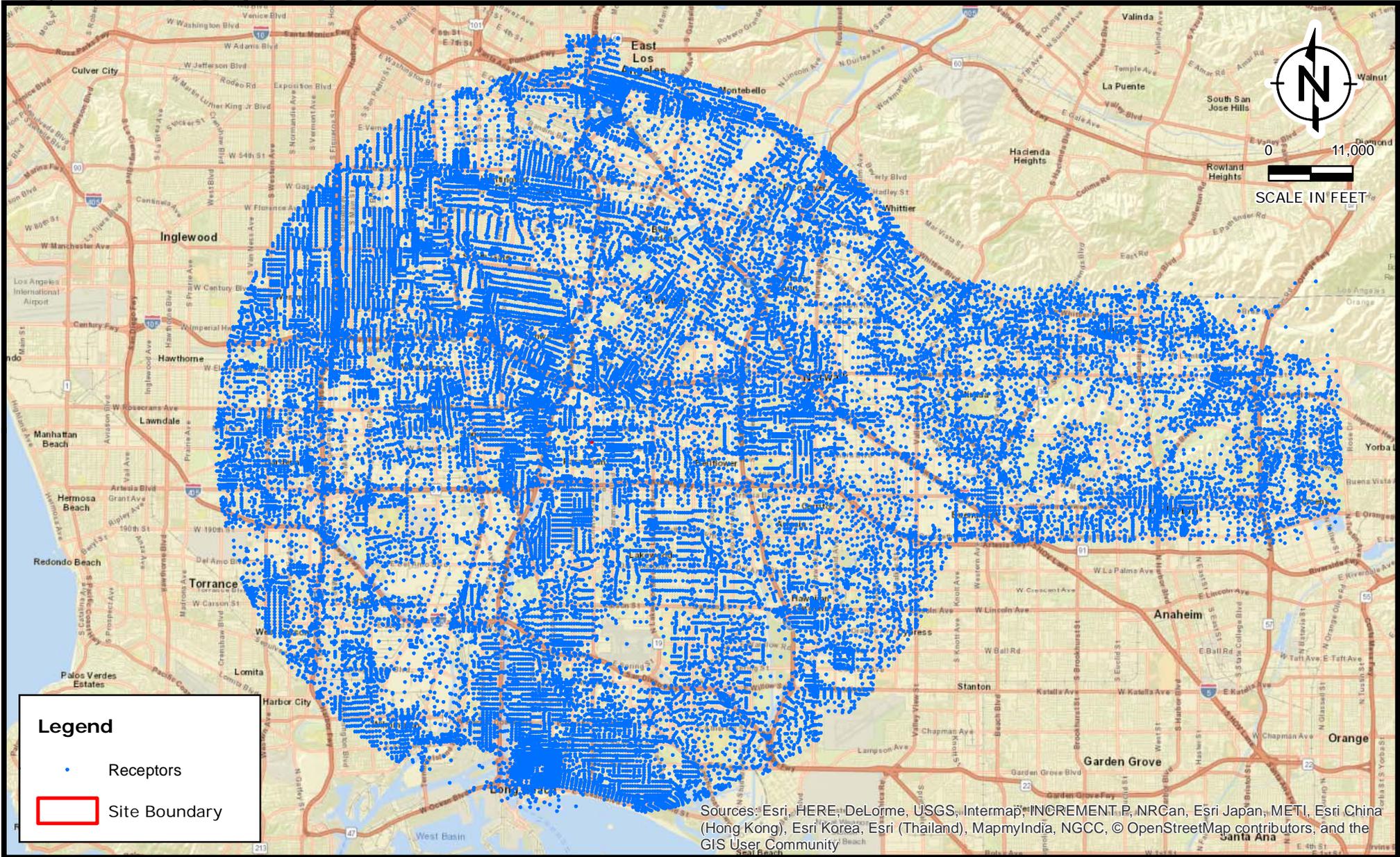
Receptors (500 Meter Grid Extent) and Meteorological Station

