Light Metals Inc.

13329 Ector Street
City of Industry, CA
91746

SCAQMD Facility ID:
83102

March 2, 2022

Prepared by:

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AB2588 Health Risk Assessment for Calendar Year 2017

Light Metals Inc.
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Prepared for:

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13329 Ector Street
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List of Acronyms and Abbreviations

AB2588	Air Toxics "Hot Spots" Information and Assessment Act
acfm	Actual Cubic Feet per Minute
ADMRT	Air Dispersion Modeling and Risk Tool
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AMS	American Meteorological Society
A/N	Application Number
AP-42	[United States] Environmental Protection Agency's Compilation of Air Emissions Factors
ARB	[California] Air Resources Board
ATIR	Air Toxics Inventory Report
ATIR Notice	The SCAQMD's August 2, 2019, *Notice to Prepare an Air Toxics Inventory Report or Voluntary Risk Reduction Plan for Light Metals Inc. (South Coast AQMD ID# 83102)* [Provided in Appendix G]
BPIPPRM	Building Profile Input Program for PRIME
CAS No.	Chemical Abstracts Service Number
CAPCOA	California Air Pollution Control Officers Association
CATEF	California Air Toxics Emission Factor database
Chlorinated D/F	Chlorinated Dioxins and Furans
deg	Degrees
Deg F	Degrees Fahrenheit
DICE	Diesel-Fueled Internal Combustion Engine
EPA	[United States] Environmental Protection Agency
FAH	Fraction of Time at Home
fps	Feet per Second
ft	Foot
g	Gram
g/s	Gram per Second
GLC	Ground Level Concentration
HARP2	Hotspots Analysis and Reporting Program (Version 2)
HES	High Exposure Scenario
HI	Hazard Index
HIA	Non-Cancer Acute Hazard Index
HIC	Non-Cancer Chronic Hazard Index
HIC-8	8-Hour Non-Cancer Chronic Hazard Index
hr	Hour
HRA	Health Risk Assessment

HRA Notice	The SCAQMD's December 2, 2021, *Approval of Air Toxics Inventory Report and Notice to Prepare a Health Risk Assessment for Light Metals Inc. (South Coast AQMD Facility ID No.: 83102)* [Provided in Appendix G]
KP	Kaiser Permanente Baldwin Park Medical Center
lb	Pound
LMI	Light Metals Inc.; SCAQMD Facility ID 83102
LOAEL	Lowest Observed Adverse Effects Level
m	Meter
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
MET	Meteorological
Mg	Megagram
MICR	Maximum Individual Cancer Risk
mgal	Thousand Gallons
ug/m^3	Microgram per cubic meter
mg/kg-d	Milligram per kilogram-day
mmBtu	Million British Thermal Units
mmscf	Million Standard Cubic Feet
NED	National Elevation Dataset
NOAEL	No Observed Adverse Effects Level
OEHHA	[California] Office of Environmental Health Hazard Assessment
OEHHA HRA Guidelines	OEHHA's February 2015 *Air Toxics Hot Spots Program Risk Assessments Guidelines*
PFD	Process Flow Diagram
PM	Particulate Matter
PMI	Point of Maximum Impact
ppmw	Parts per Million by Weight
REL	Reference Exposure Level
RMP	Risk Management Policy
SCAQMD	South Coast Air Quality Management District
SCAQMD Supplemental Guidelines	SCAQMD's October 2020 *AB2588 and Rule 1402 Supplemental Guidelines*
TAC	Toxic Air Contaminant
TEQ	Toxicity Equivalent
ug	Microgam
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
WAF	Worker Adjustment Factor

WAF-8	Worker Adjustment Factor for 8-Hour Non-Cancer Chronic Hazard Index
WGS84	World Geodetic System 1984
X/Q	Average Pollutant Concentration Normalized by Source Strength
Yr	Year
Yorke	Yorke Engineering, LLC
ZOI	Zone of Impact

Definitions

Action Risk Level	[Rule 1402(c)(2)] For the purpose of Rule 1402, the Action Risk Level is a "… Maximum Individual Cancer Risk of twenty-five in one million (25×10^{-6}), cancer burden of one half (0.5), a total acute or chronic Hazard Index of three (3.0) for any target organ system at any receptor location, or the National Ambient Air Quality Standard (NAAQS) for lead."
Acute Health Impact	An acute health impact is an adverse health effect that may occur, even in sensitive members of the general population, as a result of infrequent one-hour exposures. Unlike cancer health effects, non-cancer health effects are generally assumed to have thresholds for adverse effects and each substance may affect different target organ systems.
Cancer Burden	Cancer burden is the estimated increase in the occurrence of cancer cases in a population subject to Maximum Individual Cancer Risk of greater than or equal to 1 in one million resulting from exposure to Toxic Air Contaminants.
Cancer Health Impact	Cancer risk is the estimated probability of a potential exposed individual contracting cancer as a result of exposure to Toxic Air Contaminants.
Chronic Health Impact	A chronic health impact is an adverse health effect that may occur, even in sensitive members of the general population, as a result of continuous exposure over a significant fraction of a lifetime. Unlike cancer health effects, non-cancer health effects are generally assumed to have thresholds for adverse effects and each substance may affect different target organ systems.
8-Hour Chronic Health Impact	An 8-hour chronic health impact is an adverse health effect that may occur, even in sensitive members of the general population, as a result of repeated 8-hour exposures over a significant fraction of a lifetime. Unlike cancer health effects, non-cancer health effects are generally assumed to have thresholds for adverse effects and each substance may affect different target organ systems.
Notification Risk Level	[Rule 1402(c)(12)] For the purpose of Rule 1402, the Notification Risk Level is a "… Maximum Individual Cancer Risk of ten in one million (10×10^{-6}), a total acute or chronic Hazard Index of one (1.0) for any target organ system at any receptor location, or the more stringent of either the National Ambient Air Quality Standard (NAAQS) for lead or ambient lead concentration limit in an applicable SCAQMD rule."

Receptor Location	[Rule 1402(c)(15)] "Receptor Location means: (A) For the purpose of calculating acute Hazard Index, any location outside the boundaries of the facility at which a person could experience acute exposure: and (B) For the purpose calculating chronic Hazard Index, Maximum Individual Cancer Risk, or cancer burden, any location outside the boundaries of the facility at which a person could experience chronic exposure. The Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location."
Significant Risk Level	[Rule 1402(c)(19)] For the purpose of Rule 1402, the Significant Risk Level is a "… Maximum Individual Cancer Risk of one hundred in one million (100×10^{-6}) or a total acute or chronic Hazard Index of five (5.0) for any target organ system at any receptor location."

South Coast Air Quality Management District
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(909) 396-2000 • www.aqmd.gov

HEALTH RISK ASSESSMENT SUMMARY FORM

(Required in Executive Summary of HRA)

Facility Name : Light Metals Inc.
Facility Address: 13329 Ector Street
City of Industry, CA 91746
Type of Business: Secondary Aluminum Production (NAICS 331314)
SCAQMD ID No.: 83102

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)

1. Inventory Reporting Year : 2017
2. Maximum Cancer Risk to Receptors : *(Offsite and residence = 30-year exposure, worker = 25-year exposure)*
   a. Offsite 7.56 in a million Location: 408,916 m E ; 3,768,864 m N
   b. Residence 2.97 in a million Location: 409,079 m E ; 3,769,185 m N
   c. Worker 0.20 in a million Location: 408,949 m E ; 3,768,885 m N
3. Substances Accounting for 90% of Cancer Risk: Chlorinated D/F, Arsenic, Cadmium, Formaldehyde, PAH (CAS 1151)
   Processes Accounting for 90% of Cancer Risk: Aluminum Drying, Aluminum Melting, Crushing, Welding
4. Cancer Burden for a 70-yr exposure: *(Cancer Burden = [cancer risk] x [# of people exposed to specific cancer risk])*
   a. Cancer Burden 0.002
   b. Number of people exposed to >1 per million cancer risk for a 70-yr exposure 1,661
   c. Maximum distance to edge of 70-year, 1 x 10^{-6} cancer risk isopleth (meters) 1,300

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: 0.05 Location: 409,079 m E ; 3,769,185 m N toxicological endpoint: Respiratory System
   b. Worker HI : 0.13 Location: 408,839 m E ; 3,768,825 m N toxicological endpoint: Central Nervous System
2. Substances Accounting for 90% of Chronic Hazard Index: Arsenic, Manganese, Mercury, Selenium, HCl, H2S, Chlorinated D/F
3. Maximum 8-hour Chronic Hazard Index:
   8-Hour Chronic HI: 0.07 Location: 408,916 m E ; 3,768,864 m N toxicological endpoint: Central Nervous System
4. Substances Accounting for 90% of 8-hour Chronic Hazard Index: Arsenic, Manganese, Mercury
5. Maximum Acute Hazard Index:
   PMI: 0.27 Location: 408,827 m E ; 3,768,899 m N toxicological endpoint: Immune System
6. Substances Accounting for 90% of Acute Hazard Index: Benzene, Nickel

C. Public Notification and Risk Reduction

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

Light Metals Inc.
AB 2588 Health Risk Assessment for Calendar Year 2017 Executive Summary

1.0 EXECUTIVE SUMMARY

In accordance with the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill 2588 (AB2588), this report presents the Health Risk Assessment (HRA) for the Light Metals Inc. (LMI) facility in the City of Industry. LMI (SCAQMD Facility ID 83102) received a letter from the South Coast Air Quality Management District (SCAQMD) on August 2, 2019, that required LMI to prepare an Air Toxics Inventory Report (ATIR) (ATIR Notice). The ATIR, based on Calendar Year 2017 emissions, was submitted to the SCAQMD on December 31, 2019, and subsequently revised. The SCAQMD approved the October 22, 2021, version of the ATIR and provided LMI with a notice to prepare an HRA on December 2, 2021 (HRA Notice). The HRA report is due to be submitted to the SCAQMD within 90 days of December 2, 2021, i.e., no later than March 2, 2022. The HRA report is submitted before the March 2, 2022, due date.