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE 3a

PROJECT: 1690003769



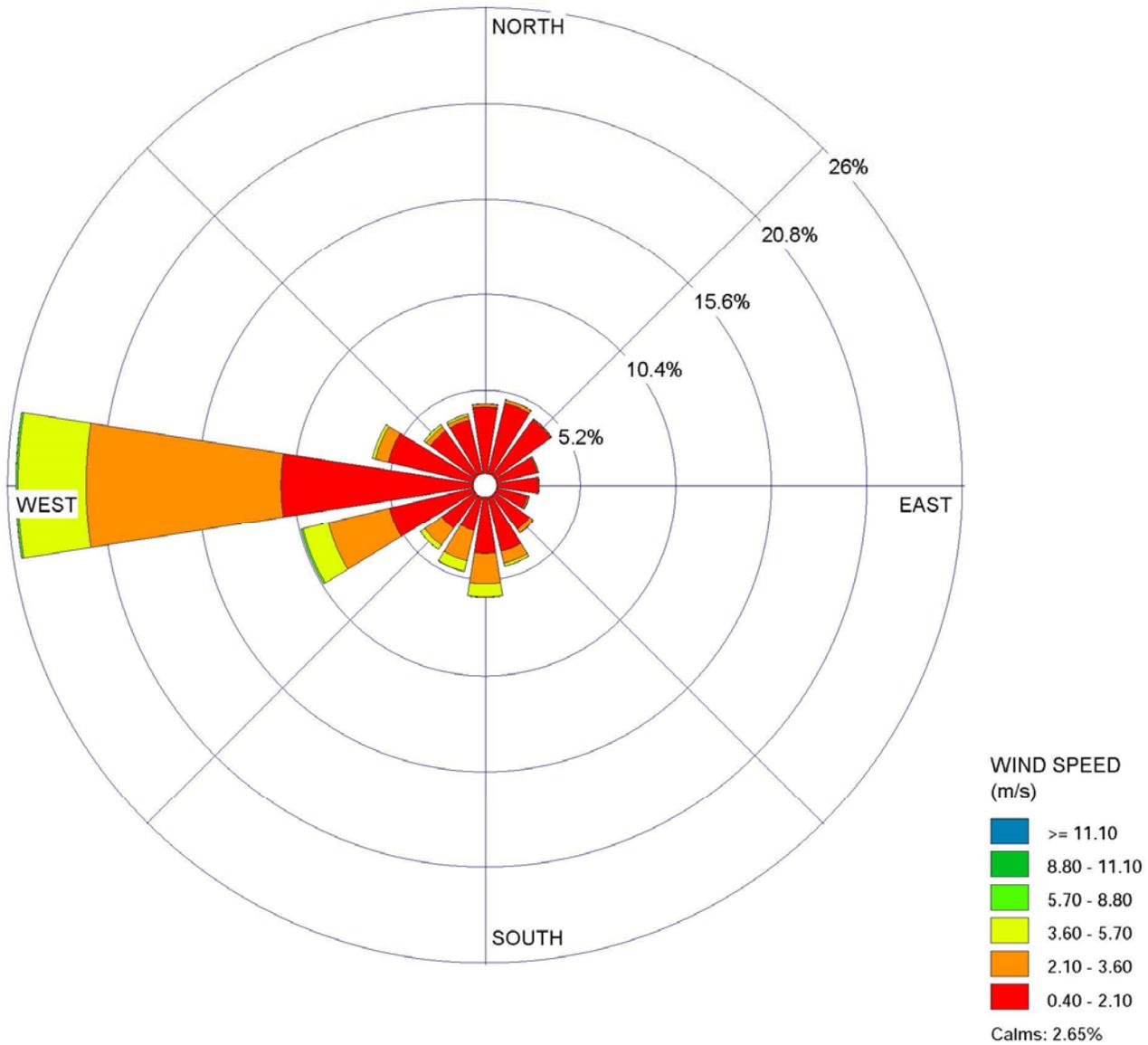


Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



Census Tract Centroid Receptors AB2588 AQMD Operating Schedule

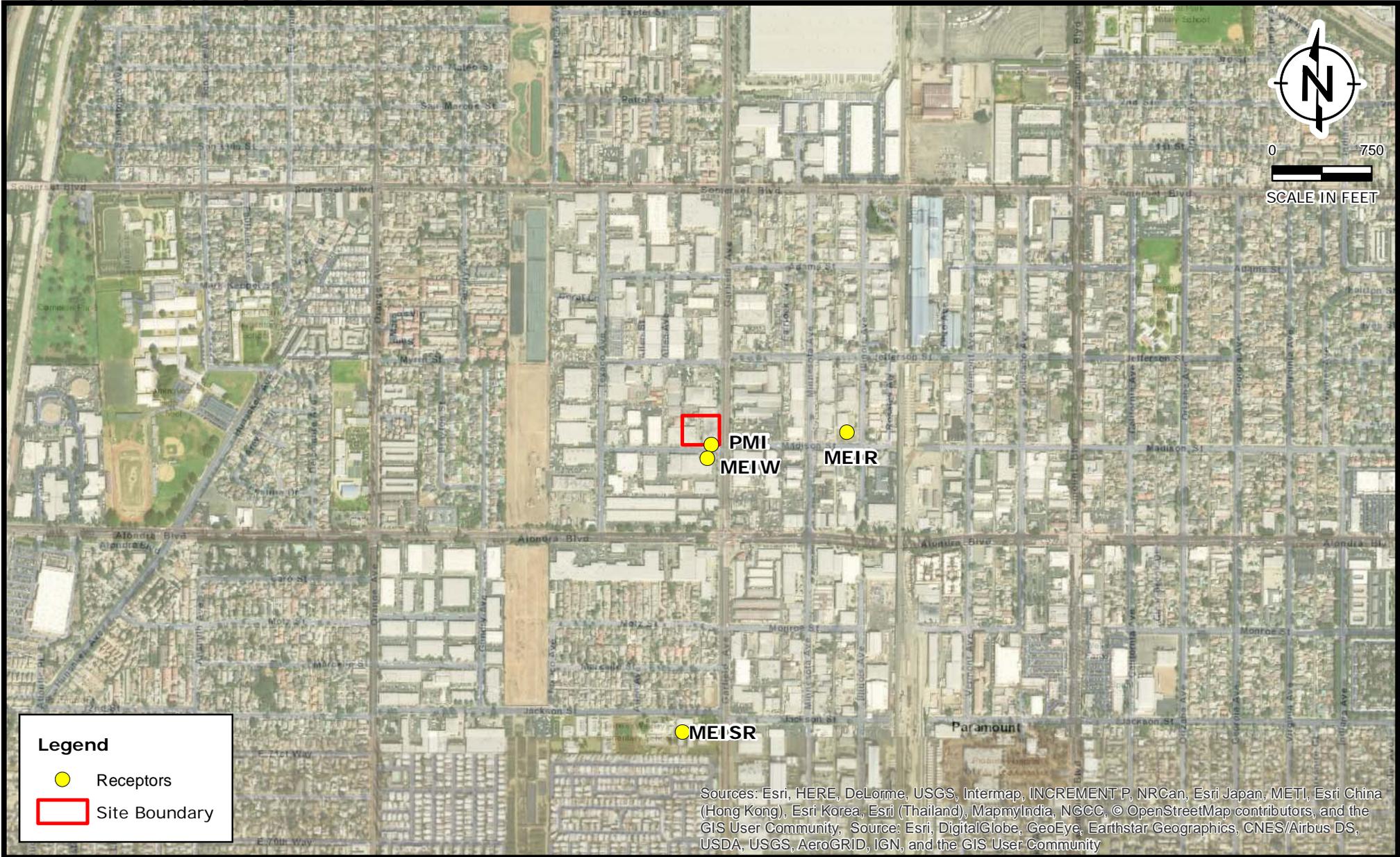
FIGURE
3d



Wind Rose for Compton Station

Anaplex Corporation
15547 Garfield Ave, Paramount, California

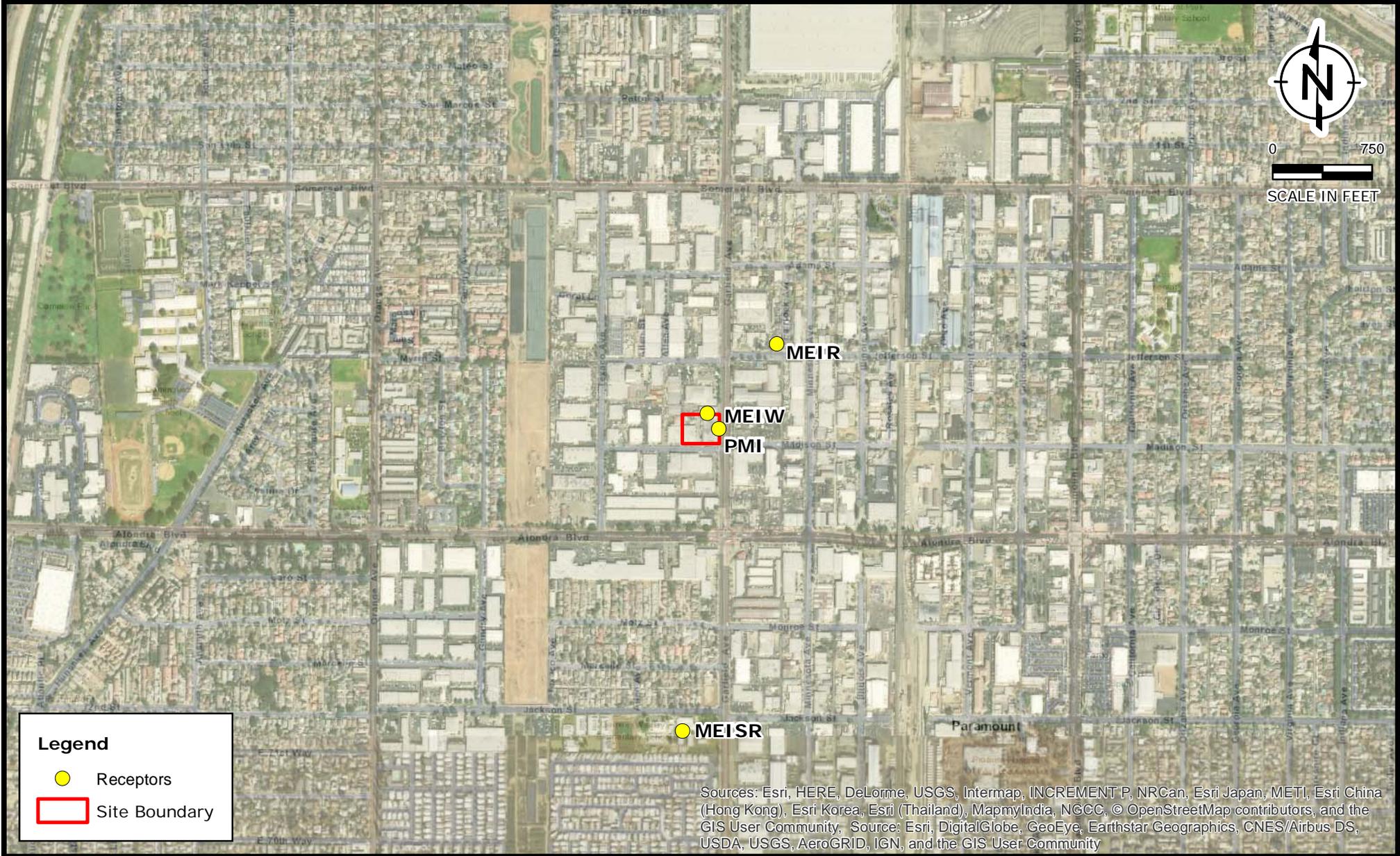
FIGURE
4



**Locations of PMI, MEIR, MEIW, and MEISR for Cancer Risk
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
5**



Legend

- Receptors
- Site Boundary

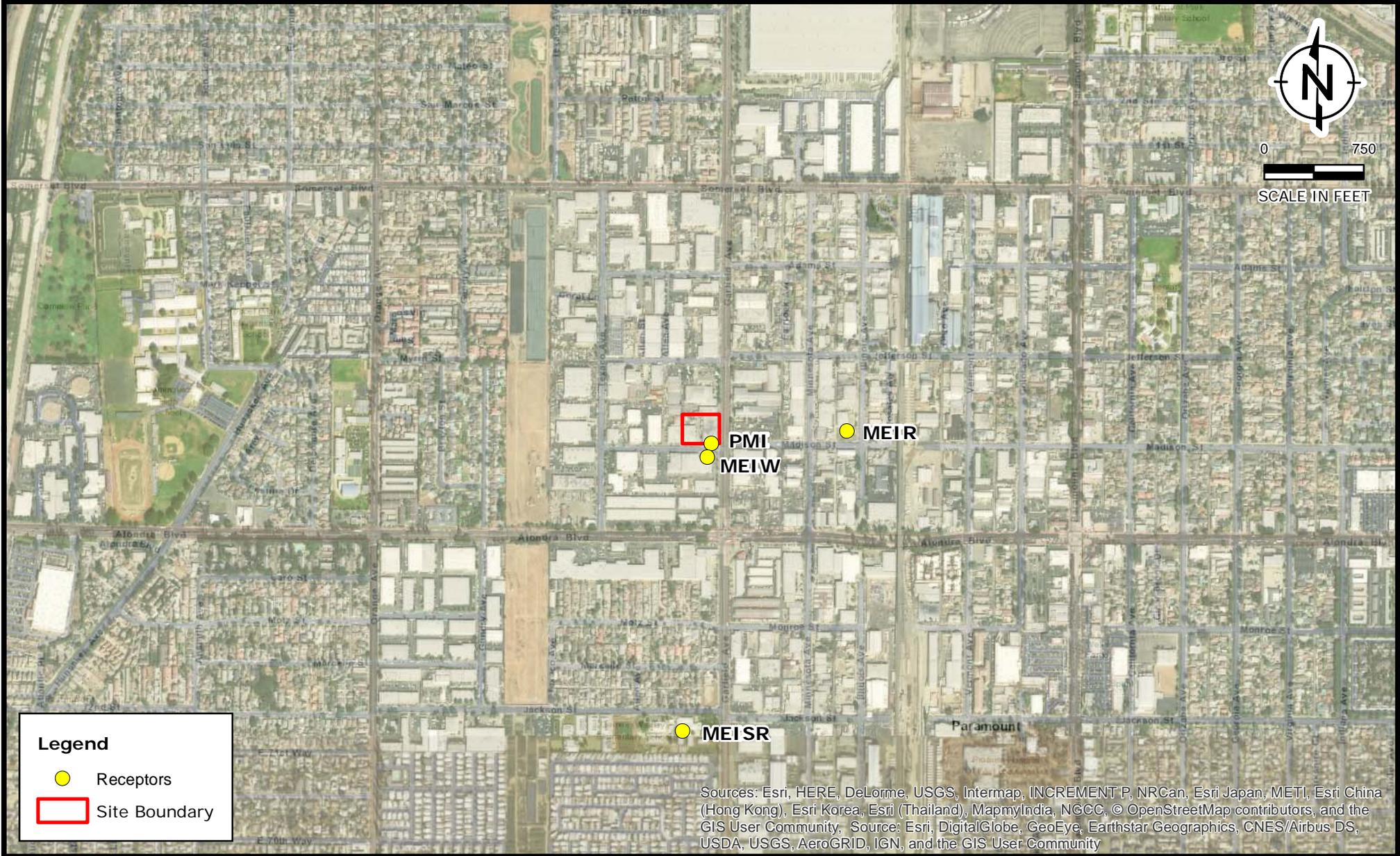
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Locations of PMI, MEIR, MEIW, and MEISR for Chronic Hazard Index
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
6**



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



DRAFTED BY: MG

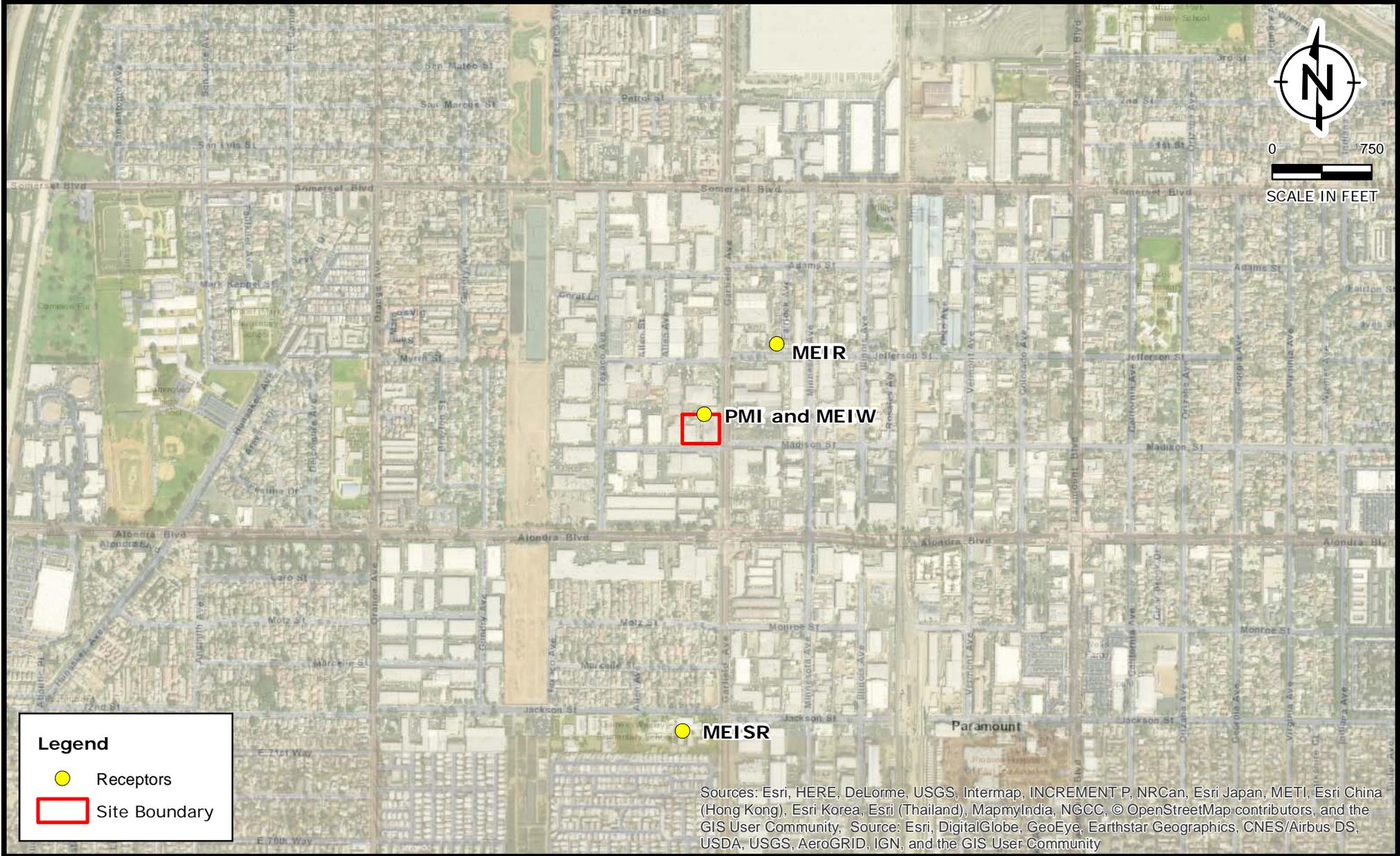
DATE: 9/21/2018

Locations of PMI, MEIR, MEIW, and MEISR for 8-hour Chronic Hazard Index AB2588 AQMD Operating Schedule

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE 7

PROJECT: 1690003769



Legend

- Receptors
- Site Boundary

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



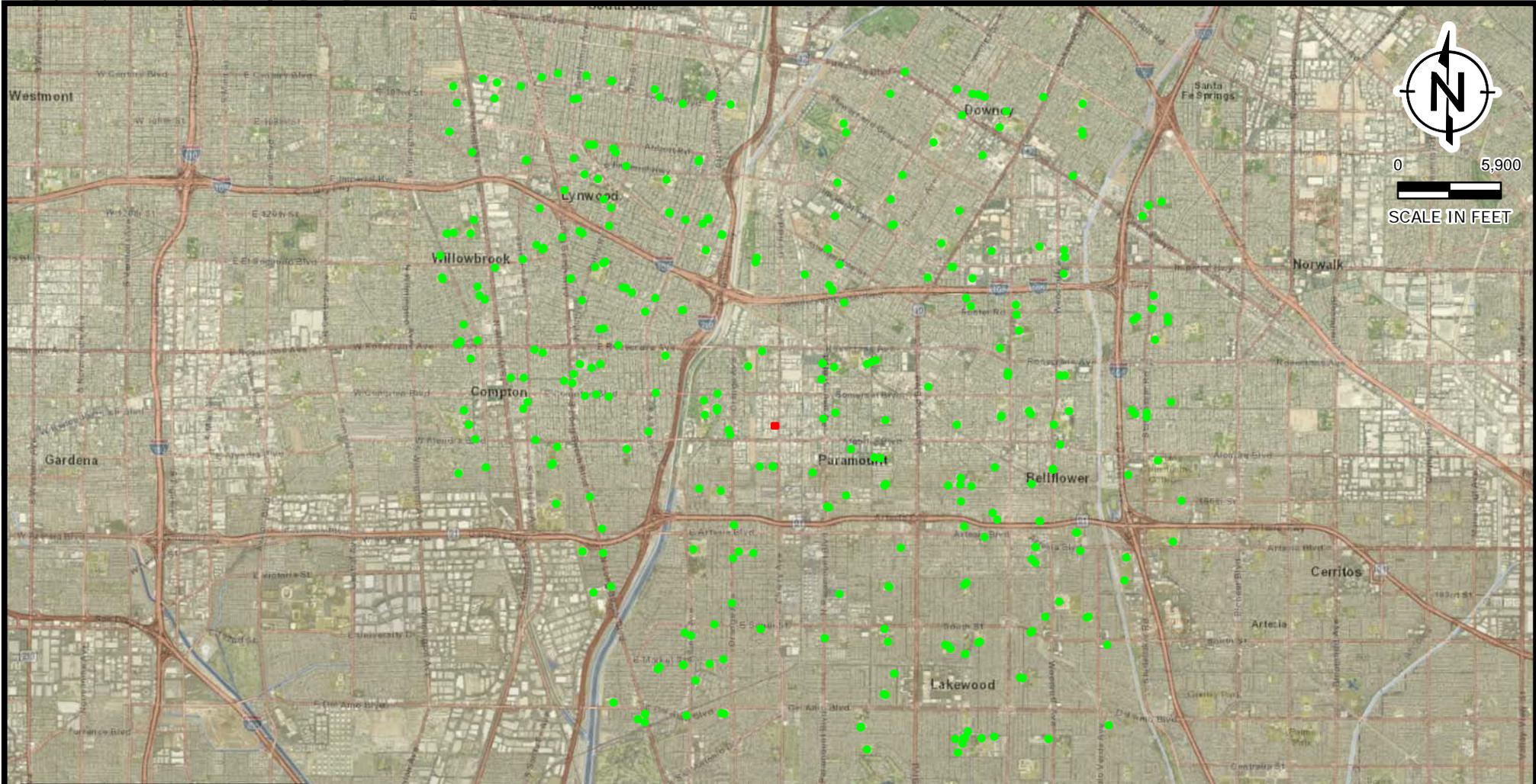
DRAFTED BY: MG DATE: 9/25/2018

**Locations of PMI, MEIR, MEIW, and MEISR for Acute Hazard Index
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
8**

PROJECT: 1690003769



Legend

- Cancer Risk > 1×10^{-6}
- Site Boundary

Notes:

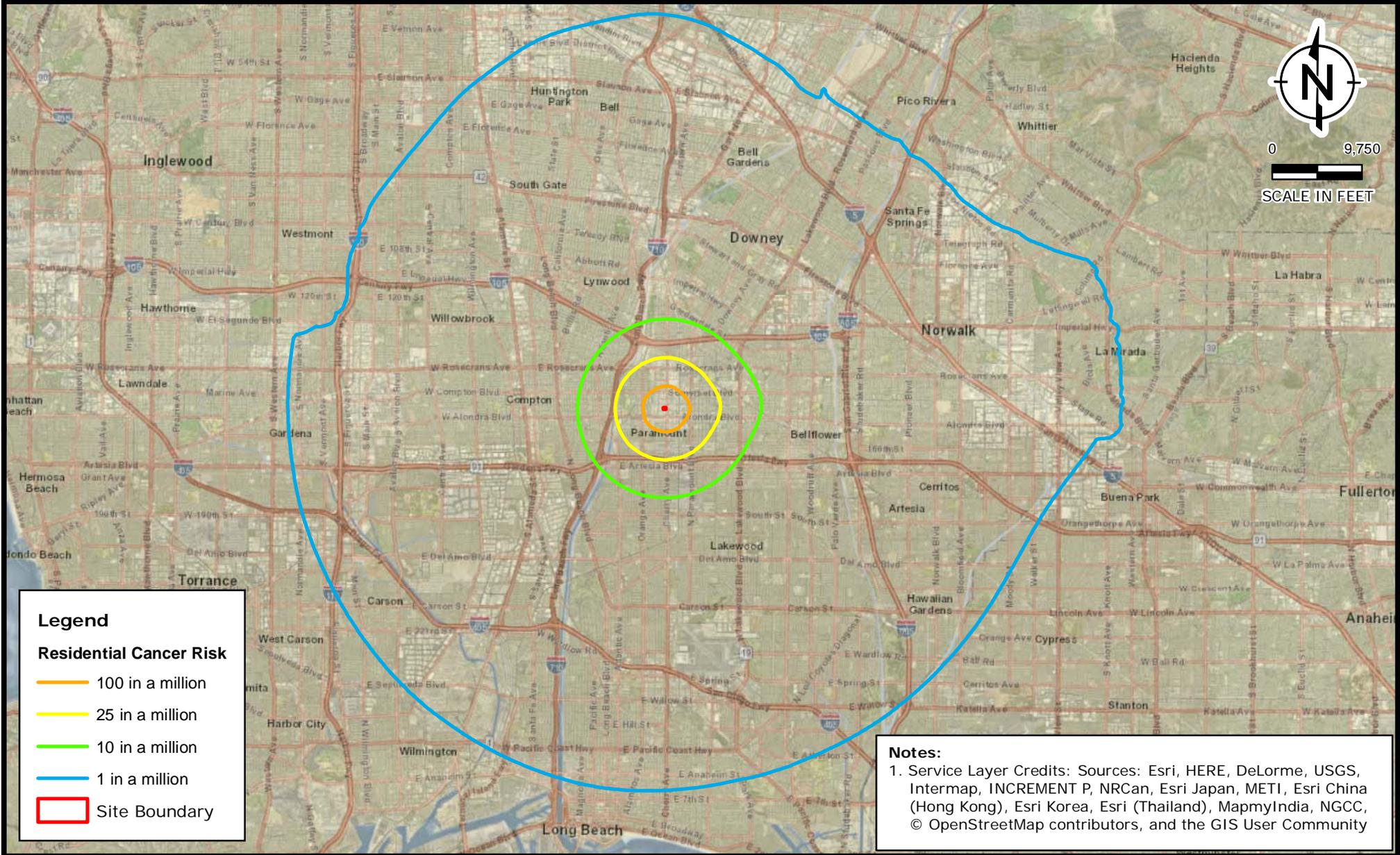
1. No sensitive receptors exceed Chronic Hazard Index (CHI) of 0.5.
2. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



**Sensitive Receptors with Cancer Risk > 1 in a Million & CHI > 0.5
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
9**



**Residential Cancer Risk Isopleths (30-Year Exposure)
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

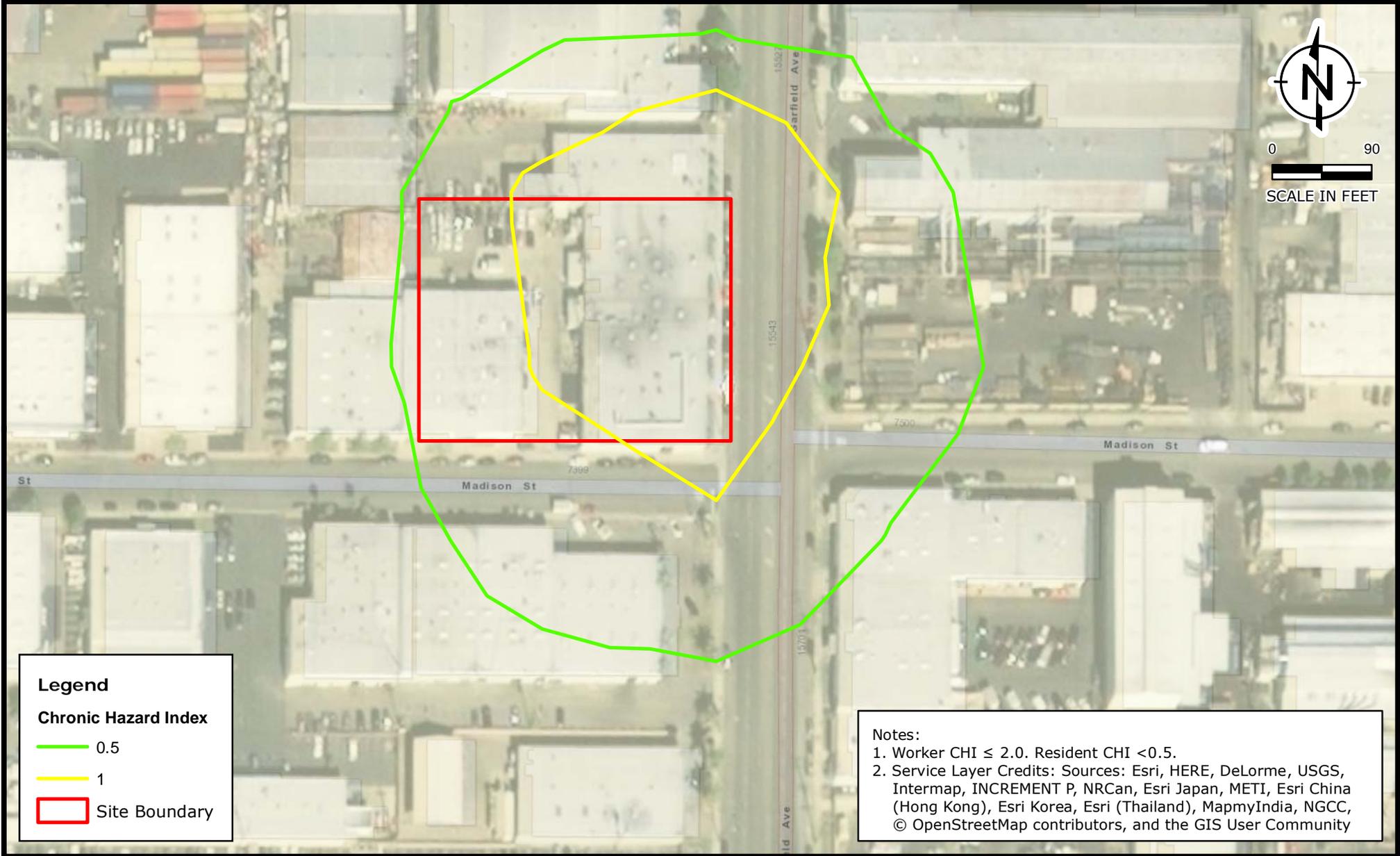
**FIGURE
10**



**Worker Cancer Risk Isoleths
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

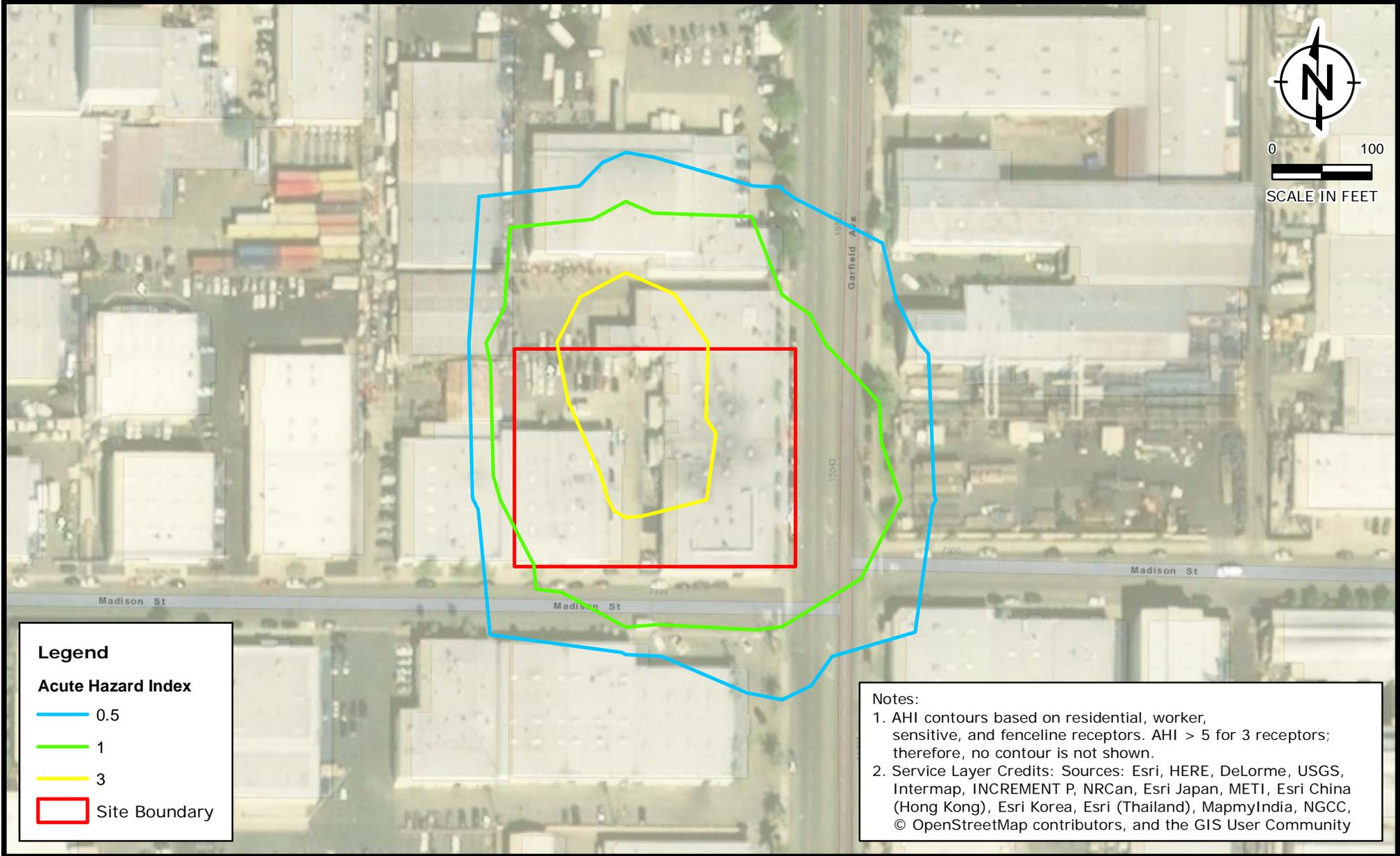
**FIGURE
11**



**Worker Chronic Hazard Index Isopleths
AB2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
12**



Legend

Acute Hazard Index

- 0.5
- 1
- 3
- Site Boundary

Notes:

1. AHI contours based on residential, worker, sensitive, and fence-line receptors. AHI > 5 for 3 receptors; therefore, no contour is not shown.
2. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



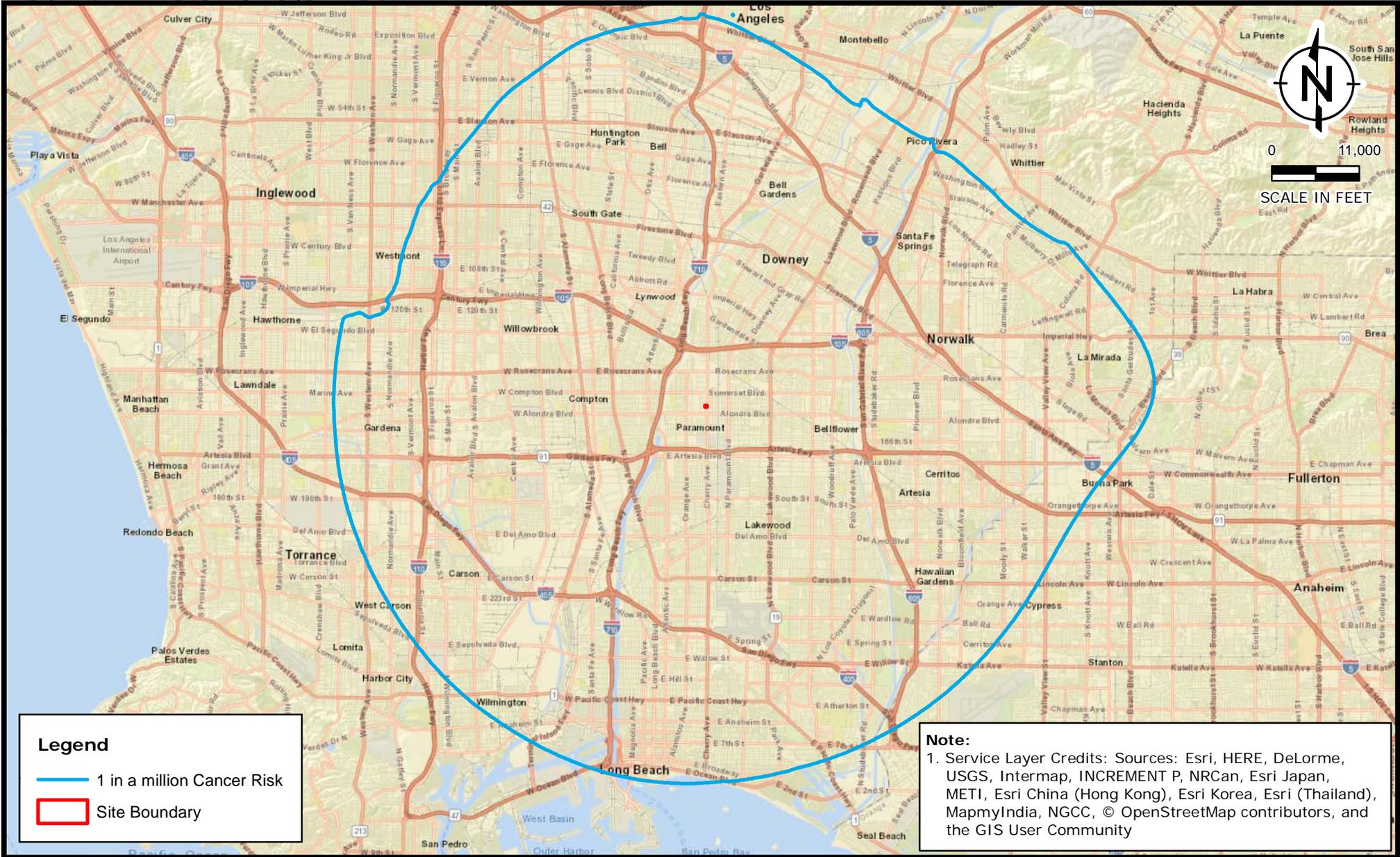
DRAFTED BY: MG DATE: 9/25/2018

Acute Hazard Index Isopleths
AB2588 AQMD Operating Schedule

Anaplex Corporation
 15547 Garfield Ave, Paramount, California

FIGURE
13

PROJECT: 1690003769



Legend

- 1 in a million Cancer Risk
- Site Boundary

Note:

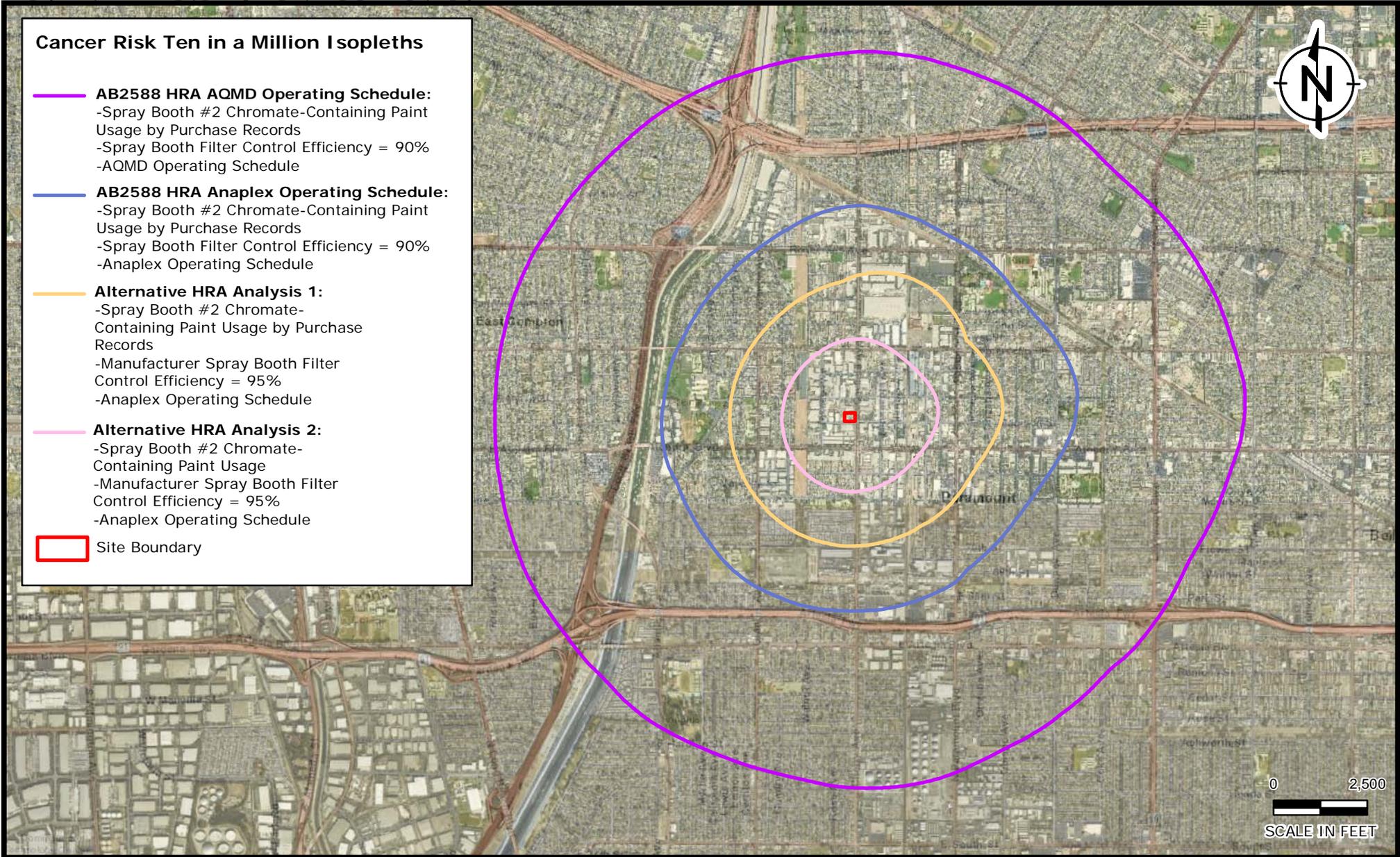
1. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



**One in a Million Isopleth Based on 70-Year Residential Exposure
AB 2588 AQMD Operating Schedule**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