The HRA demonstrates that all health risk indices are below the Notification Risk Levels (see Section 1.6). At the Point of Maximum Impact (PMI), cancer risk is 7.56; cancer burden is estimated to be 0.002; non-cancer chronic risk is 0.22; 8-hour non-cancer chronic risk is 0.07; and non-cancer acute risk is 0.27. The HRA results are well below the Action Risk Levels and Significant Risk Levels from Rule 1402. Public Notice and preparation of a Risk Reduction Plan are not required.

The HRA was prepared in accordance with both the State of California Office of Environmental Health Hazard Assessment's (OEHHA) February 2015 *Air Toxics Hot Spots Program Risk Assessments Guidelines* (OEHHA HRA Guidelines) and the SCAQMD's October 2020 *AB2588 and Rule 1402 Supplemental Guidelines* (SCAQMD Supplemental Guidelines). The HRA Notice states that:

- If the results show that the facility, excluding risks from emergency Diesel-fueled Internal Combustion Engines (DICEs), poses a Maximum Individual Cancer Risk (MICR) of ten in one million or greater, or the non-cancer health effects hazard index exceeds one, LMI must provide public notice to all individuals exposed above notification levels;
- If the results show that cancer risk from emergency DICEs are expected to be ten in one million or greater, LMI must provide newspaper notification and information will be made available on the SCAQMD website; and
- If the results show that the facility, excluding risks from emergency DICEs, poses a MICR of 25 in one million or greater, cancer burden of 0.5 or greater, or non-cancer health effects hazard index of 3 or greater, LMI will also be subject to the risk reduction provisions of Rule 1402(f).

LMI does not operate emergency DICEs at the City of Industry facility. The results presented in the HRA report do not include emergency DICE.

This HRA report was prepared by Yorke Engineering, LLC (Yorke) on behalf of LMI. The report presents the methodology used for preparing the HRA as well as the results and follows the outline from Appendix B of the SCAQMD Supplemental Guidelines.

The emission inventory contains minor differences from the ATIR; differences are noted.

All geographical coordinates referenced herein are Universal Transverse Mercator (UTM), World Geodetic System 1984 (WGS84).

1.1 Facility Identification and Operations

LMI (SCAQMD Facility ID 83102) is located at 13329 Ector Street in the City of Industry. LMI has been in operation for over 50 years, supplying North America's die casting and foundry industries with quality aluminum and zinc alloys, and building the only combined recycled aluminum smelter and zinc/za alloy supplier on the West Coast. LMI is the only 100% specialized ingot producer in the Western United States and has customers in the automotive, aerospace, medical, and industrial markets.

Transforming recycled aluminum into alloy ingot at LMI is an eight-step process. The steps are:

- Scrap Receiving;
- Material Storage;
- Material Processing;
- Charge Recipe Construction;
- Furnace Charging;
- Aluminum Melting;
- Metal Preparation and Alloying; and
- Casting.

Each of these steps is described in Sections 1.1.1 through 1.1.8. In addition to the recycling process, LMI operates propane-fueled welders and miscellaneous natural gas-fueled combustion equipment.

1.1.1 Scrap Receiving

LMI melts several types of scrap in their furnaces, including returns from customers and dealer scrap. Customer-generated scrap is normally free from non-conforming materials. Dealer scrap is baled, boxed or loose material that is carefully purchased, received, and inspected to ensure a minimum of ferrous materials, residual lubricants, and other non-conforming materials, such as plastic, cardboard, and non-conforming non-ferrous metals.

1.1.2 Material Storage

Aluminum material that will be melted and cast into ingot is stored in open areas adjacent to and inside the LMI's main production building. The storage area is divided into many sections for segregation of scrap types. Material storage areas are clearly marked to delineate between charge materials and insure the proper charge recipe mix.

1.1.3 Chip Processing

Some of the material used to make up the furnace charge is in the form of machine turnings and borings. This material must be processed further before it is ready to charge into the melting furnace. This processing consists of crushing the turnings in a ring mill crusher to produce small chips that can be easily handled by the chip conveyor systems that feed and remove chips from the two chip dryers. The chip dryers burn cutting lubricants that are usually present on the turnings. An afterburner oxidizes the unburned hydrocarbon vapors in the gas stream that is vented from the chip dryers. The resulting chip is clean, dry, and ready for melting. The chip conveyor at the discharge of the dryer houses a magnetic separator that removes any iron filings or chips that may be present as non-conforming materials in the aluminum turnings.

The crushing process and the drying process generate Toxic Air Contaminant (TAC) emissions. The drying emissions are a combination of combustion emissions and emissions from the drying process itself. The drying process is vented by an afterburner, followed by a baghouse.

Other materials include wheels, solid aluminum, and aluminum sheets.

1.1.4 Charge Recipe Construction

Proper construction of the furnace charge recipe is critical to the quality of the aluminum alloy. The appropriate mix of scrap by alloy type and cost is a major factor in obtaining the metallurgical properties and cost-competitiveness of the ingot to produce castings that meet the high-quality standards of LMI and its customers. The necessary metallurgical formulations are used to determine the furnace charge recipe. The amounts of customer-generated scrap, turnings, dealer scrap, and alloying additives that are to be used in the recipe are calculated to the pound as precisely as possible. The recipe may be adjusted throughout the production cycle (heat) to allow for inconsistencies or unknown chemistries of the scrap charge. This recipe will also change from heat to heat depending on scrap availability and the specific alloy requirements of the ingot being produced.

1.1.5 Furnace Charging

LMI uses two custom-built side-well type reverberatory furnaces to melt the aluminum scrap. The furnaces are known as Melt Furnace A and Melt Furnace B. Material is charged into the molten metal in the well area of each furnace. The scrap material is charged on a continuous basis. A non-reactive cover flux mixture consisting of approximately 60% sodium chloride and 40% potassium chloride is used in the charge wells to prevent metal oxidation. The cover flux is removed during the dross skimming process.

1.1.6 Aluminum Melting

Each furnace uses two flat flame oxy-fuel burners to produce the energy required to melt the solid aluminum. The oxy-fuel burners are fired on natural gas and oxygen. The solid aluminum metal is heated to its melting point (approximately 1,360 Degrees Fahrenheit). The temperature of the gases formed from the combustion of the fuel is approximately 1,800 Degrees Fahrenheit.

The melting process generates TAC emissions. The melting emissions are a combination of combustion emissions and emissions from the melting process itself. The melting process is vented by a baghouse.

1.1.7 Metal Preparation and Alloying

To obtain the low magnesium content required on some alloys, chlorine gas is injected into the molten metal through a molten metal circulating pump designed for this purpose. This reactive fluxing process removes magnesium from the alloy. The resulting reaction produces magnesium chloride, which floats to the surface of the charge well where it combines with the cover flux and is removed with the dross when it is skimmed. The chlorine gas is metered into the metal bath to ensure the proper amount is used. The metal is sampled throughout the production of the heat to determine if the correct metallurgical properties have been achieved.

The alloying process generates TAC emissions. The alloying emissions are a result of chlorine addition and are vented to the baghouse that vents the melting furnaces.

The dross handling process generates emissions of Particulate Matter (PM) and TACs. Emissions from the dross handling process are vented to a dedicated baghouse.

1.1.8 Casting

Once the furnace is full and the metallurgical properties of the bath are confirmed, the furnace is tapped. The molten metal flows through a trough to the ingot-casting conveyor. One furnace may pump molten metal to a holding furnace instead of tapping directly to the casting conveyor. In this case, the holding furnace will be tapped while the melt furnace will commence producing its next heat production cycle.

The loading, melting, preparation, alloying, and casting process (heat production cycle) take approximately 3 to 9 hours to complete, depending on the size of the heat required.

1.2 TAC Emissions Summary

The HRA evaluates risk associated with the TAC emissions from the ATIR, including revisions to a few emission sources. Facility-wide TAC emissions used in the HRA are provided in Table 1-1 and notes 2 through 4 of Table 1-1 provide a brief description of the revised emissions. Table 1-1 also identifies the process steps that result in emissions of each TAC.

Table 1-1: Facility-Wide TAC Emissions

CAS No.	Chemical Name	Process Step Generating Emissions[1]	Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	NGC, AM, PRC	8.99E+01	3.26E-02
1151	PAHs, total, w/o individ. Components reported [Treated as B(a)P for HRA]	NGC	2.02E-02	4.09E-06
91203	Naphthalene	NGC, PRC	7.59E-02	2.69E-05
71432	Benzene	NGC, PRC	1.41E+00	3.59E-04
75070	Acetaldehyde	NGC, AM, PRC	4.14E+01	1.28E-02
107028	Acrolein	NGC, PRC	1.60E+00	1.12E-03

CAS No.	Chemical Name	Process Step Generating Emissions[1]	Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7664417	Ammonia	NGC, PRC	6.48E+02	1.32E-01
100414	Ethyl benzene	NGC, PRC	1.58E+00	3.32E-04
110543	Hexane	NGC, PRC	1.27E+00	4.33E-04
108883	Toluene	NGC, PRC	6.14E+00	1.33E-03
1330207	Xylenes (mixed)	NGC, PRC	4.54E+00	9.63E-04
7440382	Arsenic	ASP, ASD, AM, DH	2.82E-01	8.01E-05
7439921	Lead	ASP, ASD, AM, DH	1.31E-01	4.12E-05
7440020	Nickel	ASP, ASD, AM, DH, WLD	6.71E-01	5.85E-04
7440417	Beryllium	ASP, ASD, AM, DH	2.95E-03	9.06E-07
7440508	Copper	ASP, ASD, AM, DH	1.84E+00	5.79E-04
7439976	Mercury[2]	ASP, ASD, AM, DH	3.79E-03	1.19E-06
7782492	Selenium	ASP, ASD, AM, DH	4.68E-02	1.48E-05
7440439	Cadmium	ASP, ASD, DH	6.76E-03	2.75E-06
107062	Ethylene dichloride {EDC}	PRC	4.80E-03	4.63E-06
75092	Methylene chloride {Dichloromethane}	PRC	4.10E-03	3.92E-06
129000	Pyrene	PRC	3.00E-04	2.70E-07
191242	Benzo[g,h,i]perylene	PRC	1.00E-04	8.00E-08
192972	Benzo[e]pyrene	PRC	1.00E-04	8.00E-08
205992	Benzo[b]fluoranthene	PRC	3.40E-05	3.25E-08
206440	Fluoranthene	PRC	2.00E-04	2.20E-07
208968	Acenaphthylene	PRC	1.10E-03	1.08E-06
218019	Chrysene	PRC	1.00E-04	1.40E-07
83329	Acenaphthene	PRC	3.00E-04	2.50E-07
85018	Phenanthrene	PRC	2.10E-03	2.04E-06
86737	Fluorene	PRC	1.20E-03	1.11E-06
91576	2-Methyl naphthalene	PRC	6.80E-03	6.51E-06
75014	Vinyl chloride	PRC	3.00E-03	2.92E-06
79345	1,1,2,2-Tetrachloroethane	PRC	8.20E-03	7.84E-06
79005	1,1,2-Trichloroethane	PRC	6.50E-03	6.23E-06
95636	1,2,4-Trimethylbenzene	PRC	2.90E-03	2.80E-06
78875	1,2-Dichloropropane	PRC	5.50E-03	5.27E-06
542756	1,3-Dichloropropene	PRC	5.40E-03	5.18E-06