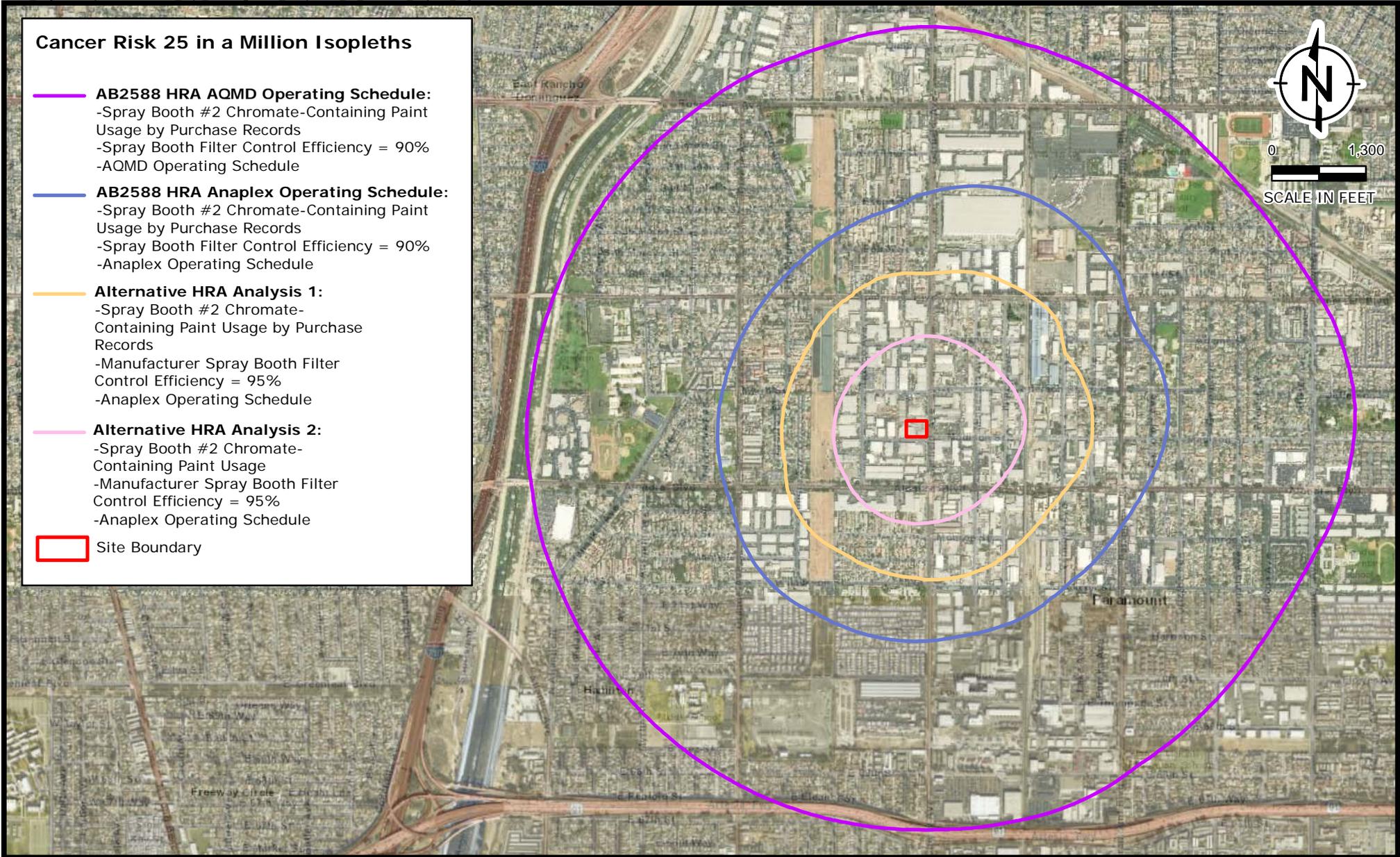
**FIGURE
14**



Comparison of Residential Cancer Risk Ten in a Million Isopleths 30-year Exposure

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE
15



Cancer Risk 25 in a Million Isoleths

- **AB2588 HRA AQMD Operating Schedule:**
 - Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records
 - Spray Booth Filter Control Efficiency = 90%
 - AQMD Operating Schedule
- **AB2588 HRA Anaplex Operating Schedule:**
 - Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records
 - Spray Booth Filter Control Efficiency = 90%
 - Anaplex Operating Schedule
- **Alternative HRA Analysis 1:**
 - Spray Booth #2 Chromate-Containing Paint Usage by Purchase Records
 - Manufacturer Spray Booth Filter Control Efficiency = 95%
 - Anaplex Operating Schedule
- **Alternative HRA Analysis 2:**
 - Spray Booth #2 Chromate-Containing Paint Usage
 - Manufacturer Spray Booth Filter Control Efficiency = 95%
 - Anaplex Operating Schedule
- Site Boundary



DRAFTED BY: MG DATE: 9/21/2018

**Comparison of Residential Cancer Risk 25 in a Million Isoleths
30-year Exposure**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
16**

PROJECT: 1690003769



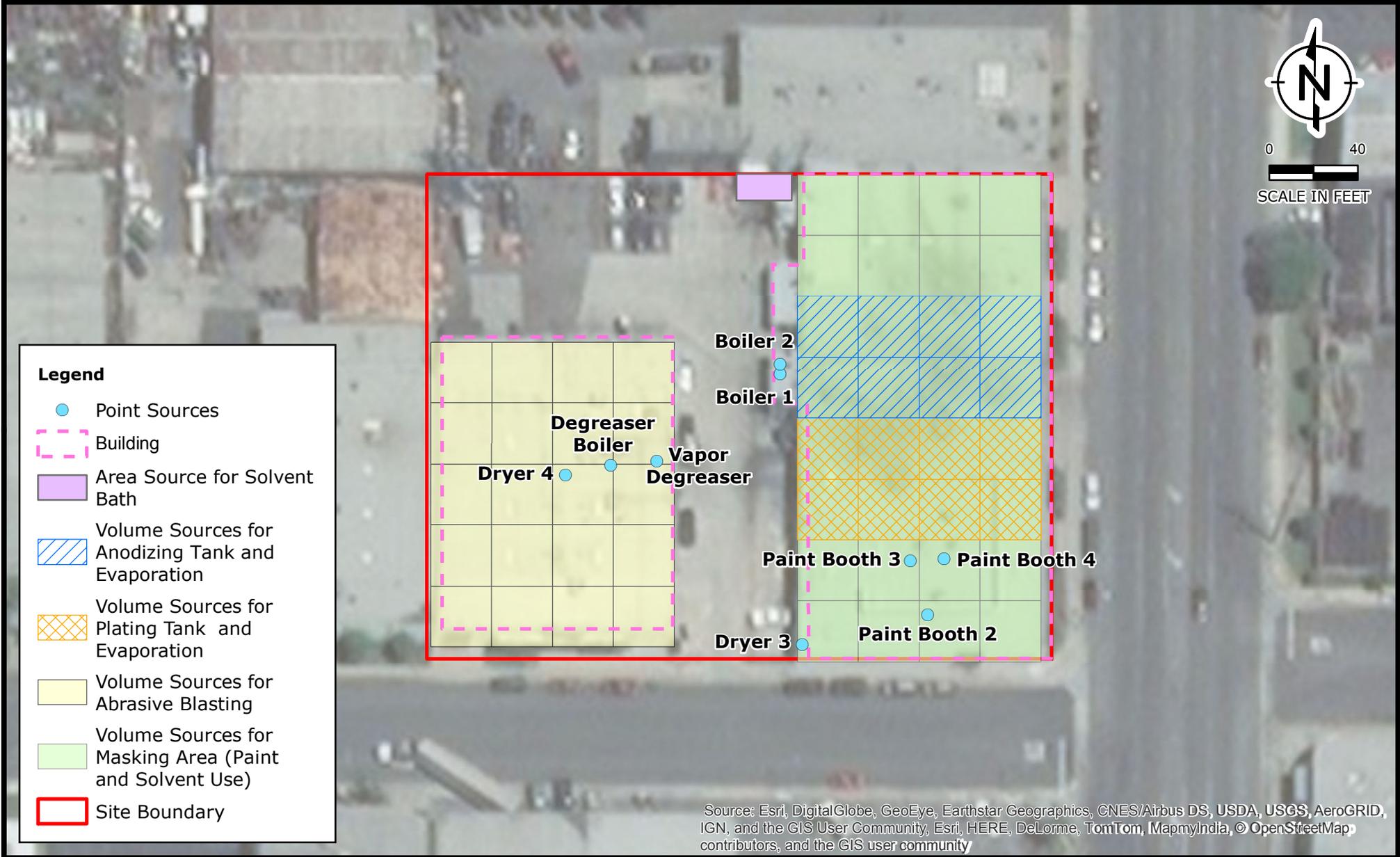
Legend
 Site Boundary



Site Location
 Anaplex Corporation
 15547 Garfield Ave
 Paramount, California

FIGURE
17

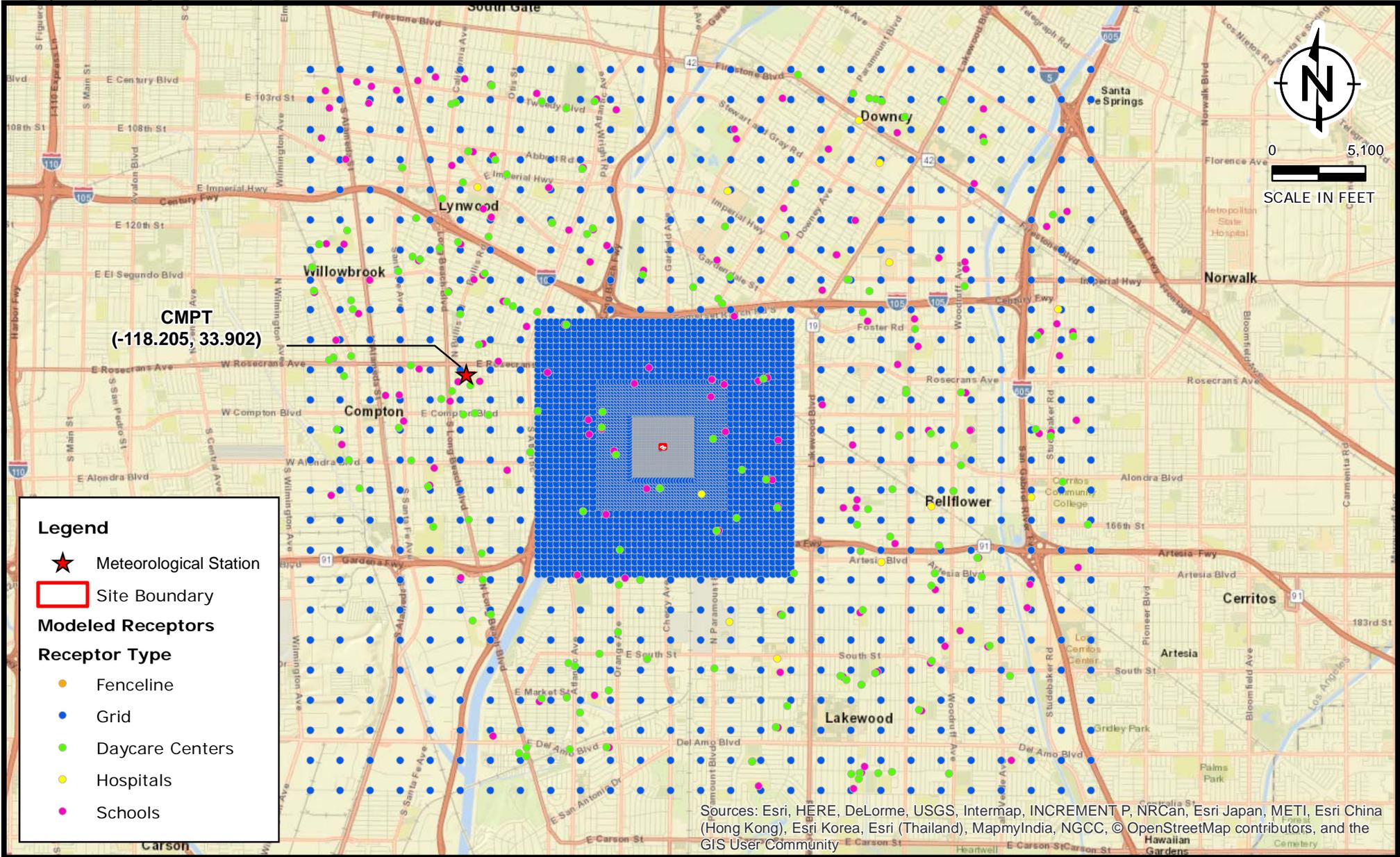
Z:\Projects\Anaplex\GIS\Figure 1_Site Location_20180502.mxd