CAS No.	Chemical Name	Process Step Generating Emissions[1]	Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
67663	Chloroform	PRC	5.80E-03	5.59E-06
106990	1,3-Butadiene	PRC	5.46E-02	5.23E-05
67561	Methanol	PRC	5.11E-01	4.90E-04
56235	Carbon tetrachloride	PRC	7.50E-03	7.19E-06
100425	Styrene	PRC	4.80E-03	4.63E-06
106934	Ethylene dibromide {EDB}	PRC	9.10E-03	8.68E-06
7439965	Manganese	AM, WLD	3.31E+01	2.11E-01
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin	ASD, AM	6.86E-06	1.97E-09
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	ASD, AM	2.79E-05	7.99E-09
39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	ASD, AM	2.61E-06	7.46E-10
57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin[3]	ASD, AM	4.76E-06	1.36E-09
19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin[3]	ASD, AM	3.14E-06	8.96E-10
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin[3]	ASD, AM	1.33E-06	3.77E-10
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin[4]	ASD, AM	0.00E+00	0.00E+00
51207319	2,3,7,8-Tetrachlorodibenzofuran	ASD, AM	1.06E-05	3.03E-09
57117416	1,2,3,7,8-Pentachlorodibenzofuran[3]	ASD, AM	3.87E-06	1.11E-09
57117314	2,3,4,7,8-Pentachlorodibenzofuran	ASD, AM	7.14E-05	2.04E-08
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran	ASD, AM	2.58E-05	7.32E-09
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran[3]	ASD, AM	1.97E-05	5.62E-09
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran[3]	ASD, AM	1.92E-05	5.47E-09
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran[3]	ASD, AM	5.51E-06	1.56E-09
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran[3]	ASD, AM	4.63E-06	1.31E-09
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran[3]	ASD, AM	4.43E-07	1.26E-10
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran[4]	ASD, AM	0.00E+00	0.00E+00
7783064	Hydrogen sulfide	AM	1.03E+03	2.89E-01
7647010	Hydrochloric acid	AA	3.08E+03	3.61E+00
7782505	Chlorine	AA	8.56E+00	1.00E-02

Notes:

1. ASP = Aluminum Scrap Processing (Section 1.1.3); NGC = Natural Gas Combustion (Sections 1.1.3, 1.1.6, 1.1.8, and Miscellaneous Natural Gas-Fueled Combustion Equipment); ASD = Aluminum Scrap Drying (Section 1.1.3); AM = Aluminum Melting (Sections 1.1.6 and 1.1.8); AA = Aluminum Alloying (Section 1.1.7); DH = Dross Handling (Section 1.1.7); PRC = Propane Combustion in Welders; WLD = Welding Emissions.
2. The mercury speciation from a baghouse dust laboratory analysis has been corrected to 0.780 parts per million by weight (ppmw) from 780 ppmw. Facility-wide mercury emissions decreased from approximately 3.77 lb/year to 3.79E-03 lb/year.
3. The emission factors for one of the dryers have been adjusted.
4. The Toxicity Equivalent (TEQ) value emission factors for 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin and 1,2,3,4,6,7,8,9-Octachlorodibenzofuran have been adjusted to 0.000 micrograms (ug) per megagram (Mg) feed, consistent with the SCAQMD source test evaluation.

1.3 Multipathway Substances

All TACs enter the body through inhalation. Some TACs also enter the body through other pathways. For example, a substance may be deposited on the ground in particulate form and contribute to risk through ingestion of soil or backyard garden vegetables. TACs from Table 1-1 with multipathway effects are shown in Table 1-2.

Table 1-2: Multipathway Substances

CAS No.	Chemical Name	Soil Ingestion	Dermal	Mother's Milk	Drinking Water[1]	Fish[1]	Homegrown Produce	Beef / Dairy[1]	Pigs, Chickens, and/or Eggs[1]
1151	PAHs, total, w/o individ. Components reported [Treated as B(a)P for HRA]	X	X	X	X	X	X	X	X
7440382	Arsenic	X	X		X	X	X	X	X
7439921	Lead	X	X	X	X	X	X	X	X
7440020	Nickel	X	X		X		X	X	X
7440417	Beryllium	X	X		X	X	X	X	X
7439976	Mercury	X	X		X	X	X	X	X
7440439	Cadmium	X	X		X	X	X	X	X
205992	Benzo[b]fluoranthene	X	X	X	X	X	X	X	X
218019	Chrysene	X	X	X	X	X	X	X	X
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	X	X	X	X	X	X	X	X
51207319	2,3,7,8-Tetrachlorodibenzofuran	X	X	X	X	X	X	X	X
57117416	1,2,3,7,8-Pentachlorodibenzofuran	X	X	X	X	X	X	X	X
57117314	2,3,4,7,8-Pentachlorodibenzofuran	X	X	X	X	X	X	X	X
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran	X	X	X	X	X	X	X	X
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran	X	X	X	X	X	X	X	X
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran	X	X	X	X	X	X	X	X
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran	X	X	X	X	X	X	X	X

CAS No.	Chemical Name	Soil Ingestion	Dermal	Mother's Milk	Drinking Water[1]	Fish[1]	Homegrown Produce	Beef / Dairy[1]	Pigs, Chickens, and/or Eggs[1]
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran	X	X	X	X	X	X	X	X
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran	X	X	X	X	X	X	X	X
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	X	X	X	X	X	X	X	X

Notes:

1. Please refer to Table 1-3. Although some substances included in the HRA may contribute to risk through these exposure pathways, these exposure pathways are excluded since LMI does not impact applicable land uses that could lead to exposure through these pathways.

Table 1-3 lists the potential non-inhalation exposure pathways and whether each was evaluated for residential / sensitive, and/or worker receptors. As shown in Table 1-3, the HRA includes the default exposure pathways for all receptors as identified in Section 4.4 of the SCAQMD Supplemental Guidelines. The exposure pathways of drinking water consumption, fish ingestion, dairy milk ingestion, and meat ingestion are excluded since LMI does not impact a local water reservoir, a local fishable body of water, a dairy, or grazing land, respectively.

Table 1-3: HRA Exposure Pathways

Exposure Pathway	Residential / Sensitive Receptors	Worker Receptors
Soil Ingestion	☒	☒
Dermal	☒	☒
Mother's Milk	☒	☐
Drinking Water	☐	☐
Fish	☐	☐
Homegrown Produce	☒	☐
Beef / Dairy	☐	☐
Pigs, Chickens, and/or Eggs	☐	☐

1.4 Overview of Dispersion Modeling and Exposure Assessment

Air dispersion models calculate the atmospheric transport and fate of pollutants from the emission sources. The models calculate the concentration of selected pollutants at specific downwind ground-level points, such as residential or off-site workplace receptors. The transformation (fate) of an airborne pollutant, its movement with the prevailing winds (transport), its crosswind and vertical movement due to atmospheric turbulence (dispersion), and its removal due to dry and wet deposition are influenced by the pollutant's physical and chemical properties and by meteorological and environmental conditions. Factors such as distance from the source to the receptor, meteorological conditions, intervening land use and terrain, pollutant release characteristics, and background pollutant concentrations affect the predicted concentration of an air pollutant. Air dispersion models take all these factors into consideration when calculating downwind ground-level pollutant concentrations.

The air dispersion model used for this HRA is the **A**merican Meteorological Society (AMS) / U.S. **E**nvironmental Protection Agency (EPA) **R**egulatory **Mod**el (AERMOD). AERMOD is a steady-state plume dispersion model that incorporates air dispersion calculations based on planetary boundary layer turbulence structure and scaling concepts. AERMOD includes the treatment of both surface and elevated sources and simple and complex terrain. AERMOD, like most dispersion models, uses mathematical algorithms to characterize the atmospheric processes that disperse pollutants emitted by a source. Using emission rates, exhaust parameters, terrain characteristics, and meteorological inputs, AERMOD calculates downwind pollutant concentrations at specified receptor locations. The results from the AERMOD runs were imported into the Hotspots Analysis and Reporting Program (Version 2) (HARP2) Air Dispersion Modeling and Risk Tool (ADMRT), an HRA software tool, for further processing and analysis.

1.5 Dose-Response Assessment for Cancer and Non-Cancer Health Impacts

Dose-response assessment is the process of characterizing the relationship between exposure to an agent and incidence of an adverse health effect in exposed populations.

1.5.1 Carcinogenic Effects

In quantitative carcinogenic risk assessment, the dose-response relationship is expressed in terms of a potency slope that is used to calculate the probability or risk of cancer associated with an estimated exposure. Cancer potency factors are expressed as the 95th percent upper confidence limit of the slope of the dose response curve estimated assuming continuous lifetime exposure to a substance at a dose of one milligram per kilogram of body weight-day and commonly expressed in units of inverse dose (i.e., (mg/kg/day)-1).