Site Plot Plan with Sources and Buildings

**FIGURE
18**

Anaplex Corporation
15547 Garfield Ave, Paramount, California



Legend

- ★ Meteorological Station
- Site Boundary

Modeled Receptors

Receptor Type

- Fenceline
- Grid
- Daycare Centers
- Hospitals
- Schools

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

RAMBOLL

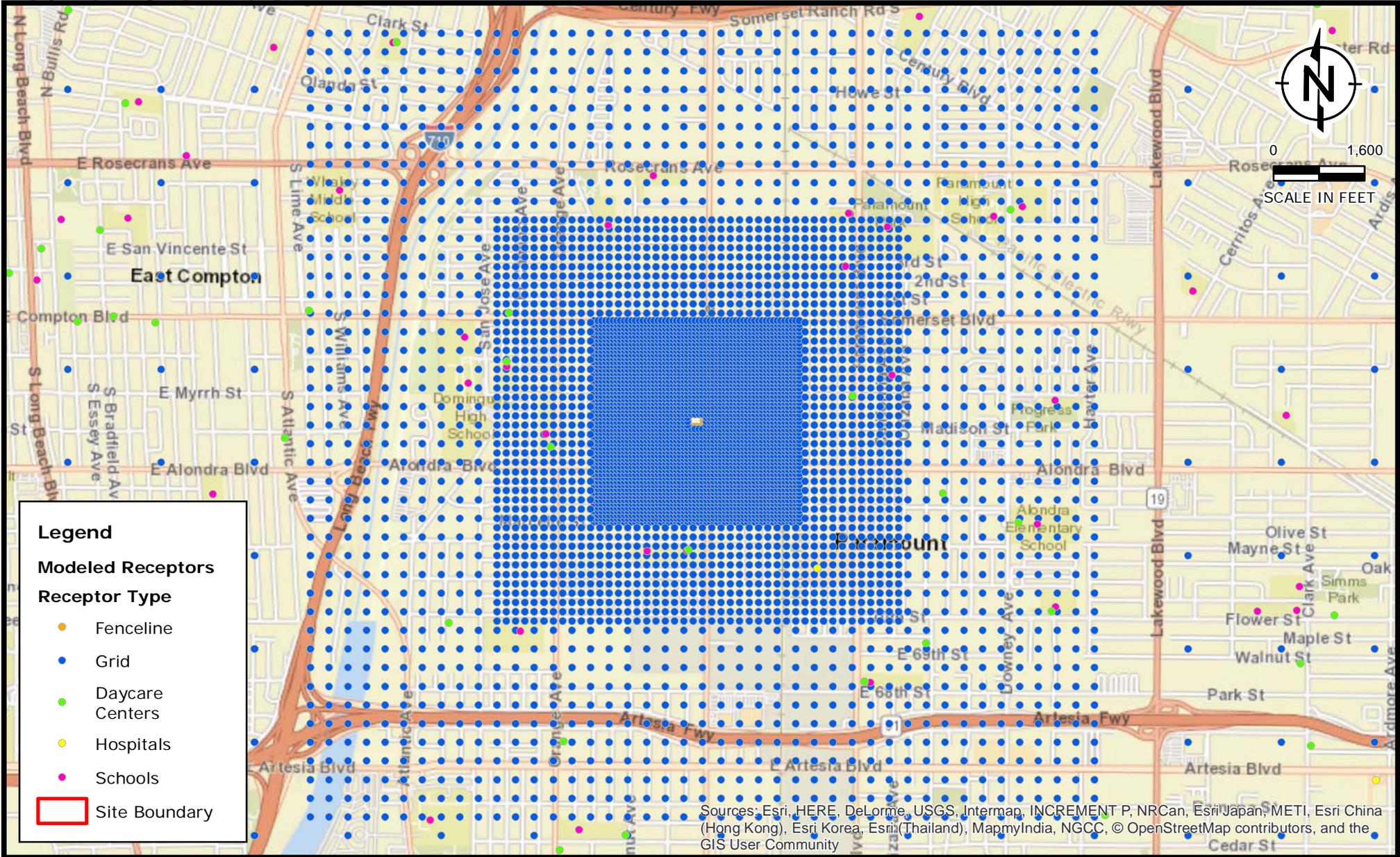
DRAFTED BY: MG DATE: 5/4/2018

Receptors (500 Meter Grid Extent) and Meteorological Station

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE 19a

PROJECT: 1690003769

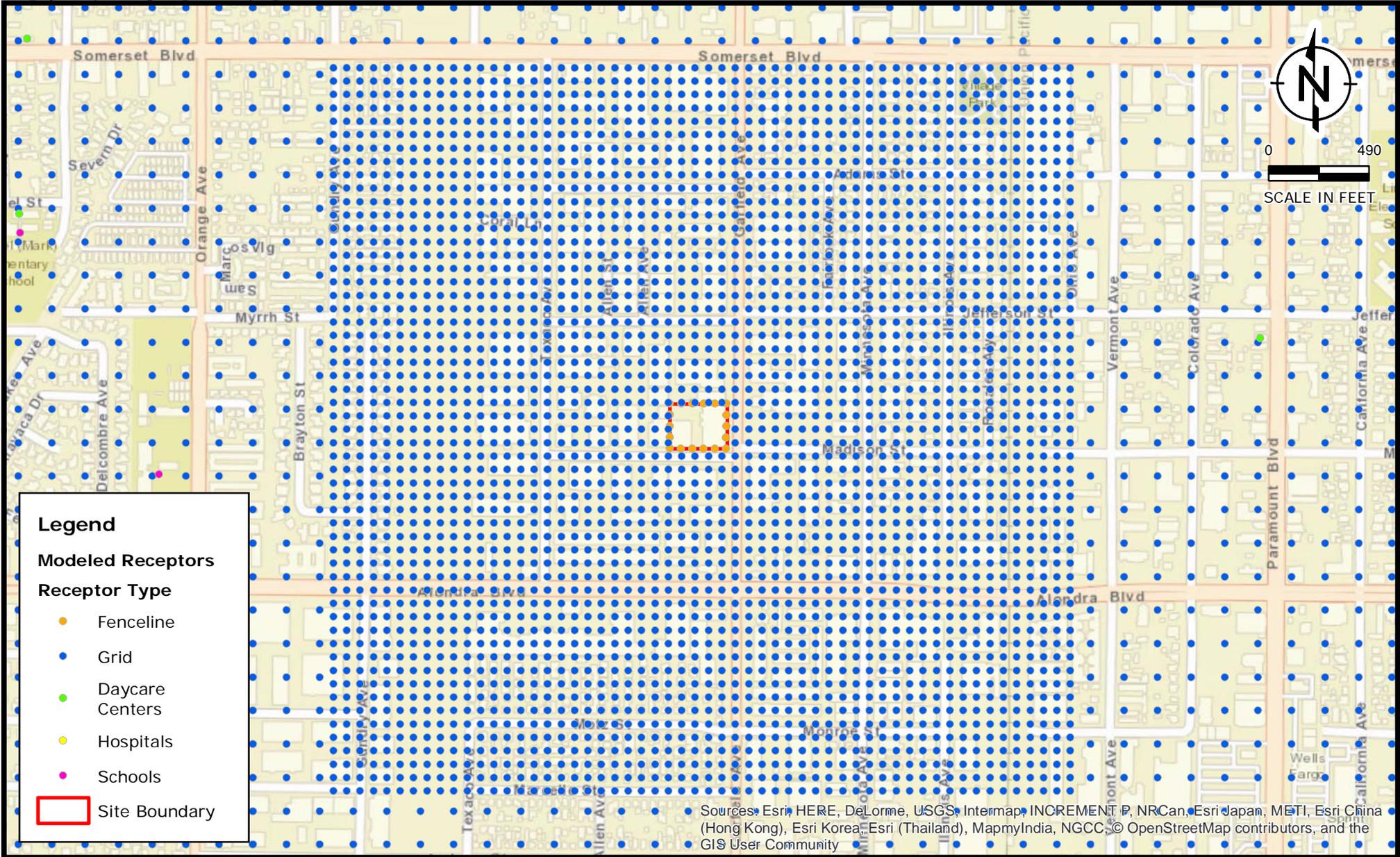


Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



Receptors (100 Meter Grid Extent)

FIGURE 19b



Legend

Modeled Receptors

Receptor Type

- Fenceline
- Grid
- Daycare Centers
- Hospitals
- Schools
- Site Boundary

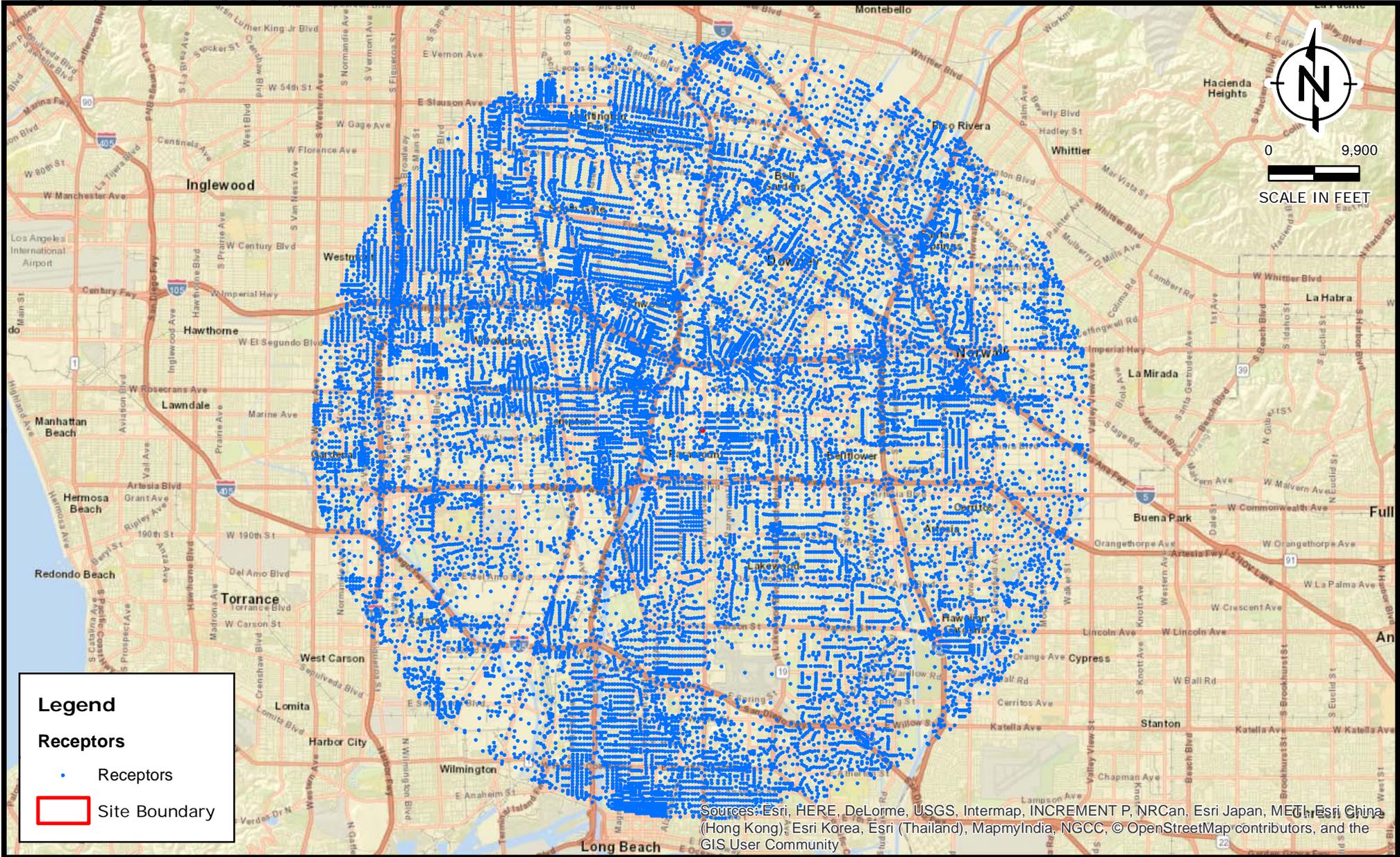
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



Receptors (20 Meter Grid Extent)

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
19c**



Legend

Receptors

- Receptors
- ▭ Site Boundary

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, MEIT, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



Census Tract Centroid Receptors

Anaplex Corporation
15547 Garfield Ave, Paramount, California

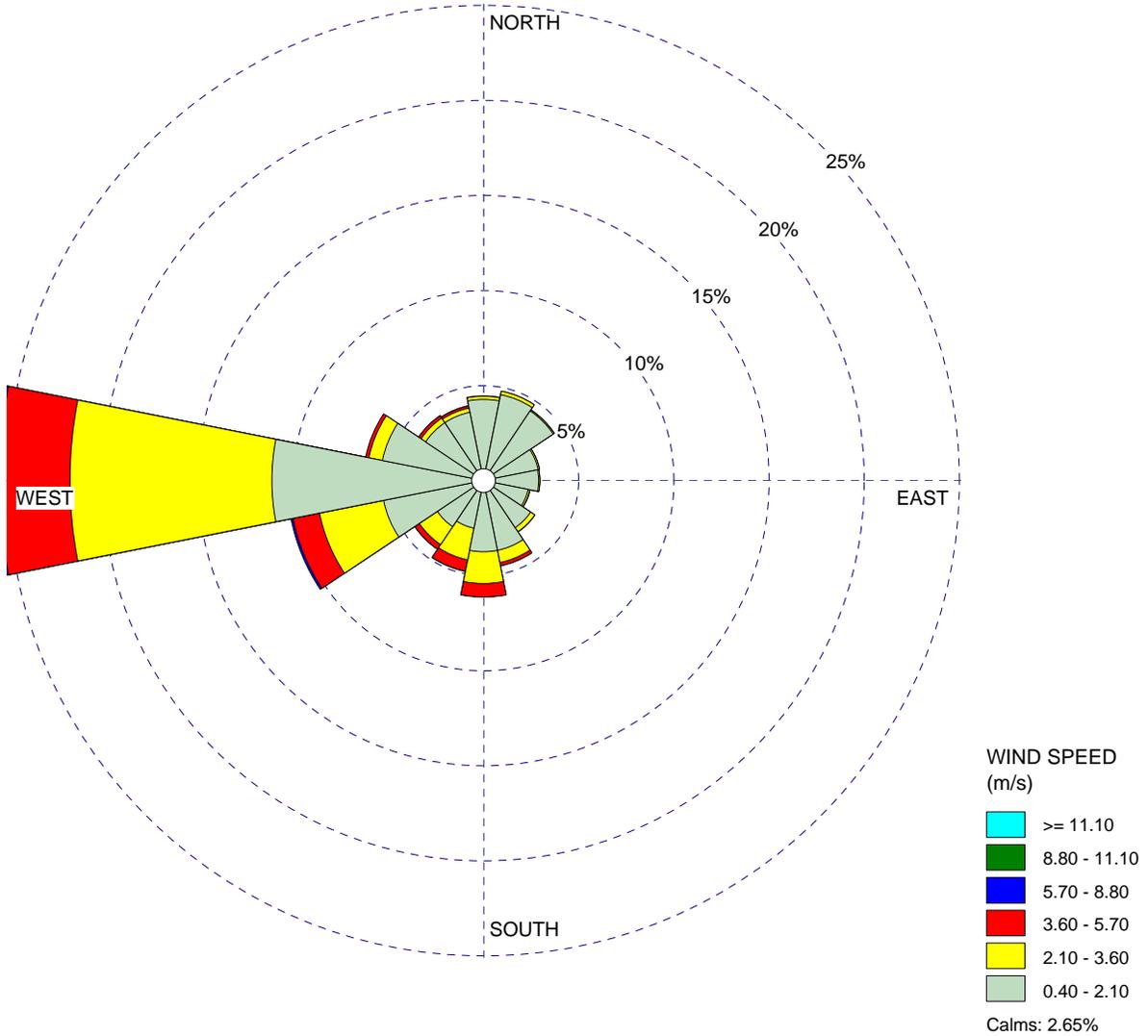
**FIGURE
19d**

WIND ROSE PLOT:

Figure 20. Wind Rose for Compton Station Year 2012, 2015, 2016

DISPLAY:

**Wind Speed
Direction (blowing from)**



COMMENTS:

DATA PERIOD:

**Start Date: 1/1/2012 - 00:00
End Date: 12/31/2016 - 23:59**

COMPANY NAME:

MODELER:

CALM WINDS:

2.65%

TOTAL COUNT:

25841 hrs.

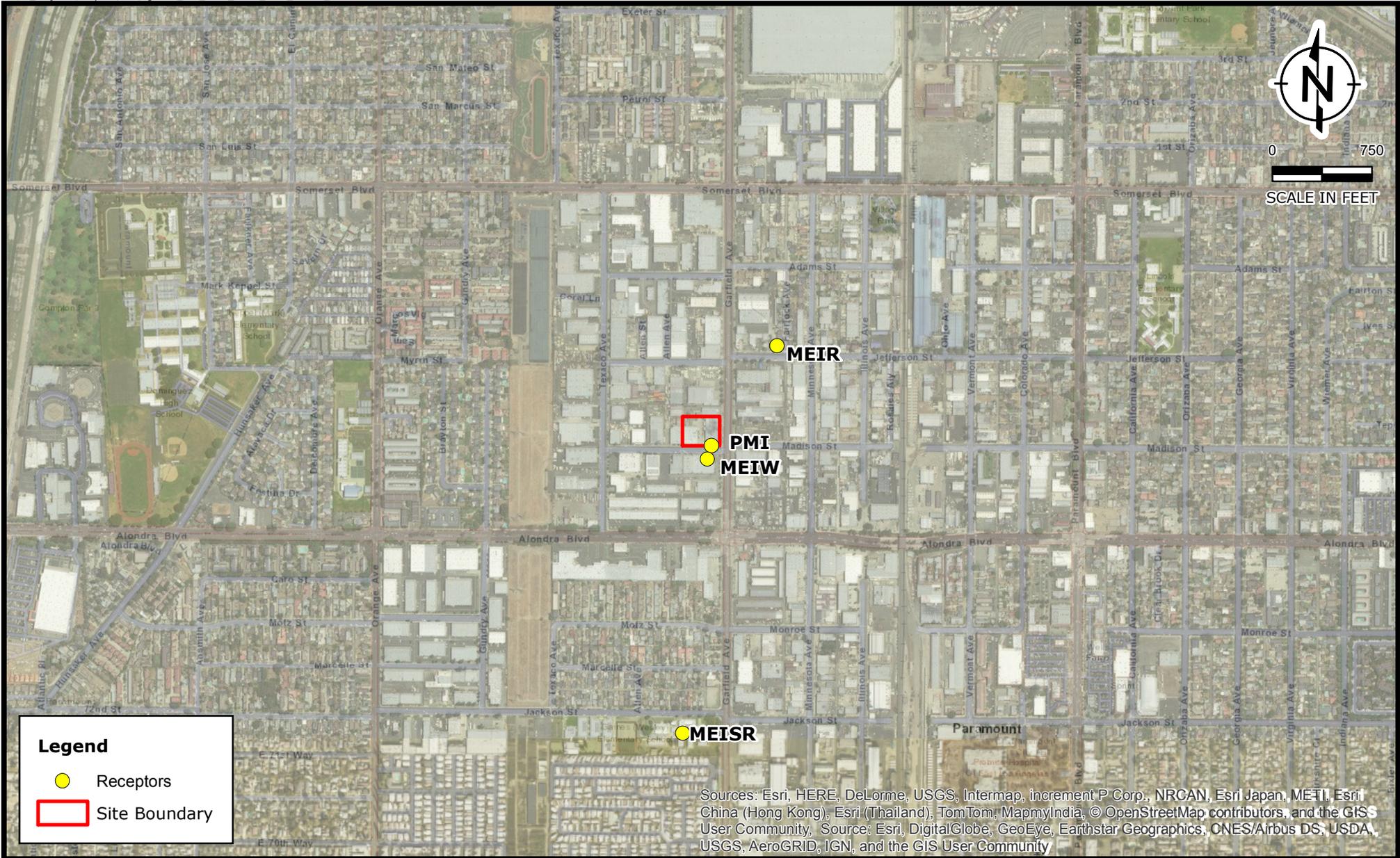
AVG. WIND SPEED:

1.54 m/s

DATE:

5/15/2018

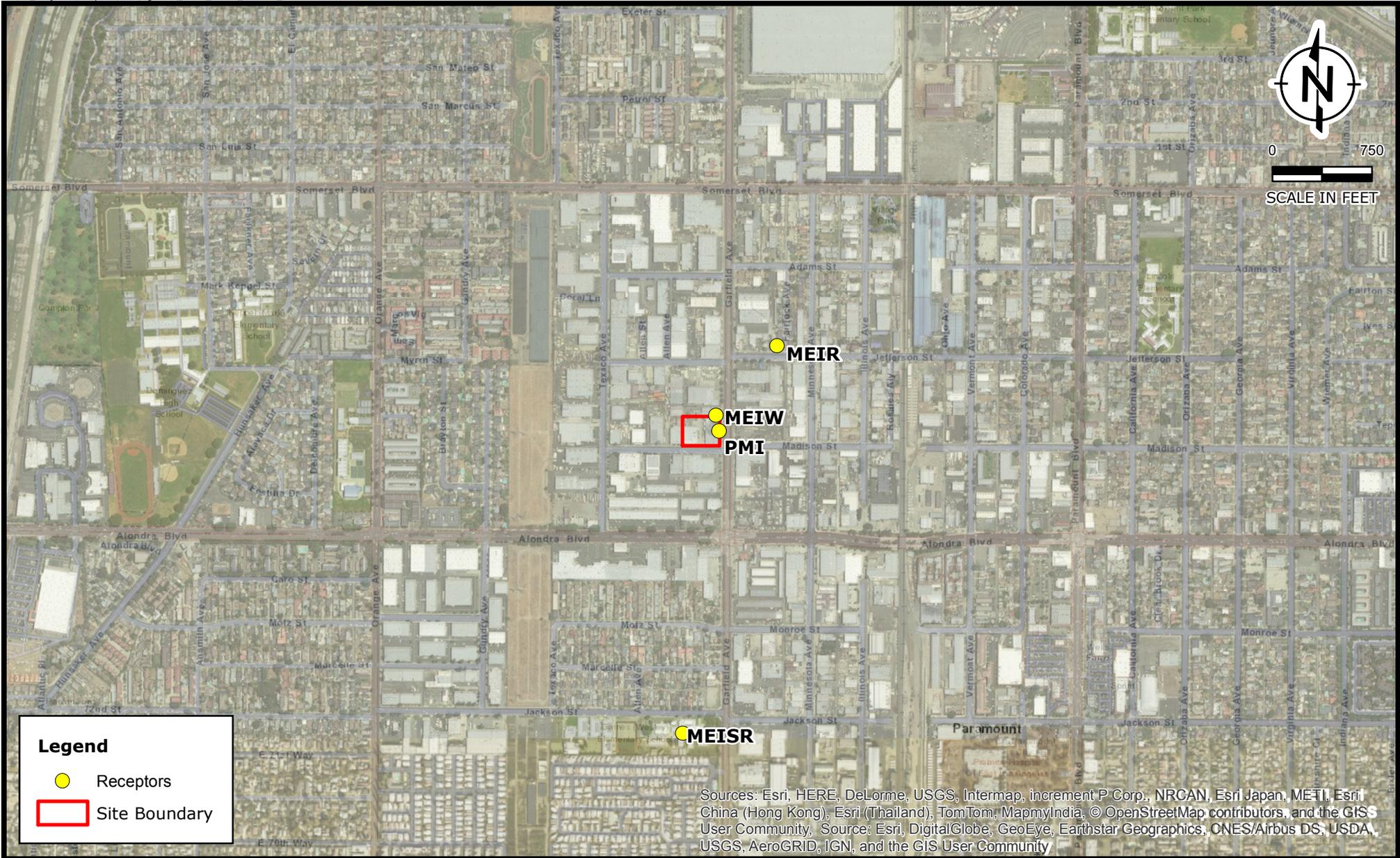
PROJECT NO.:



Locations of PMI, MEIR, MEIW, and MEISR for Cancer Risk

**FIGURE
21**

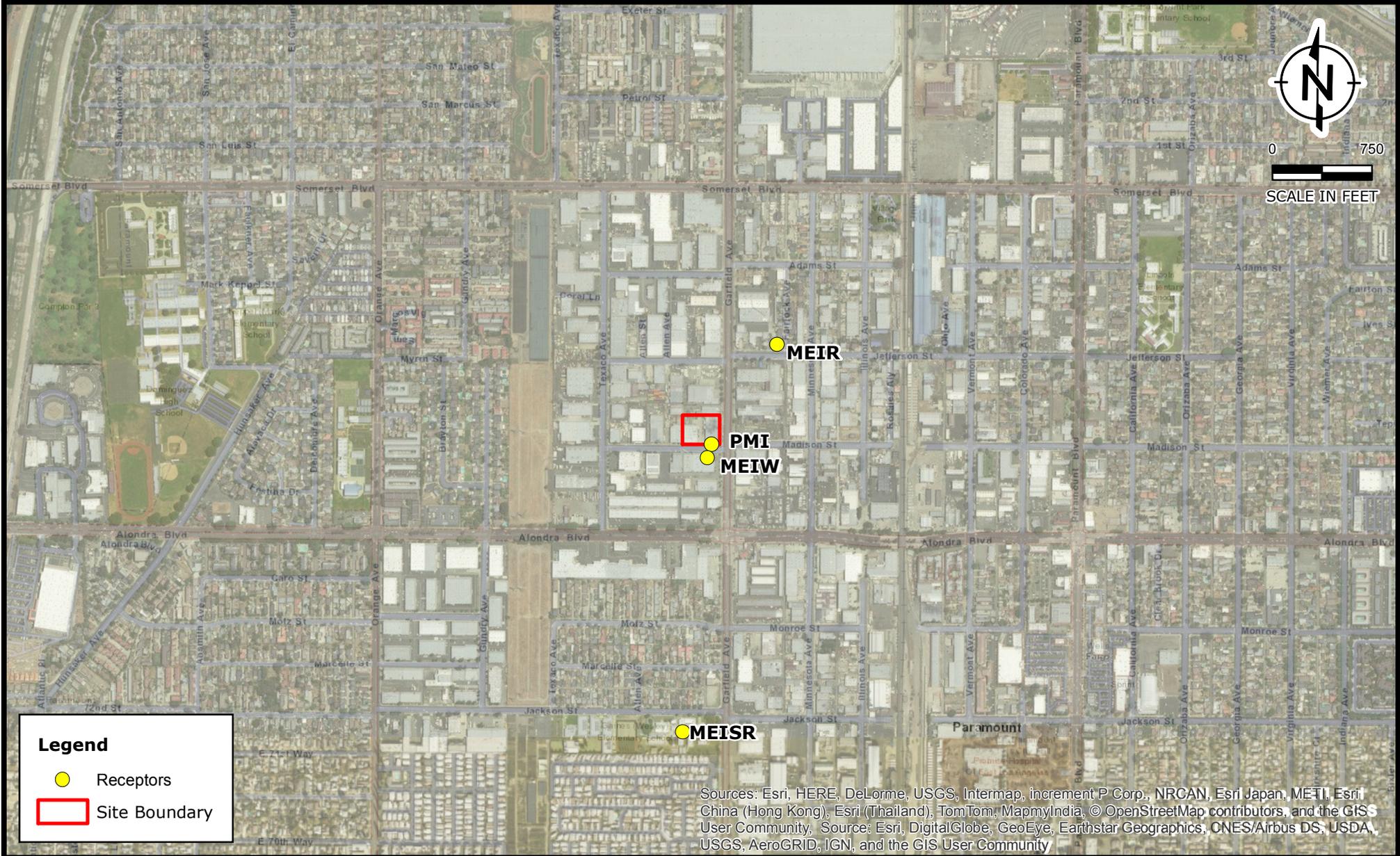
Anaplex Corporation
15547 Garfield Ave, Paramount, California



Locations of PMI, MEIR, MEIW, and MEISR for Chronic Hazard Index

FIGURE
22

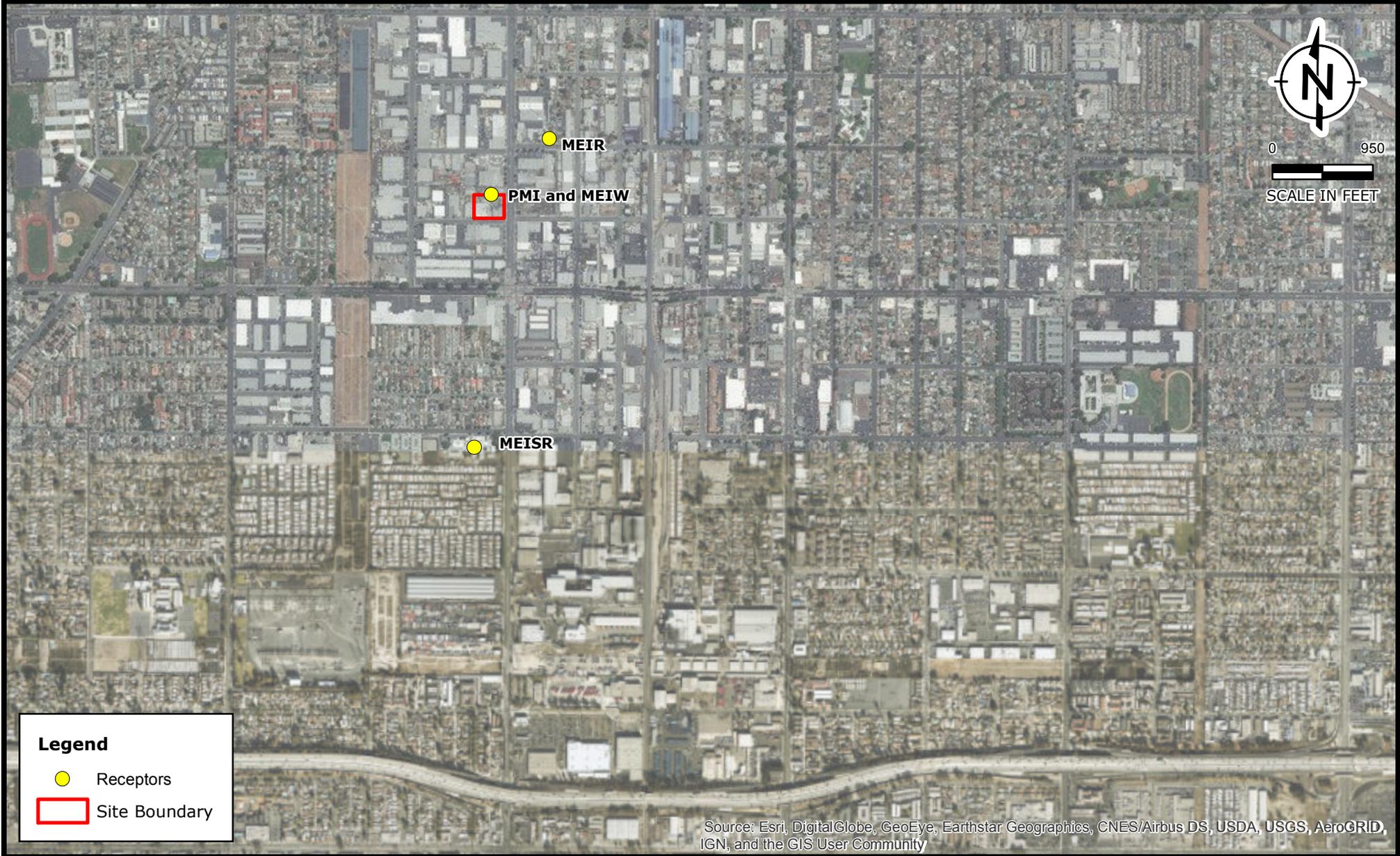
Anaplex Corporation
15547 Garfield Ave, Paramount, California



Locations of PMI, MEIR, MEIW, and MEISR for 8-Hour Chronic HI

FIGURE
23

Anaplex Corporation
15547 Garfield Ave, Paramount, California



Legend

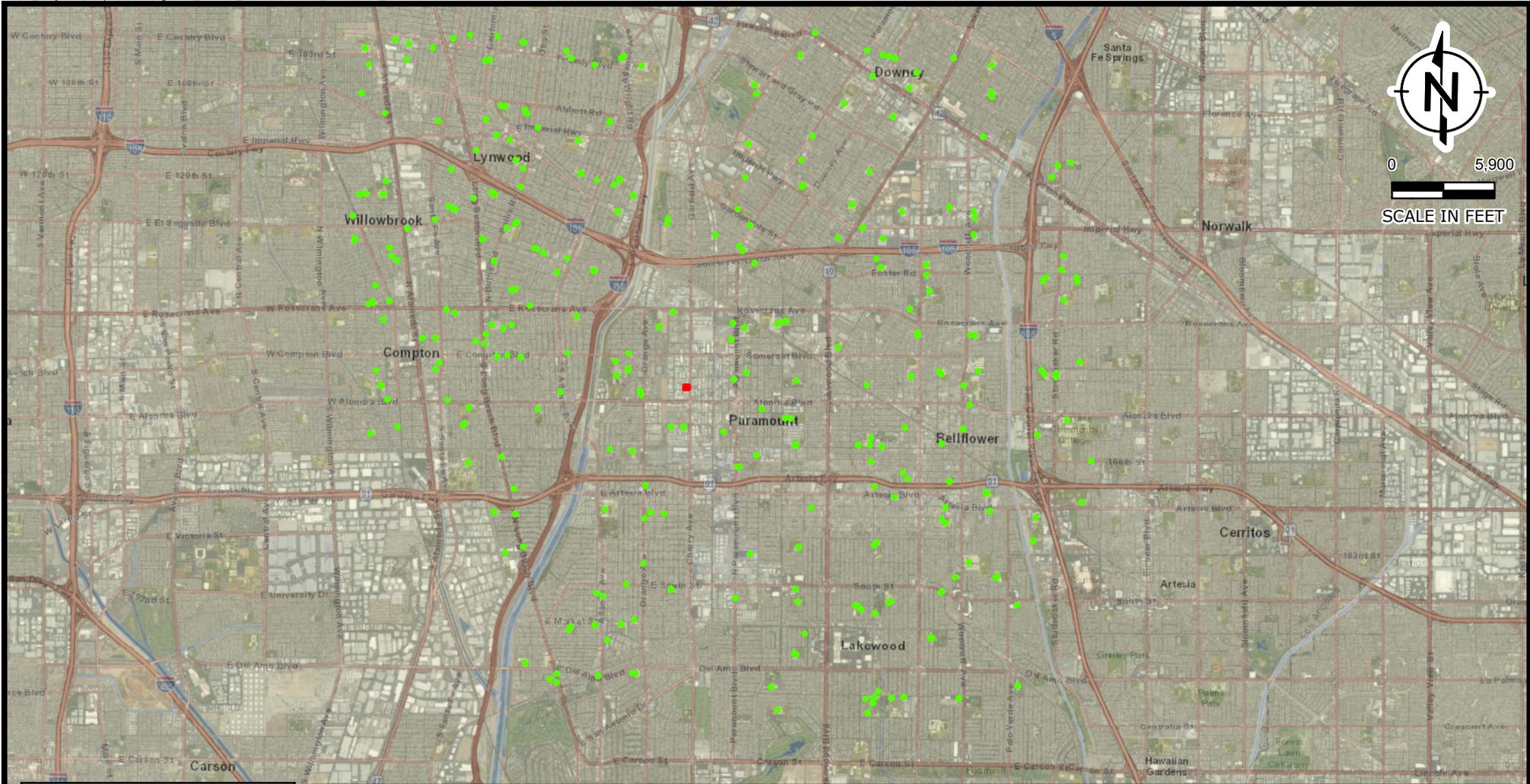
- Receptors
- Site Boundary



Locations of PMI, MEIR, MEIW, and MEISR for Acute Hazard Index

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
24**



Legend

- Cancer Risk > 1x10⁻⁶
- Site Boundary

Notes:

1. No sensitive receptors exceed Chronic Hazard Index of 0.5.
2. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



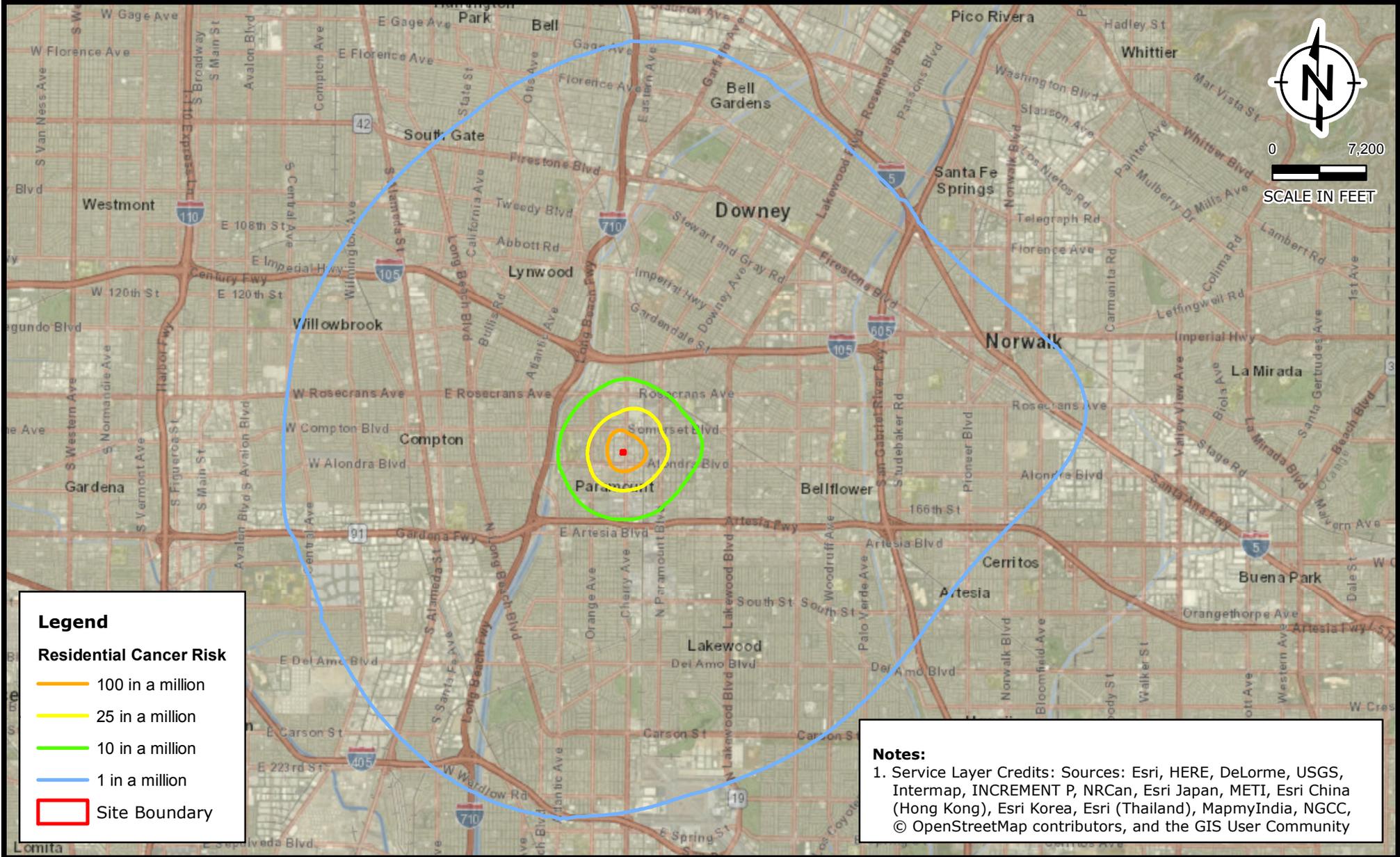
DRAFTED BY: MG DATE: 5/9/2018

**Sensitive Receptors with Cancer Risk > 1 per One Million
Chronic Hazard Index > 0.5**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
25**

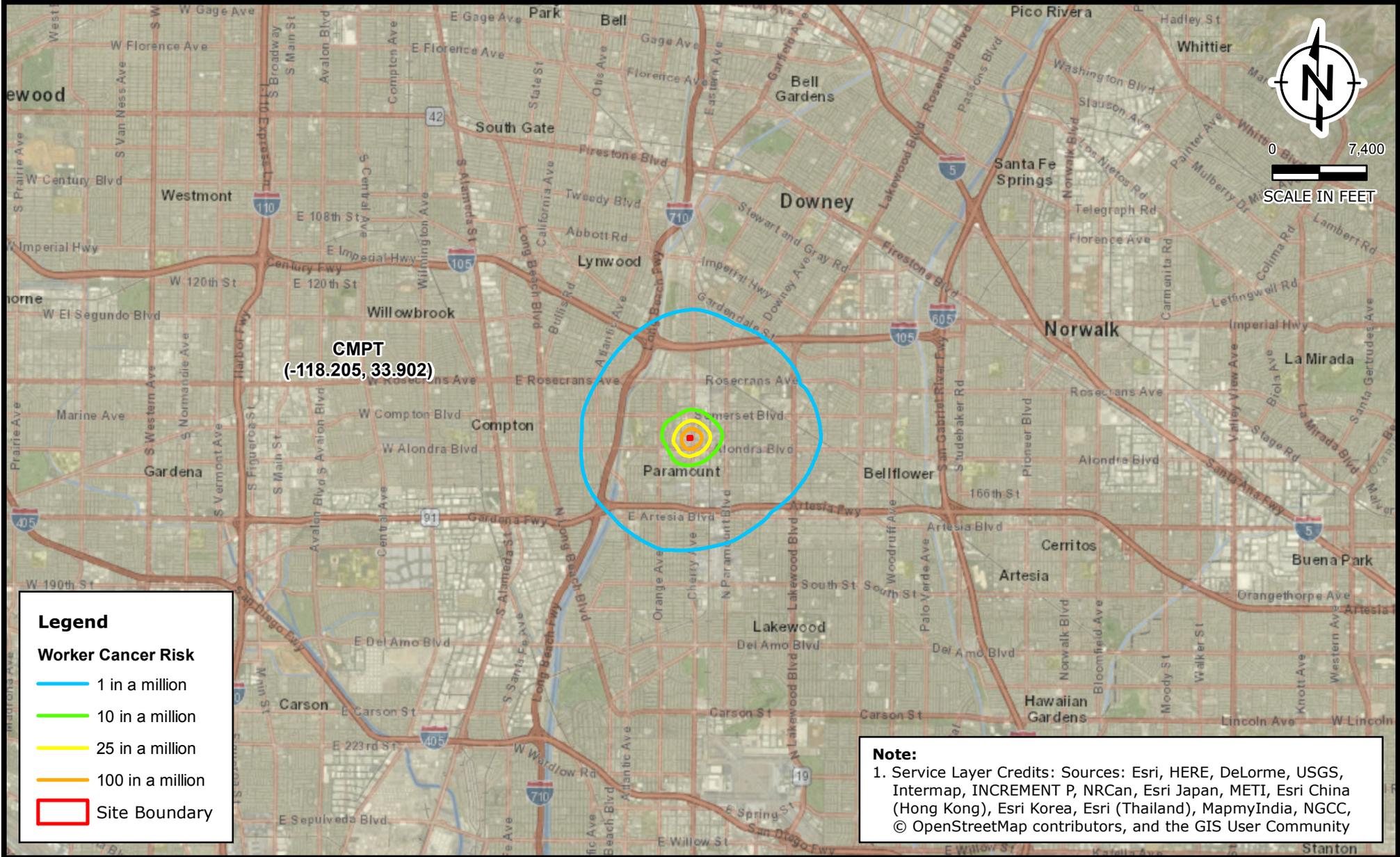
PROJECT: 1690003769



**Residential Cancer Risk Isopleths (30-Year Exposure)
(Including Chromate-Containing Paints Usage by Purchase Records)**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