It is assumed in cancer risk assessments that risk is directly proportional to dose and that there is no threshold for carcinogenesis. OEHHA has compiled cancer potency factors, which are used in risk assessments for the Hot Spots program. Cancer potency factors were derived either by the EPA or by OEHHA. For a detailed description of cancer potency factors, refer to The Air Toxics Hot Spots Program Risk Assessment Guidelines; Part II; Technical Support Document for Describing Available Cancer Potency Factors (OEHHA, 1999b and 2002).

1.5.2 Non-Carcinogenic Effects

For noncarcinogenic effects, dose-response data developed from animal or human studies are used to develop acute and chronic noncancer Reference Exposure Levels (RELs). The acute and chronic RELs are defined as the concentration at which no adverse noncancer adverse health effects are anticipated. The most sensitive health effect is chosen to determine the REL if the chemical affects multiple organ systems. Unlike cancer health effects, noncancer acute and chronic health effects are generally assumed to have thresholds for adverse effects. In other words, acute or chronic injury from a pollutant will not occur until exposure to that pollutant has reached or exceeded a certain concentration (i.e., threshold). The acute and chronic RELs are intended to be below the threshold for health effects for the general population. The actual threshold for health effects in the general population is generally not known with any precision. Uncertainty factors are applied to the Lowest Observed Adverse Effects Level (LOAEL) or No Observed Adverse Effects Level (NOAEL) or Benchmark Concentration values from animal or human studies to help ensure that the chronic and acute REL values are below the threshold for human health for nearly all individuals. Some substances that pose a chronic inhalation hazard may also present a chronic hazard via non-inhalation routes of exposure (e.g., ingestion of contaminated water, foods, or soils, and dermal absorption). The methodology and derivations for acute and chronic RELs are described in the Air Toxics Hot Spots Program Risk Assessment Guidelines; Part I; The Determination of Acute Reference Exposure Levels for Airborne Toxicants (Part I TSD) (OEHHA 1999a) and Air Toxics Hot Spots Program Risk Assessment Guidelines; Part III; Technical Support Document for the Determination of Chronic Reference Exposure Levels (Part III TSD)(OEHHA 2000a).

1.5.3 Substances with Carcinogenic and Non-Carcinogenic Effects

Table 1-4 identifies each TAC from Table 1-1 as a carcinogen, or as having annual non-cancer chronic, 8-hour non-cancer chronic, or non-cancer acute health effects on a particular target organ system.

Table 1-4: Substances with Carcinogenic and Non-Carcinogenic Health Effects

CAS No.	Pollutant	CARCINOGEN[1]	BLOOD[2,3]	BONE[2,3]	CNS[2,3]	CV[2,3]	ENDO[2,3]	EYE[2,3]	GILV[2,3]	IMMUN[2,3]	KIDNEY[2,3]	REPRO_DEVEL[2,3]	RESP[2,3]	SKIN[2,3]
50000	Formaldehyde	X						A					C8	
1151	PAHs, total, w/o individ. Components reported [Treated as B(a)P for HRA]	X												
91203	Naphthalene	X											C	
71432	Benzene	X	C8A							A		A		
75070	Acetaldehyde	X						A					C8A	
107028	Acrolein							A					C8A	
7664417	Ammonia							A					CA	
100414	Ethyl benzene	X					C		C		C	C		
110543	Hexane				C									
108883	Toluene				A			C8A					A	
1330207	Xylenes (mixed)				CA			CA					CA	
7440382	Arsenic	X			C8A	C8A						C8A	C8	C8
7439921	Lead	X												
7440020	Nickel	X	C							8A		C	C8	
7440417	Beryllium	X							C	C			C	
7440508	Copper												A	
7439976	Mercury				C8A						C8	C8A		
7782492	Selenium				C	C			C					
7440439	Cadmium	X									C		C	

CAS No.	Pollutant	CARCINOGEN[1]	BLOOD[2,3]	BONE[2,3]	CNS[2,3]	CV[2,3]	ENDO[2,3]	EYE[2,3]	GILV[2,3]	IMMUN[2,3]	KIDNEY[2,3]	REPRO_DEVEL[2,3]	RESP[2,3]	SKIN[2,3]
107062	Ethylene dichloride {EDC}	X							C					
75092	Methylene chloride {Dichloromethane}	X			CA	CA								
129000	Pyrene													
191242	Benzo[g,h,i]perylene													
192972	Benzo[e]pyrene													
205992	Benzo[b]fluoranthene	X												
206440	Fluoranthene													
208968	Acenaphthylene													
218019	Chrysene	X												
83329	Acenaphthene													
85018	Phenanthrene													
86737	Fluorene													
91576	2-Methyl naphthalene													
75014	Vinyl chloride	X			A			A					A	
79345	1,1,2,2-Tetrachloroethane	X												
79005	1,1,2-Trichloroethane	X												
95636	1,2,4-Trimethylbenzene													
78875	1,2-Dichloropropane													
542756	1,3-Dichloropropene													
67663	Chloroform	X			A				C		C	CA	A	

CAS No.	Pollutant	CARCINOGEN[1]	BLOOD[2,3]	BONE[2,3]	CNS[2,3]	CV[2,3]	ENDO[2,3]	EYE[2,3]	GILV[2,3]	IMMUN[2,3]	KIDNEY[2,3]	REPRO_DEVEL[2,3]	RESP[2,3]	SKIN[2,3]
106990	1,3-Butadiene	X										C8A		
67561	Methanol				A							C		
56235	Carbon tetrachloride	X			CA				CA			CA		
100425	Styrene				C			A				A	A	
106934	Ethylene dibromide {EDB}	X										C		
7439965	Manganese				C8									
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin	X	C				C		C			C	C	
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	X	C				C		C			C	C	
39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	X	C				C		C			C	C	
57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	X	C				C		C			C	C	
19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	X	C				C		C			C	C	
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	X	C				C		C			C	C	

CAS No.	Pollutant	CARCINOGEN[1]	BLOOD[2,3]	BONE[2,3]	CNS[2,3]	CV[2,3]	ENDO[2,3]	EYE[2,3]	GILV[2,3]	IMMUN[2,3]	KIDNEY[2,3]	REPRO_DEVEL[2,3]	RESP[2,3]	SKIN[2,3]
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	X	C				C		C			C	C	
51207319	2,3,7,8-Tetrachlorodibenzofuran	X	C				C		C			C	C	
57117416	1,2,3,7,8-Pentachlorodibenzofuran	X	C				C		C			C	C	
57117314	2,3,4,7,8-Pentachlorodibenzofuran	X	C				C		C			C	C	
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran	X	C				C		C			C	C	
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran	X	C				C		C			C	C	
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran	X	C				C		C			C	C	
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran	X	C				C		C			C	C	
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran	X	C				C		C			C	C	

CAS No.	Pollutant	CARCINOGEN[1]	BLOOD[2,3]	BONE[2,3]	CNS[2,3]	CV[2,3]	ENDO[2,3]	EYE[2,3]	GILV[2,3]	IMMUN[2,3]	KIDNEY[2,3]	REPRO_DEVEL[2,3]	RESP[2,3]	SKIN[2,3]
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran	X	C				C		C			C	C	
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	X	C				C		C			C	C	
7783064	Hydrogen sulfide				A								C	
7647010	Hydrochloric acid							A					CA	
7782505	Chlorine	X						A					CA	

Notes:

1. "X" indicates a pollutant is identified as a carcinogen.
2. "C" indicates a pollutant has annual non-cancer chronic health effects; "8" indicates a pollutant has 8-hour non-cancer chronic health effects; and "A" indicates a pollutant has non-cancer acute health effects.
3. BLOOD = Hematologic System; BONE = Bones and Teeth; CNS = Central Nervous System; CV = Cardiovascular System; ENDO = Endocrine System; EYE = Eyes; GILV = Gastrointestinal Tract & Liver or Alimentary Tract; IMMUN = Immune System; KIDNEY = Kidneys; REPRO_DEVEL = Reproductive & Developmental; RESP = Respiratory System; SKIN = Skin

1.6 Summary of Results

Table 1-5 summarizes the HRA results and presents the MICR and Hazard Index (HI) for non-cancer health effects for the Point of Maximum Impact, the Maximally Exposed Individual Resident (MEIR), the highest exposed Sensitive Receptor, and the Maximally Exposed Individual Worker (MEIW).

The cancer burden is estimated to be 0.002. This is less than the 0.5 Action Risk Level. An estimated 1,661 persons may be exposed to MICR greater than 1 in one million over a 70-year lifetime.

Table 1-5: Summary of Results

Health Risk	UTM Easting (m)	UTM Northing (m)	Result
MICR (in one million) [Notification Risk Level = 10; Action Risk Level = 25; Significant Risk Level = 100]			
PMI[1]	408916	3768864	7.56
MEIR[1]	409079	3769185	2.97
Sensitive[1]	408949	3768885	5.95
MEIW[2]	408949	3768885	0.20
Non-Cancer Chronic HI (HIC) (dimensionless) [Notification Risk Level = 1.0; Action Risk Level = 3.0; Significant Risk Level = 5.0]			
PMI[3]	408916	3768864	0.22
MEIR[3]	409079	3769185	0.05
Sensitive[3]	408949	3768875	0.11
MEIW[4]	408839	3768825	0.13
8-Hour Non-Cancer Chronic HI (HIC-8) (dimensionless) [Notification Risk Level = 1.0; Action Risk Level = 3.0; Significant Risk Level = 5.0]			
PMI	408916	3768864	0.07
MEIR	409079	3769185	0.005
Sensitive	408949	3768875	0.03
MEIW	408839	3768825	0.05
Non-Cancer Acute HI (HIA) (dimensionless) [Notification Risk Level = 1.0; Action Risk Level = 3.0; Significant Risk Level = 5.0]			
PMI	408827	3768899	0.27
MEIR	409119	3768785	0.016
Sensitive	408916	3768864	0.20
MEIW	408916	3768864	0.20

Notes:

1. Based on a 30-year exposure duration and Residential/Sensitive exposure pathways.
2. Based on a 25-year exposure duration and Worker exposure pathways.
3. Based on Residential/Sensitive exposure pathways.
4. Based on Worker exposure pathways.

1.6.1 Cancer Risk

The receptors identified in Table 1-5 with 30-year exposure duration are shown in Figure 1-1. The PMI (MICR = 7.56 in one million) is located at Receptor No. 9956 on unimproved property on the grounds of Torch Middle School. The MEIR (MICR = 2.97 in one million) is located at Receptor No. 4715, approximately 1,000 feet northeast of the facility boundary near the intersection of Amar Road and North Feather Avenue. The highest exposed Sensitive receptor (MICR = 5.95 in one million) is located at Receptor No. 3662 on the grounds of Torch Middle School[1].

The SCAQMD Supplemental Guidelines require identification of all sensitive receptors within the Zone of Impact (ZOI). The ZOI for cancer risk is defined as 1 in one million. Figure 1-1 also shows another Sensitive receptor within the ZOI for cancer risk, the Kaiser Permanente Baldwin Park Medical Center (KP). The estimated MICR at this receptor, Receptor No. 7780, is 1.15 in one million.

There are no residential/sensitive receptors with an estimated MICR that exceeds 10 in one million.

The MEIW (MICR = 0.20 in one million) is located at Receptor No. 3662 on the grounds of Torch Middle School[2]. This receptor is shown in Figure 1-2. There are no worker receptors with an estimated MICR that exceeds 10 in one million.

The relative contribution of each exposure pathway to the totals is provided in Table 1-6. The non-inhalation exposure pathways contribute to at least 70% of the cancer risk at each receptor identified in Table 1-6.

Table 1-6: Summary of Results – Cancer Risk by Exposure Pathway

Exposure Pathway	PMI	MEIR	Sensitive	MEIW
Inhalation	17.45%	5.83%	10.56%	26.92%
Soil Ingestion	36.90%	42.07%	39.18%	50.16%
Dermal	2.05%	2.34%	2.19%	22.92%
Mother's Milk	34.46%	41.89%	40.75%	--
Homegrown Produce	9.14%	7.88%	7.31%	--
Total Non-Inhalation	82.55%	94.17%	89.44%	73.08%

[1] Receptor No. 3662 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating cancer risk as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3662 is expected to provide a conservative estimate of the highest exposed Sensitive receptor as it is unlikely that a person would experience the long-term exposure assumed for the cancer risk calculation.

[2] Receptor No. 3662 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating cancer risk as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3662 is expected to provide a conservative estimate of the MEIW as it is unlikely that a person would experience the long-term exposure assumed for the cancer risk calculation.

The TACs that account for at least 90% of the totals are provided in Table 1-7. Chlorinated dioxins and furans (Chlorinated D/F) account for approximately 60% of the cancer risk at the PMI and the MEIW, and approximately 75% of the cancer risk at the MEIR and the highest exposed Sensitive receptor, with arsenic, cadmium, formaldehyde, and polycyclic aromatic hydrocarbons accounting for the remainder of the totals shown in Table 1-7.

Aluminum drying (Section 1.1.3), aluminum melting (Section 1.1.6), crushing (Section 1.1.3), and welding account for at least 90% of the total cancer risk.

Table 1-7: Summary of Results – Cancer Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
7440382	Arsenic	17.25%	14.46%	12.18%	14.22%
7440439	Cadmium	1.95%	--	--	2.42%
50000	Formaldehyde	8.74%	--	4.41%	11.06%
1151	PAHs, total, w/o individ. Components reported [Treated as B(a)P for HRA]	2.12%	--	--	--
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin[1]	8.60%	9.99%	10.08%	7.46%
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin[1]	34.66%	40.67%	41.13%	30.42%
57117314	2,3,4,7,8-Pentachlorodibenzofuran[1]	16.76%	21.94%	20.20%	21.13%
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran[1]	--	2.00%	1.52%	1.59%
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran[1]	--	2.60%	1.87%	1.95%
	[1]Chlorinated D/F	60.02%	77.20%	74.81%	62.56%
	Total Shown	90.08%	91.65%	91.40%	90.26%

Figure 1-1: Summary of Results – Residential / Sensitive Cancer Risk

Legend:
Blue Square..... PMI; Torch Middle School; Receptor No. 9956
Orange Triangle..... MEIR; Receptor No. 4715
Purple Triangle ..... Sensitive Receptor; Torch Middle School; Receptor No. 3662
Pink Circle ..... Kaiser Permanente Baldwin Park Medical Center; Receptor No. 7780

Figure 1-2: Summary of Results – Worker Cancer Risk

Legend:
Green Circle..... MEIW; Receptor No. 3662

1.6.2 Non-Cancer Chronic Risk

Although residential and worker non-cancer chronic risk are evaluated over the same exposure duration, multipathway exposure effects can create different results for the same receptor.

The PMI, MEIR, and highest exposed Sensitive receptors identified in Table 1-5 are shown in Figure 1-3. The PMI (HIC = 0.22) is located at Receptor No. 9956 on unimproved property on the grounds of Torch Middle School. The MEIR (HIC = 0.05) is located at Receptor No. 4715, approximately 1,000 feet northeast of the facility boundary near the intersection of Amar Road and North Feather Avenue. The highest exposed Sensitive receptor (HIC = 0.11) is located at Receptor No. 3661 on the grounds of Torch Middle School[3]. There are no receptors with an estimated HIC that exceeds 1.0. The primary target organ for the PMI and the highest exposed Sensitive receptor is the Central Nervous System. The primary target organ for the MEIR is the Respiratory System.

The MEIW (HIC = 0.13) is located at Receptor No. 2937. Receptor No. 2937 is on the grounds of Estes Van Lines. A parking lot would not typically be considered a worker receptor but, due to the nature of the business, the HRA considers Receptor No. 2937 to be a worker receptor. There are no receptors with an estimated HIC that exceeds 1.0. The primary target organ for the MEIW is the Central Nervous System.

The relative contribution of each exposure pathway to the totals is provided in Table 1-8. The non-inhalation exposure pathways contribute to at least 40% of the non-cancer chronic risk at the PMI, the MEIR, and the highest exposed Sensitive receptor, and approximately 20% of the non-cancer chronic risk at the MEIW.

Table 1-8: Summary of Results – Non-Cancer Chronic Risk by Exposure Pathway

Exposure Pathway	PMI	MEIR	Sensitive	MEIW
Inhalation	56.38%	22.04%	49.12%	79.41%
Soil Ingestion	19.39%	28.58%	22.63%	16.02%
Dermal	1.40%	2.08%	1.64%	4.57%
Mother's Milk	0.00%	14.26%	0.00%	--
Homegrown Produce	22.82%	33.05%	26.61%	--
Total Non-Inhalation	43.62%	77.96%	50.88%	20.59%

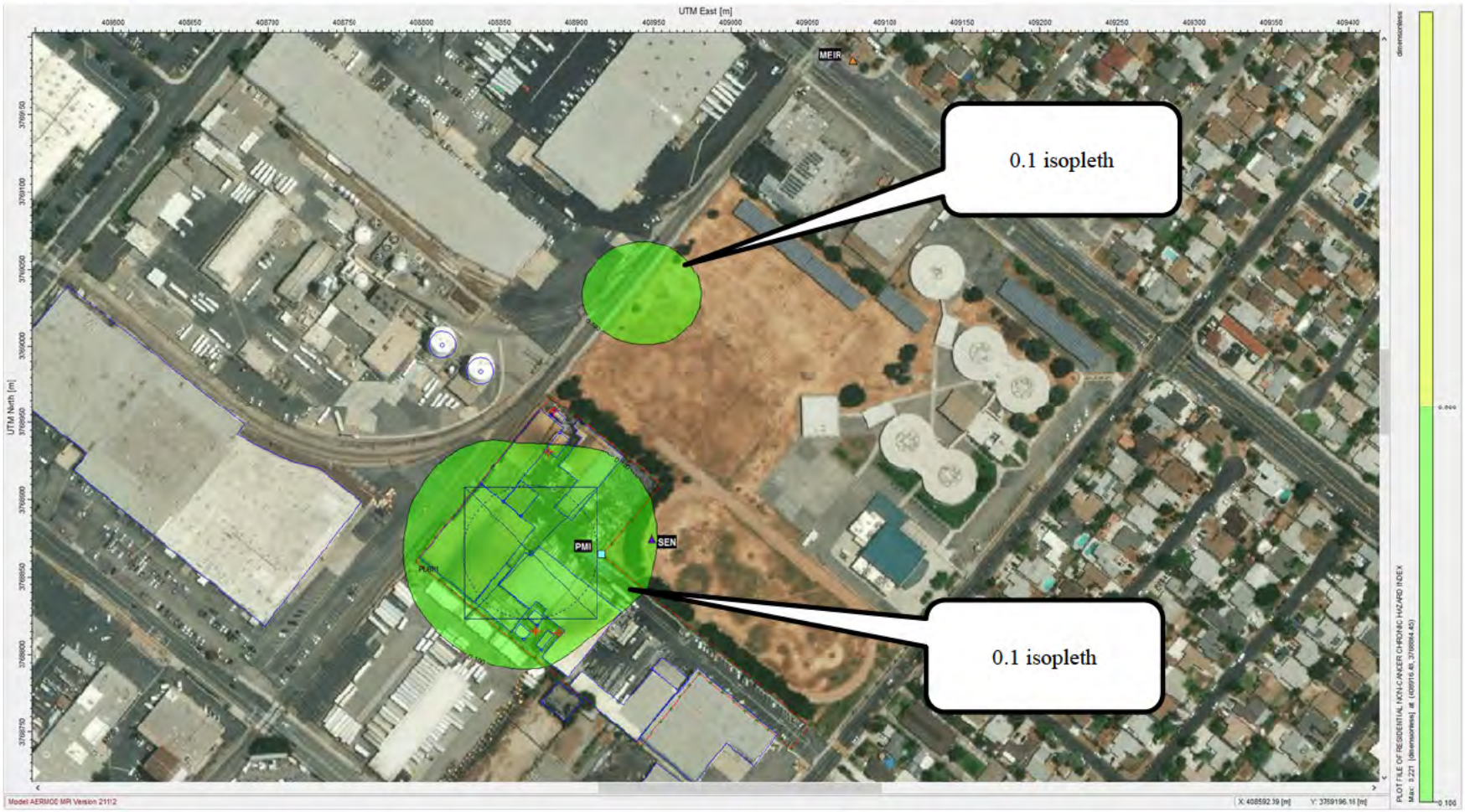
[3] Receptor No. 3661 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating HIC as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3661 is expected to provide a conservative estimate of the highest exposed Sensitive receptor as it is unlikely that a person would experience the long-term exposure assumed for the HIC calculation.