**FIGURE
26**

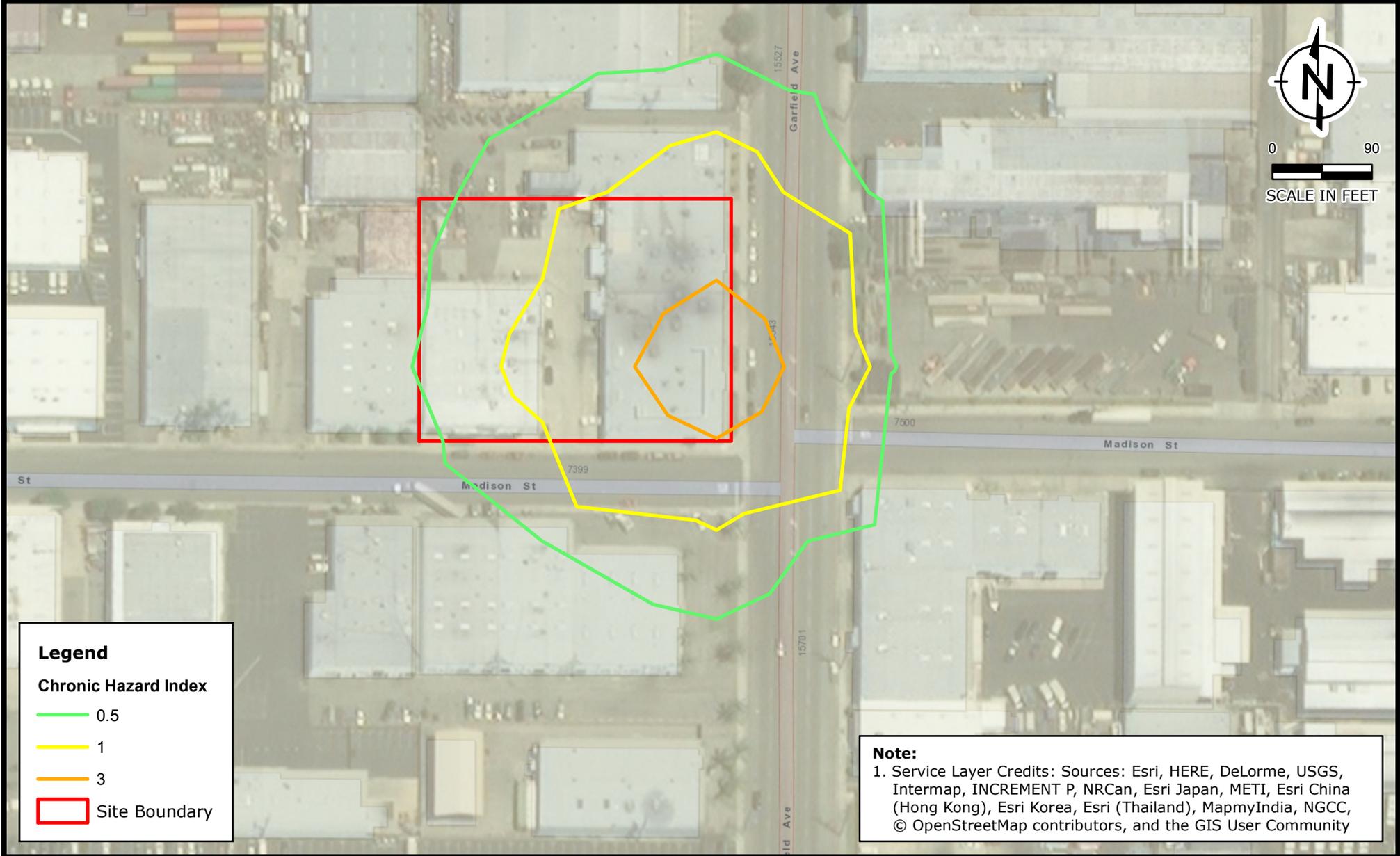


Worker Cancer Risk Isopleths

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE

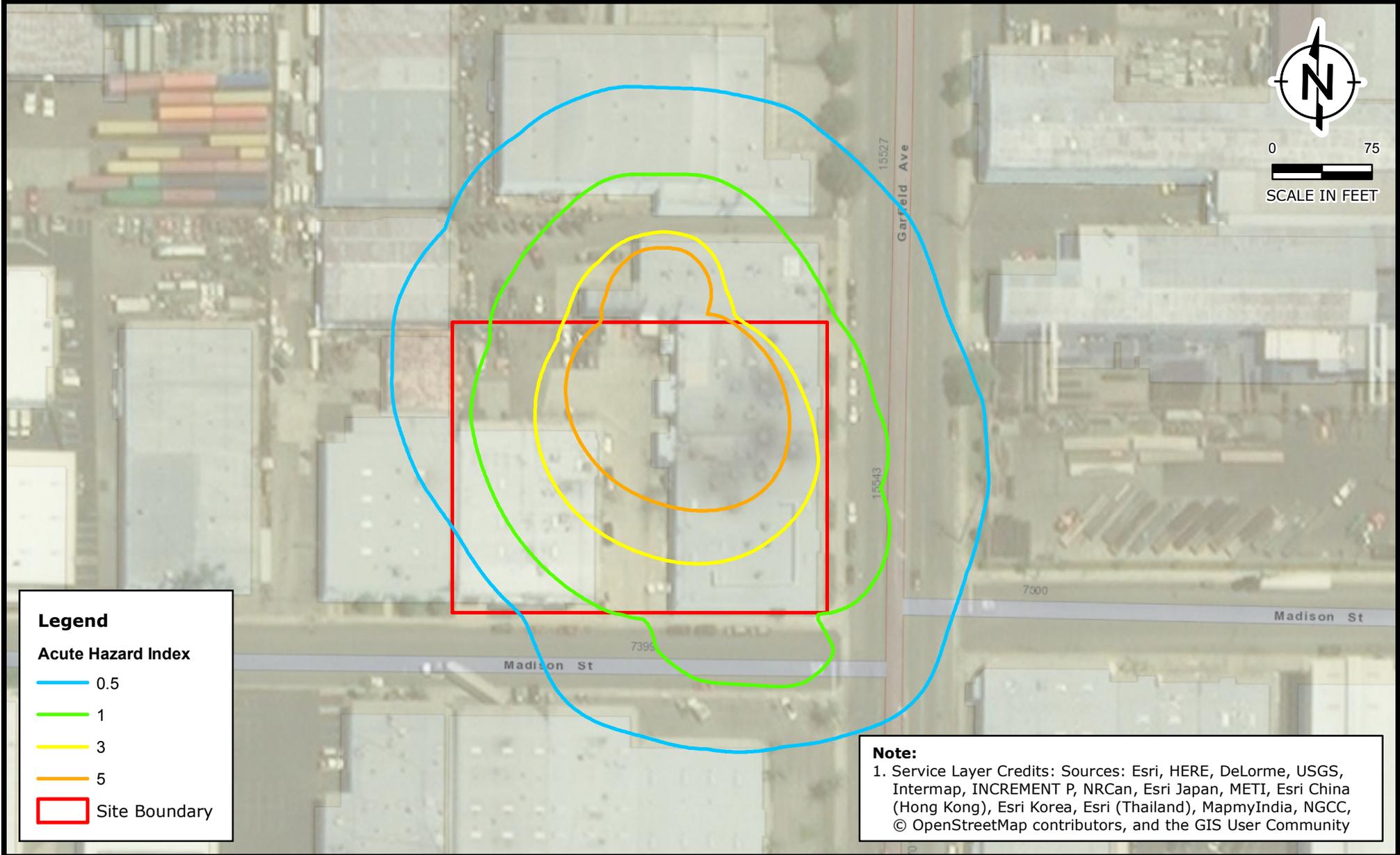
27



Chronic Hazard Index Isopleths

Anaplex Corporation
15547 Garfield Ave, Paramount, California

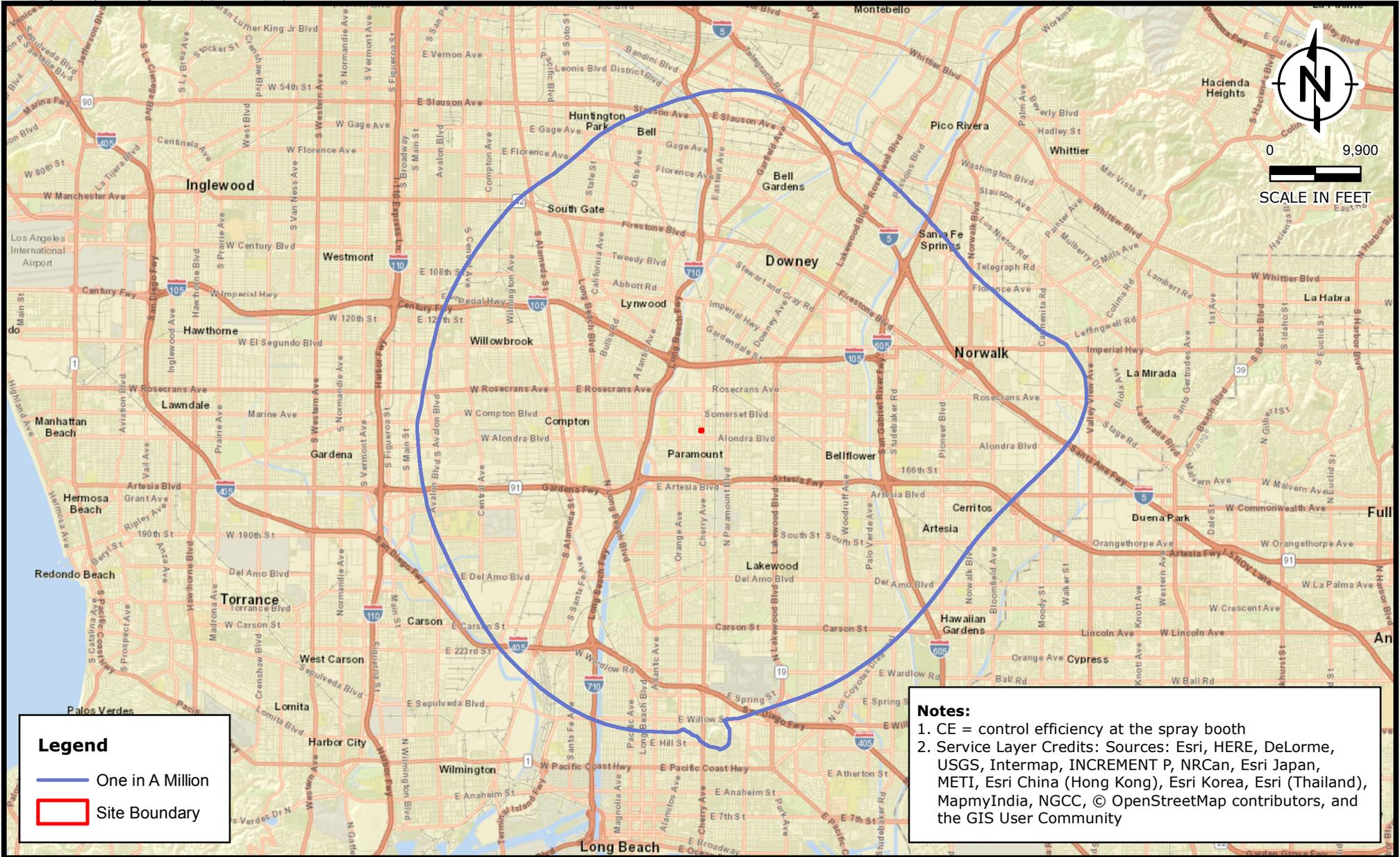
FIGURE
28



Acute Hazard Index Isopleths

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE
29



Legend

- One in A Million
- ▭ Site Boundary

Notes:

1. CE = control efficiency at the spray booth
2. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

RAMBOLL

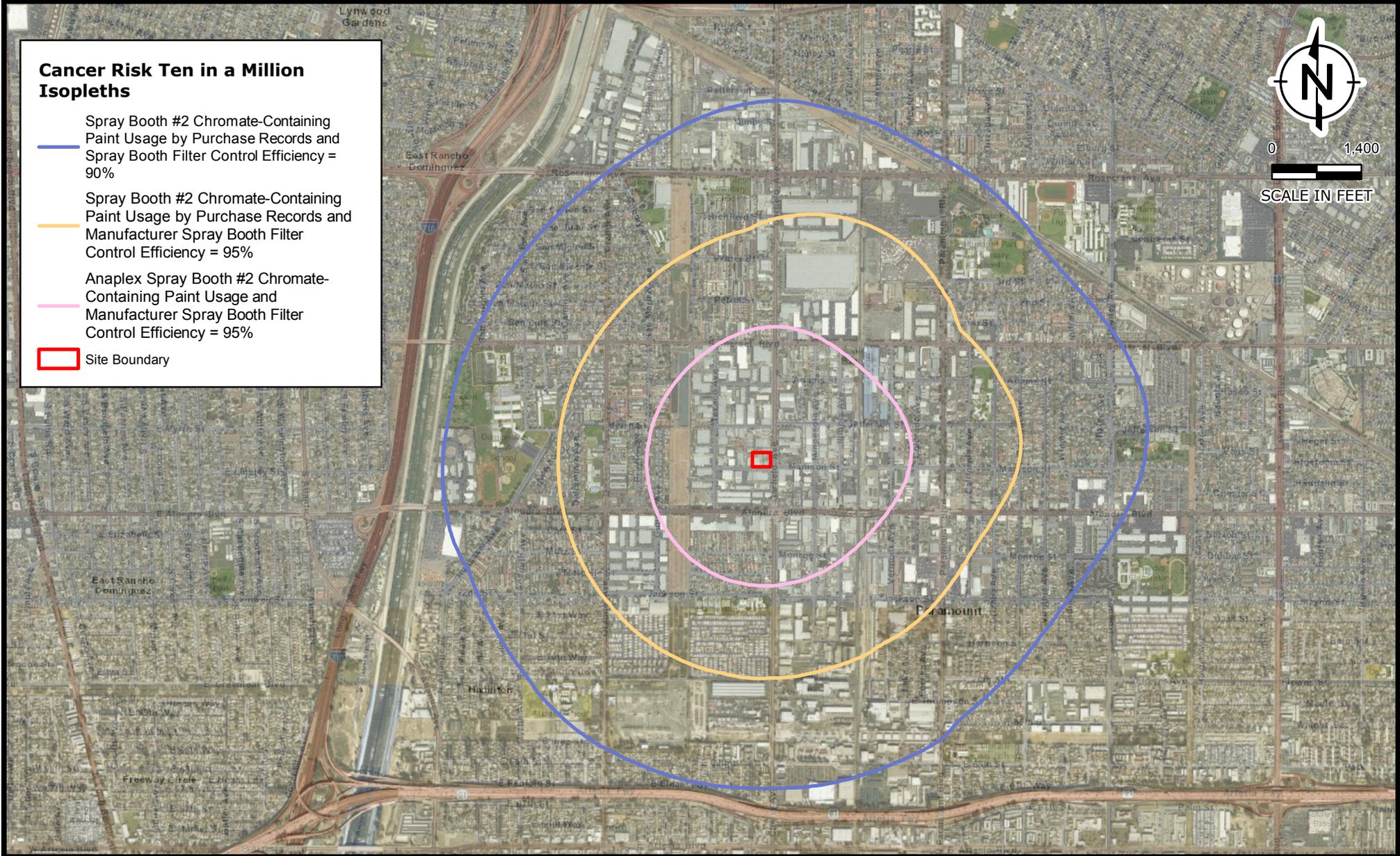
DRAFTED BY: MG DATE: 5/10/2018

One in a Million Isopleth Based on 70-Year Residential Exposure

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE 30

PROJECT: 1690003769



**Comparison of Residential Cancer Risk Ten in a Million Isopleths
30-year Exposure**

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE
31



Comparison of Residential Cancer Risk 25 in a Million Isoleths 30-year Exposure

Anaplex Corporation
15547 Garfield Ave, Paramount, California

FIGURE
32

APPENDIX A
ANAPLEX 2016 OPERATING INFORMATION, INCLUDING HOURLY
ELECTRICITY AND DISCHARGE WATER RECORDS
[RECORDS PROVIDED ELECTRONICALLY]

In late July 2018, SCAQMD staff contacted Anaplex and stated that the 2016 HRA should model the facility's emissions as if they were evenly distributed (i.e., 24/7/365 operations) unless continuous emissions monitor system (CEMS) or similar data for individual Anaplex operations. This type of monitoring is neither required nor possible for historical Anaplex operations, which generally involve tank-based plating and anodizing and/or spray painting of parts. SCAQMD staff requested, and Anaplex complied, modeling of operations over a 24/7/365 schedule. Anaplex stated that they did not operate on a 24/7/365 schedule and never have; they noted that they have operated the same 1-shift per weekday plating/anodizing/painting schedule they have operated under for over 40 years, with office, minor maintenance and sometimes masking operations for some Saturday hours. In August, Anaplex submitted ampere-hour records, water discharge records, and hour electrical usage data from Southern California Edison (SCE) consistent with Anaplex's 2016 operating schedule.

Hourly Electricity Records (Data Provided Electronically)

Electric usage records include hourly electricity use at Anaplex (15547 Garfield Ave) in 2016. The electric usage data was obtained from Southern California Edison and is based on Anaplex's Smart Meter readings. Figure A.1 below shows the average hourly electricity consumption in kwh by day of week and hour of day. As presented in Figure A.1, the hourly electricity usage demonstrates peak electricity usage occurred during 6am to 2pm on weekdays and reduced electricity use (i.e., base load for lighting, full facility ventilation, etc.) on Saturdays for non-production activities (e.g., housekeeping, office, maintenance, and some masking activities), and low electricity use on Sundays.

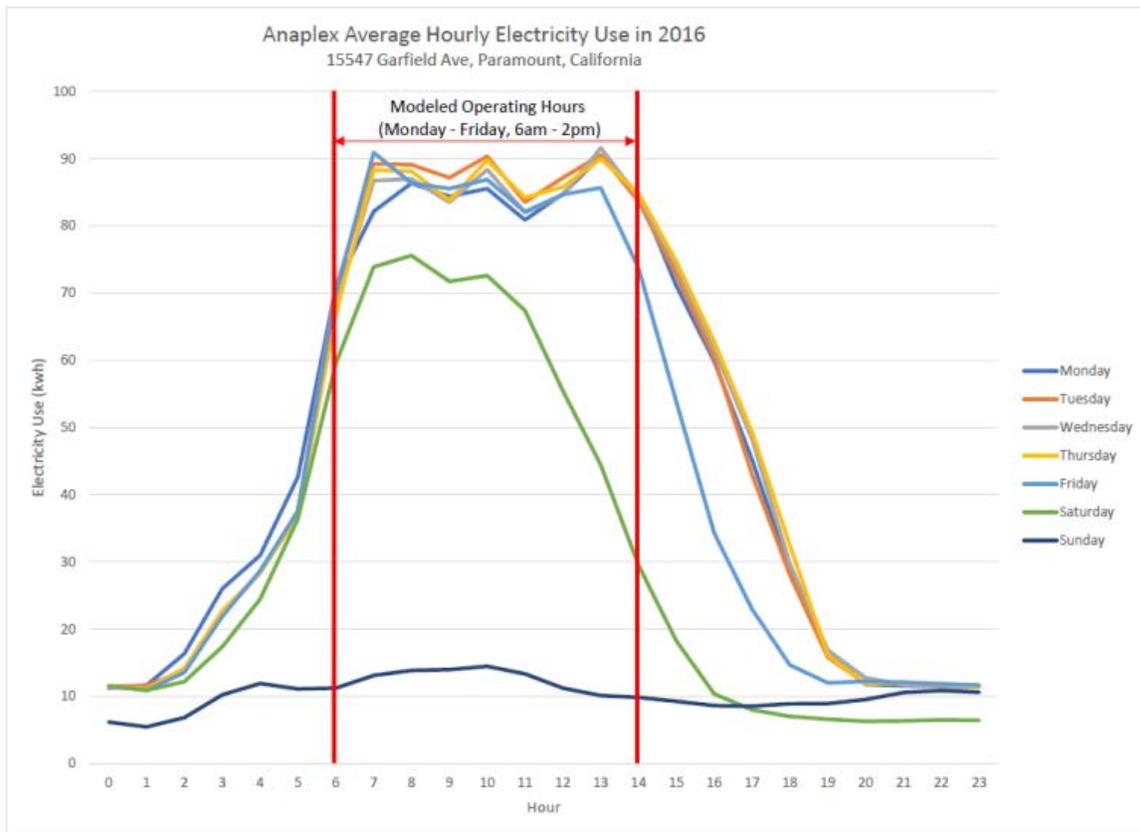


Figure A.1 Diurnal Variation of the Average Hourly Electricity Consumption in 2016

The data provided by SCE included gaps in the raw data directly from the SCE and the data gaps are independent of any Anaplex actions. The missing gaps would not change the results of our average

hourly electricity use calculations because **the data are more than 97% complete** (noting that 2016 was a leap year with 8786 hours). Thus, the diurnal pattern by day of week based on the SCE's data should still be representative.

Missing days in 2016

- 5/26 (Thu), 5/27(Fri), 8/25(Thu), 8/26(Fri), 10/26(Wed), 10/27(Thu)

Partial hour days in 2016

- 2/12 (Fri) missing hours: 2am – 3pm
- 3/13 (Sun) missing hours: 2am
- 5/28 (Sat) missing hours: 12am – 4pm
- 6/27 (Mon) missing hours: 12am – 4pm
- 8/27 (Sat) missing hours: 12am – 4pm
- 10/28 (Fri) missing hours: 12am – 4pm
- 12/27 (Tue) missing hours: 12am – 3pm

Hourly Water Discharge Charts (Data Provided Electronically)

Furthermore, hourly water flow discharge data was also submitted to the SCAQMD for review. Water flow discharge data includes hourly water usage from January 4, 2016 to Nov 27, 2016. The hourly water discharge charts (provided electronically) showed the following water usage patterns:

- Peak water discharge occurred during 6am to 2pm Monday through Friday and reduced water discharge after 2pm on weekdays
- No/minimal water discharge at night on weekdays
- Lower water discharge on Saturdays for maintenance activities only
- No/minimal water discharge on Sundays
- water discharge records (January – November 2016).

Rule 1469 ampere-hour, anti-mist, and surface tension log for 2016 Tank #19

Rule 1469 ampere-hour, anti-mist, and surface tension log for 2016 (Tank #19) describes the routine operational hours of Anaplex throughout 2016, including cumulative ampere-hour readings throughout the year demonstrating a week-day only schedule (no weekends, holidays).

Anaplex has been in business over 40 years operating with one shift per workday; it has never had a second shift, much less third shift. The data provided above, as a weight-of-evidence with Anaplex's statements and Tank #19 records, demonstrates Anaplex 2016 routine plating/anodizing/painting operation was during daytime, and weekday only (no weekends, holidays). Therefore, modeling the routine emissions from 6am to 2pm, Monday – Friday best represents the facility's operation in 2016, instead of the 24/7 schedule.

Regardless, SCAQMD directed the Facility to model their 2016 emissions using the following operating schedule

- Monday through Thursday: 1am to 8pm (19 hours per day)
- Friday: 1am to 7pm (18 hours per day)
- Saturday: 1am to 4pm (15 hours per day)
- Sunday: no operation

It is important to note that the operating directed by the District is not based on the "routine and predictable" operations of Anaplex, as required by Office of Environmental Health Hazard Assessment (OEHHA) guidance. The SCAQMD's proposed hours of operations implies that workers will be on site doing anodizing, plating and spraying in the earliest hours (e.g., 1am to 5am) with little or no lighting

or fans operating for the facility or even all of the work equipment operating. This is not how the facility operated in 2016 (or in any of its 40 years). Despite the fact this schedule does not represent how the facility operating schedule in 2016, at the SCAMD's direction and insistence, this revised HRA report (Revised 2016 HRA - September 2018) incorporates the SCAQMD's operating schedule.

APPENDIX B
MAY 1, 2018 MEMORANDUM: RESPONSES TO
THE SCAQMD'S ATIR COMMENTS
[PREVIOUSLY PROVIDED ELECTRONICALLY
IN MAY 2018 REVISION]

APPENDIX C
EMISSION CALCULATIONS
[PREVIOUSLY PROVIDED
ELECTRONICALLY IN MAY 2018
REVISION]

APPENDIX D
AERMOD MODELING FILES
[PROVIDED ELECTRONICALLY]

APPENDIX E
HARP FILES
[PROVIDED ELECTRONICALLY]

APPENDIX F
RISK CHARACTERIZATION FILES
[PROVIDED ELECTRONICALLY]