The TACs that account for at least 90% of the totals are provided in Table 1-9. Arsenic, manganese, mercury, and selenium account for essentially 100% of the non-cancer chronic risk at the PMI, the highest exposed Sensitive receptor, and the MEIW. Arsenic, hydrochloric acid, hydrogen sulfide, and two chlorinated dioxins and furans account for approximately 91.5% of the non-cancer chronic risk at the MEIR.

Table 1-9: Summary of Results – Non-Cancer Chronic Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
7440382	Arsenic	43.90%	63.84%	51.27%	21.26%
7439965	Manganese	55.84%	--	48.51%	78.61%
7439976	Mercury	0.13%	--	0.11%	0.10%
7782492	Selenium	0.12%	--	0.11%	0.02%
7647010	Hydrochloric Acid	--	12.49%	--	--
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	--	8.20%	--	--
7783064	Hydrogen Sulfide	--	3.75%	--	--
57117314	2,3,4,7,8-Pentachlorodibenzofuran	--	3.18%	--	--
	Total Shown	100.00%	91.46%	100.00%	100.00%

Figure 1-3: Summary of Results – Residential / Sensitive Non-Cancer Chronic Risk



Legend:
Blue Square..... PMI; Torch Middle School; Receptor No. 9956
Orange Triangle..... MEIR; Receptor No. 4715
Purple Triangle ..... Sensitive Receptor; Torch Middle School; Receptor No. 3661

Figure 1-4: Summary of Results – Worker Non-Cancer Chronic Risk

Legend:
Green Circle..... MEIW; Receptor No. 2937

1.6.3 8-Hour Non-Cancer Chronic Risk

The 8-hour non-cancer chronic risk calculation is identical for both residential and worker receptors. The PMI, MEIR, highest exposed Sensitive receptor, and MEIW identified in Table 1-5 are shown in Figure 1-5. The PMI (HIC-8 = 0.07) is located at Receptor No. 9956 on unimproved property on the grounds of Torch Middle School. The MEIR (HIC-8 = 0.005) is located at Receptor No. 4715, approximately 1,000 feet northeast of the facility boundary near the intersection of Amar Road and North Feather Avenue. The highest exposed Sensitive receptor (HIC-8 = 0.03) is located at Receptor No. 3661 on the grounds of Torch Middle School[4]. The MEIW (HIC-8 = 0.05) is located at Receptor No. 2937. Receptor No. 2937 is on the grounds of Estes Van Lines. A parking lot would not typically be considered a worker receptor but, due to the nature of the business, the HRA considers Receptor No. 2937 to be a worker receptor. There are no receptors with an estimated HIC-8 that exceeds 1.0. The primary target organ for all four receptors is the Central Nervous System.

The TACs that account for at least 90% of the totals are provided in Table 1-10. Arsenic, manganese, and mercury account for 100% of the 8-hour non-cancer chronic risk at all four receptors.

Table 1-10: Summary of Results – 8-Hour Non-Cancer Chronic Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
7440382	Arsenic	1.66%	6.77%	2.22%	1.77%
7439965	Manganese	98.29%	93.19%	97.73%	98.18%
7439976	Mercury	0.06%	0.04%	0.06%	0.06%
	Total Shown	100.00%	100.00%	100.00%	100.00%

[4] Receptor No. 3661 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating HIC-8 as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3661 is expected to provide a conservative estimate of the highest exposed Sensitive receptor as it is unlikely that a person would experience the long-term exposure assumed for the HIC-8 calculation.

Figure 1-5: Summary of Results – 8-Hour Non-Cancer Chronic Risk

Legend:
Blue Square..... PMI; Torch Middle School; Receptor No. 9956
Orange Triangle..... MEIR; Receptor No. 4715
Purple Triangle ..... Sensitive Receptor; Torch Middle School; Receptor No. 3661
Green Circle..... MEIW; Receptor No. 2937

1.6.4 Non-Cancer Acute Risk

The non-cancer acute risk calculation is identical for both residential and worker receptors. The PMI, MEIR, highest exposed Sensitive receptor, and MEIW identified in Table 1-5 are shown in Figure 1-6. The PMI (HIA = 0.27) is located at Receptor No. 9965 on the western facility boundary. The MEIR (HIA = 0.016) is located at Receptor No. 4999, approximately 250 north of the facility entrance on Vineland Avenue, near the intersection of Vineland Avenue and Giordano Street. The highest exposed Sensitive receptor (HIA = 0.20) and the MEIW (HIA = 0.20) are both located at Receptor No. 9956, adjacent to the facility on unimproved property on the grounds of Torch Middle School[5]. There are no receptors with an estimated HIA that exceeds 1.0. The primary target organ for all receptors is the Immune System.

The TACs that accounts for at least 90% of the totals are provided in Table 1-11. Nickel and benzene account for 100% of the non-cancer acute risk at all receptors.

Table 1-11: Summary of Results – Non-Cancer Acute Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
71432	Benzene	0.19%%	0.28%	0.20%	0.20%
7440020	Nickel	99.81%	99.72%	99.80%	999.80%
	Total Shown	100.00%	95.99%	100.00%	100.00%

[5] Receptor No. 9956 corresponds to unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(A) defines Receptor Location for the purpose of calculating HIA as "… any location outside the boundaries of the facility at which a person could experience acute exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 9956 is expected to provide a conservative estimate of the highest exposed Sensitive receptor and the MEIW, as acute, i.e., 1-hour, exposure could occur on unimproved property.

Figure 1-6: Summary of Results – Non-Cancer Acute Risk

Legend:
Blue Square..... PMI; Receptor No. 9965
Orange Triangle..... MEIR; Receptor No. 4999
Green Circle..... Sensitive Receptor / MEIW; Torch Middle School; Receptor No. 9956

1.6.5 Cancer Burden

The 70-year MICR is shown in Figure 1-7. As shown in Figure 1-7, there are eight Census receptors with non-zero population with 70-year MICR that exceed 1 in one million. The cancer burden calculation is shown in Table 1-12.

The maximum distance from the center of the facility to the edge of the 1 in one million isopleth is approximately 4,265 feet (1,300 meters).

Please note that the receptor numbering for the cancer burden analysis is different from the receptor numbering for the other analyses.

Table 1-12: Summary of Results – Cancer Burden

Receptor No.	Census Tract No. – Block No.	Population [A]	MICR [B]	Cancer Burden[1] [C]
123	404703 – 1004	22	1.05E-06	2.32E-05
155	404703 – 2016	139	1.11E-06	1.54E-04
522	407001 – 1005	304	1.08E-06	3.28E-04
523	407001 – 1006	325	1.36E-06	4.43E-04
524	407001 – 1007	272	1.74E-06	4.74E-04
525	407001 – 1008	310	1.50E-06	4.64E-04
560	407001 – 3003	284	1.07E-06	3.04E-04
604	407002 – 2021	5	2.18E-06	1.09E-05
	Total	1,661	--	0.002

Notes:
1. [C] = [A] x [B]

Figure 1-7: Summary of Results – Cancer Burden

Legend:
Blue Triangle ..... Census Receptors with Zero Population
Green Square ..... Census Receptors with Non-Zero Population

1.6.6 Other Population Exposure Assessments

There are no residential receptors with non-cancer HI greater than 0.5. The HRA does not include an assessment of population exposure for non-cancer risk.

1.6.7 Lead Non-Carcinogenic Assessment

Lead is unique among TACs because of the way it accumulates in the blood stream. The California Air Resources Board (ARB) developed methods to assess non-carcinogenic impacts from lead. The methods are outlined in the Risk Management Guidelines for Lead (ARB 2001).

The HRA includes a comparison of 30-day average Ground-Level Concentration (GLC) of lead to the Tier I high exposure scenario (HES) level of 0.12 ug/m^3. The 30-day average GLC of lead is estimated to be approximately 9E-05 ug/m^3. No further action is required.

1.7 Computer Models

Dispersion Modeling Software

The Lakes Environmental Software implementation/user interface, AERMOD View™, Version 10.2.1, was used for this project. This version of AERMOD View™ implements Version 21112 of AERMOD.

Health Risk Assessment Software

Health risk calculations were performed using HARP2's Air Dispersion Modeling and Risk Tool (ADMRT, version 21081). The HARP2 model uses OEHHA equations and algorithms to calculate health risks based on input parameters, such as emissions, ground-level concentrations, and toxicological data, as presented in the OEHHA risk assessment guidelines.

1.8 Executive Summary Conclusion

The HRA results from Section 1.6 demonstrate that the health risk from LMI's Calendar Year 2017 operations is below the applicable Notification Risk Levels, Action Risk Levels, and Significant Risk Levels from Rule 1402. Public Notice and preparation of a Risk Reduction Plan are not required.

AB2588 Health Risk Assessment Report

2.0 INTRODUCTION

In accordance with the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill 2588 (AB2588), this report presents the Health Risk Assessment (HRA) for the Light Metals Inc. (LMI) facility in the City of Industry. LMI (SCAQMD Facility ID 83102) received a letter from the South Coast Air Quality Management District (SCAQMD) on August 2, 2019, that required LMI to prepare an Air Toxics Inventory Report (ATIR) (ATIR Notice). The ATIR, based on Calendar Year 2017 emissions, was submitted to the SCAQMD on December 31, 2019, and subsequently revised. The SCAQMD approved the October 22, 2021, version of the ATIR and provided LMI with a notice to prepare an HRA on December 2, 2021 (HRA Notice). The HRA report is due to be submitted to the SCAQMD within 90 days of December 2, 2021, i.e., no later than March 2, 2022. The HRA report is submitted before the March 2, 2022, due date.

The HRA must be prepared in accordance with both the State of California Office of Environmental Health Hazard Assessment's (OEHHA) February 2015 *Air Toxics Hot Spots Program Risk Assessments Guidelines* (OEHHA HRA Guidelines) and the SCAQMD's October 2020 *AB2588 and Rule 1402 Supplemental Guidelines* (SCAQMD Supplemental Guidelines). The HRA Notice states that:

- If the results show that the facility, excluding risks from emergency Diesel-fueled Internal Combustion Engines (DICEs), poses a Maximum Individual Cancer Risk (MICR) of ten in one million or greater, or the non-cancer health effects hazard index exceeds one, LMI must provide public notice to all individuals exposed above notification levels;
- If the results show that cancer risk from emergency DICEs are expected to be ten in one million or greater, LMI must provide newspaper notification and information will be made available on the SCAQMD website; and
- If the results show that the facility, excluding risks from emergency DICEs, poses a MICR of 25 in one million or greater, cancer burden of 0.5 or greater, or non-cancer health effects hazard index of 3 or greater, LMI will also be subject to the risk reduction provisions of Rule 1402(f).

LMI does not operate emergency DICE at the City of Industry facility. The results presented herein do not include emergency DICE.

This HRA report was prepared by Yorke Engineering, LLC (Yorke) on behalf of LMI. The report presents the methodology used for preparing the HRA as well as the results and follows the outline from Appendix B of the SCAQMD Supplemental Guidelines.

All geographical coordinates referenced herein are Universal Transverse Mercator (UTM), World Geodetic System 1984 (WGS84).

3.0 HAZARD IDENTIFICATION

The first step in preparing an HRA is to identify the Toxic Air Contaminants (TACs) of concern and the source(s) of emissions of each TAC, and then to estimate the emissions from each source. This process is known as the "hazard identification."

3.1 Description of Operations and Emission Inventory

LMI has been in operation for over 50 years, supplying North America's die casting and foundry industries with quality aluminum and zinc alloys, and building the only combined recycled aluminum smelter and zinc/za alloy supplier on the West Coast. LMI is the only 100% specialized ingot producer in the Western United States and has customers in the automotive, aerospace, medical, and industrial markets.

Transforming recycled aluminum into alloy ingot at LMI is an eight-step process. The steps are:

- Scrap Receiving;
- Material Storage;
- Material Processing;
- Charge Recipe Construction;
- Furnace Charging;
- Aluminum Melting;
- Metal Preparation and Alloying; and
- Casting.

Each of these steps is described in Sections 3.1.1 through 3.1.8. In addition to the recycling process, LMI operates miscellaneous natural gas-fueled combustion equipment and propane-fueled welders. A Process Flow Diagram (PFD) and the emission inventory are shown in detail in Appendix A.

3.1.1 Scrap Receiving

LMI melts several types of scrap in their furnaces, including returns from customers and dealer scrap. Customer-generated scrap is normally free from non-conforming materials. Dealer scrap is baled, boxed or loose material that is carefully purchased, received, and inspected to ensure a minimum of ferrous materials, residual lubricants, and other non-conforming materials, such as plastic, cardboard, and non-conforming non-ferrous metals.

3.1.2 Material Storage

Aluminum material that will be melted and cast into ingot is stored in open areas adjacent to and inside the LMI's main production building. The storage area is divided into many sections for segregation of scrap types. Material storage areas are clearly marked to delineate between charge materials and insure the proper charge recipe mix.

3.1.3 Chip Processing

Some of the material used to make up the furnace charge is in the form of machine turnings and borings. This material must be processed further before it is ready to charge into the melting furnace. This processing consists of crushing the turnings in a ring mill crusher to produce small chips that can be easily handled by the chip conveyor systems that feed and remove chips from the two chip dryers. The chip dryers burn cutting lubricants that are usually present on the turnings. An afterburner oxidizes the unburned hydrocarbon vapors in the gas stream that is vented from the chip dryers. The resulting chip is clean, dry, and ready for melting. The chip conveyor at the discharge of the dryer houses a magnetic separator that removes any iron filings or chips that may be present as non-conforming materials in the aluminum turnings.

Other materials include wheels, solid aluminum, and aluminum sheets.

The crushing process generates emissions of Particulate Matter (PM). The PM may contain toxic metals. PM emissions are estimated from an emission factor used by the SCAQMD in the evaluation for Application Number (A/N) 242132. An LMI laboratory analysis of dust collected from a baghouse is assumed to be representative of the TAC speciation of the PM. The emission inventory for the crusher is shown in Appendix A, Table A.1.

The drying process generates TAC emissions from combustion of natural gas and the drying process itself. Combustion emissions are calculated from SCAQMD defaults. PM emissions, which may contain toxic metals, are estimated from an uncontrolled AP-42 emission factor and a control efficiency. An LMI laboratory analysis of dust collected from a baghouse is assumed to be representative of the TAC speciation of the PM. The drying process may also generate Chlorinated Dioxins and Furans (Chlorinated D/F). Chlorinated D/F emissions associated with the two dryers are calculated using emission factors derived from source tests. The emission inventory for the two dryers is shown in Appendix A, Tables A.2 and A.3.

Each dryer vents to an afterburner, followed by one or more baghouses. The afterburners generate TAC emissions from combustion of natural gas. Combustion emissions are calculated from SCAQMD defaults. The emission inventory for the two afterburners is shown in Appendix A, Tables A.4 and A.5.

3.1.4 Charge Recipe Construction

Proper construction of the furnace charge recipe is critical to the quality of the aluminum alloy. The appropriate mix of scrap by alloy type and cost is a major factor in obtaining the metallurgical properties and cost-competitiveness of the ingot to produce castings that meet the high-quality standards of LMI and its customers. The necessary metallurgical formulations are used to determine the furnace charge recipe. The amounts of customer-generated scrap, turnings, dealer scrap, and alloying additives that are to be used in the recipe are calculated to the pound as precisely as possible. The recipe may be adjusted throughout the production cycle (heat) to allow for inconsistencies or unknown chemistries of the scrap charge. This recipe will also change from heat to heat depending on scrap availability and the specific alloy requirements of the ingot being produced.

3.1.5 Furnace Charging

LMI uses two custom-built side-well type reverberatory furnaces to melt the aluminum scrap. The furnaces are known as Melt Furnace A and Melt Furnace B. Material is charged into the molten metal in the well area of each furnace. The scrap material is charged on a continuous basis. A non-reactive cover flux mixture consisting of approximately 60% sodium chloride and 40% potassium chloride is used in the charge wells to prevent metal oxidation. The cover flux is removed during the dross skimming process.

3.1.6 Aluminum Melting

Each furnace uses two flat flame oxy-fuel burners to produce the energy required to melt the solid aluminum. The oxy-fuel burners are fired on natural gas and oxygen. The solid aluminum metal is heated to its melting point (approximately 1,360 Degrees Fahrenheit). The temperature of the gases formed from the combustion of the fuel is approximately 1,800 Degrees Fahrenheit.

The melting process generates TAC emissions from combustion of natural gas and the melting process itself. Non-aldehyde combustion emissions are calculated from SCAQMD defaults. Aldehyde combustion emissions are calculated from source test data. Toxic metal emissions are estimated using one of three methods: speciation of PM emissions, source test data, or defaults from the California Air Toxics Emission Factor (CATEF) database. The melting process may generate hydrogen sulfide and additional aldehydes. Emissions of hydrogen sulfide are estimated using a CATEF emission factor; additional emissions of aldehydes are calculated from source test data. The melting process may also generate Chlorinated D/F. Chlorinated D/F emissions associated with the two melting furnaces are calculated using emission factors derived from source tests. The emission inventory for the two melting furnaces is shown in Appendix A, Tables A.6 and A.7.

3.1.7 Metal Preparation and Alloying

To obtain the low magnesium content required on some alloys, chlorine gas is injected into the molten metal through a molten metal circulating pump designed for this purpose. This reactive fluxing process removes magnesium from the alloy. The resulting reaction produces magnesium chloride, which floats to the surface of the charge well where it combines with the cover flux and is removed with the dross when it is skimmed. The chlorine gas is metered into the metal bath to ensure the proper amount is used. The metal is sampled throughout the production of the heat to determine if the correct metallurgical properties have been achieved.

The alloying process generates TAC emissions. The alloying emissions are a result of chlorine addition. TAC emissions associated with chlorine addition are shown in Appendix A, Tables A.6 and A.7.

The dross handling process generates emissions of PM and TACs. PM emissions are estimated from an emission factor used by the SCAQMD in the evaluation for A/N 357807. An LMI laboratory analysis of dust collected from a baghouse is assumed to be representative of the TAC speciation of the PM. The emission inventory for the dross handling process is shown in Appendix A, Table A.8.

3.1.8 Casting

Once the furnace is full and the metallurgical properties of the bath are confirmed, the furnace is tapped. The molten metal flows through a trough to the ingot-casting conveyor. One furnace may pump molten metal to a holding furnace instead of tapping directly to the casting conveyor. In this case, the holding furnace will be tapped while the melt furnace will commence producing its next heat production cycle.

The holding furnace generates TAC emissions from combustion of natural gas. Combustion emissions are calculated from SCAQMD defaults. The emission inventory for the holding furnace is shown in Appendix A, Table A.9.

The loading, melting, preparation, alloying, and casting process (heat production cycle) take approximately 3 to 9 hours to complete, depending on the size of the heat required.

3.1.9 Miscellaneous Natural Gas Combustion

LMI operates miscellaneous permit-exempt equipment that combusts natural gas. Combustion emissions for the miscellaneous equipment are calculated from SCAQMD defaults. The emission inventory for the miscellaneous equipment is shown in Appendix A, Table A.10.

3.1.10 Propane-Fueled Welders

LMI operates propane-fueled welders. LMI's welding is considered to be *routine and predictable* and therefore must be included in the HRA. The welders generate TAC emissions from combustion of propane. The welding process may generate emissions of toxic metals. Combustion emissions are calculated from SCAQMD defaults. Welding emissions are calculated from AP-42 emission factors. The emission inventory for the propane-fueled welders is shown in Appendix A, Table A.11.

3.2 Emission Summary

A summary of the emission inventory is provided in Appendix A, Tables A.12 and A.13. Appendix A, Table A.13 also shows whether each chemical has carcinogenic and/or non-carcinogenic effects and may contribute to health risk through non-inhalation exposure pathways. Cancer potency factors and Reference Exposure Levels (REL), and target organs for non-cancer health effects are shown in Appendix A, Table A.14 and Appendix A, Table A.15, respectively.

Facility-wide emissions are reproduced in Table 3-1.

Table 3-1: Facility-Wide Emissions

CAS No.	Chemical Name (Abbreviated)	Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	Annual Emissions (g/s)	Maximum Hourly Emissions (g/s)
7440382	Arsenic	2.82E-01	8.01E-05	4.06E-06	1.01E-05
7439921	Lead	1.31E-01	4.14E-05	1.89E-06	5.22E-06
7440020	Nickel	6.71E-01	5.85E-04	9.66E-06	7.38E-05
7440417	Beryllium	2.87E-03	9.04E-07	4.13E-08	1.14E-07
7440508	Copper	1.85E+00	5.82E-04	2.66E-05	7.34E-05

CAS No.	Chemical Name (Abbreviated)	Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	Annual Emissions (g/s)	Maximum Hourly Emissions (g/s)
7440439	Cadmium	6.79E-03	2.75E-06	9.78E-08	3.46E-07
7439976	Mercury[1]	3.79E-03	1.19E-06	5.45E-08	1.51E-07
7782492	Selenium	4.71E-02	1.49E-05	6.78E-07	1.87E-06
50000	Formaldehyde	8.99E+01	3.26E-02	1.29E-03	4.11E-03
1151	PAHs-w/o	2.02E-02	4.10E-06	2.91E-07	5.17E-07
91203	Naphthalene	7.59E-02	2.69E-05	1.09E-06	3.39E-06
71432	Benzene	1.41E+00	3.60E-04	2.04E-05	4.54E-05
75070	Acetaldehyde	4.14E+01	1.28E-02	5.96E-04	1.61E-03
107028	Acrolein	1.60E+00	1.12E-03	2.30E-05	1.41E-04
7664417	NH3	6.48E+02	1.32E-01	9.32E-03	1.66E-02
100414	Ethyl Benzene	1.58E+00	3.33E-04	2.28E-05	4.20E-05
110543	Hexane	1.27E+00	4.34E-04	1.83E-05	5.47E-05
108883	Toluene	6.14E+00	1.33E-03	8.84E-05	1.68E-04
1330207	Xylenes	4.54E+00	9.66E-04	6.53E-05	1.22E-04
1746016	2,3,7,8-TCDD	6.86E-06	1.97E-09	9.87E-11	2.48E-10
40321764	1-3,7,8PeCDD	2.79E-05	7.99E-09	4.01E-10	1.01E-09
39227286	1-4,7,8HxCDD	2.61E-06	7.46E-10	3.76E-11	9.40E-11
57653857	1-3,6-8HxCDD[2]	4.76E-06	1.36E-09	6.85E-11	1.71E-10
19408743	1-3,7-9HxCDD[2]	3.14E-06	8.96E-10	4.53E-11	1.13E-10
35822469	1-4,6-8HpCDD[2]	1.33E-06	3.77E-10	1.91E-11	4.76E-11
3268879	1-8OctaCDD[3]	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51207319	2,3,7,8-TCDF	1.06E-05	3.03E-09	1.53E-10	3.83E-10
57117416	1-3,7,8PeCDF[2]	3.87E-06	1.11E-09	5.58E-11	1.40E-10
57117314	2-4,7,8PeCDF	7.14E-05	2.04E-08	1.03E-09	2.57E-09
70648269	1-4,7,8HxCDF	2.58E-05	7.32E-09	3.71E-10	9.24E-10
57117449	1-3,6-8HxCDF[2]	1.97E-05	5.62E-09	2.84E-10	7.08E-10
60851345	2-4,6-8HxCDF[2]	1.92E-05	5.47E-09	2.77E-10	6.89E-10
72918219	1-3,7-9HxCDF[2]	5.51E-06	1.56E-09	7.93E-11	1.97E-10
67562394	1-4,6-8HpCDF[2]	4.63E-06	1.31E-09	6.67E-11	1.65E-10
55673897	1-4,7-9HpCDF[2]	4.43E-07	1.26E-10	6.38E-12	1.58E-11
39001020	1-8OctaCDF[3]	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7439965	Manganese	3.32E+01	2.11E-01	4.78E-04	2.66E-02
7783064	H2S	1.03E+03	2.89E-01	1.48E-02	3.64E-02
7647010	HCl	3.08E+03	3.61E+00	4.44E-02	4.55E-01
7782505	Chlorine	8.56E+00	1.00E-02	1.23E-04	1.26E-03
107062	EDC	4.83E-03	4.63E-06	6.95E-08	5.83E-07

CAS No.	Chemical Name (Abbreviated)	Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	Annual Emissions (g/s)	Maximum Hourly Emissions (g/s)
75092	Methylene Chlor	4.09E-03	3.92E-06	5.89E-08	4.94E-07
129000	Pyrene	2.78E-04	2.67E-07	4.00E-09	3.36E-08
191242	B[g,h,i]perylen	8.47E-05	8.12E-08	1.22E-09	1.02E-08
192972	B[e]pyrene	8.49E-05	8.13E-08	1.22E-09	1.03E-08
205992	B[b]fluoranthen	3.40E-05	3.25E-08	4.89E-10	4.10E-09
206440	Fluoranthene	2.27E-04	2.18E-07	3.27E-09	2.74E-08
208968	Acenaphthylene	1.13E-03	1.08E-06	1.63E-08	1.37E-07
218019	Chrysene	1.42E-04	1.36E-07	2.04E-09	1.71E-08
83329	Acenaphthene	2.56E-04	2.45E-07	3.68E-09	3.09E-08
85018	Phenanthrene	2.13E-03	2.04E-06	3.06E-08	2.57E-07
86737	Fluorene	1.16E-03	1.11E-06	1.67E-08	1.40E-07
91576	2MeNaphthalene	6.79E-03	6.51E-06	9.78E-08	8.21E-07
75014	Vinyl Chloride	3.05E-03	2.92E-06	4.39E-08	3.68E-07
79345	TetraClEthane	8.18E-03	7.84E-06	1.18E-07	9.89E-07
79005	1,1,2TriClEthan	6.50E-03	6.23E-06	9.36E-08	7.86E-07
95636	1,2,4TriMeBenze	2.92E-03	2.80E-06	4.21E-08	3.54E-07
78875	1,2-DiClPropane	5.50E-03	5.27E-06	7.92E-08	6.65E-07
542756	1,3-DiClPropene	5.40E-03	5.18E-06	7.77E-08	6.53E-07
67663	Chloroform	5.83E-03	5.59E-06	8.39E-08	7.05E-07
106990	1,3-Butadiene	5.46E-02	5.23E-05	7.86E-07	6.60E-06
67561	Methanol	5.11E-01	4.90E-04	7.36E-06	6.18E-05
56235	CCl4	7.51E-03	7.19E-06	1.08E-07	9.07E-07
100425	Styrene	4.83E-03	4.63E-06	6.95E-08	5.83E-07
106934	EDB	9.06E-03	8.68E-06	1.30E-07	1.10E-06

Notes:

1. The mercury speciation from a baghouse dust laboratory analysis has been corrected to 0.780 parts per million by weight (ppmw) from 780 ppmw. Facility-wide mercury emissions decreased from approximately 3.77 lb/year to 3.79E-03 lb/year.
2. The emission factors for one of the dryers have been adjusted.
3. The Toxicity Equivalent (TEQ) value emission factors for 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin and 1,2,3,4,6,7,8,9-Octachlorodibenzofuran have been adjusted to 0.000 micrograms (ug) per megagram (Mg) feed, consistent with the SCAQMD source test evaluation.

4.0 EXPOSURE ASSESSMENT

The second step in preparing an HRA is the "exposure assessment". The exposure assessment includes modeling of environmental transport, evaluation of environmental fate, identification of exposure routes, determination of exposed population, and estimation of ground-level concentrations at receptors.

4.1 Facility Description

LMI operates under SCAMQD Facility ID 83102 and is located in the City of Industry at 13329 Ector Street. An aerial of LMI and its surroundings is provided in Figure 4-1. The local topography is generally flat with elevation between 90 and 100 meters (295 – 328 feet) above sea level within 2,000 feet of the facility boundary.

As shown in the PFD in Appendix A, most of the emission sources at LMI vent to either a baghouse or an afterburner followed by a baghouse. The baghouses are included in the dispersion model as Point Sources; the emissions associated with the individual emission sources that vent to each baghouse are considered separately in the risk assessment calculations in order to be able to identify the emission sources with the highest contributions to health risk. The emission sources that do not vent to a control device, the crusher, miscellaneous natural gas combustion, and propane-fueled welders, are included in the dispersion model as Volume Sources covering the approximate facility footprint. The releases are shown in Figure 4-2.

Releases from Point Sources may be affected by nearby buildings through a phenomenon known as building downwash. The dispersion model includes the nearby buildings that may affect the model's Point Sources. Buildings may be defined as rectangular, circular, or polygonal. Rectangular buildings are shown in Figure 4-3; circular buildings are shown in Figure 4-4; and polygonal buildings are shown in Figure 4-5. Rectangular and circular building dimensions are provided in Appendix B, Table B.1 and polygonal building parameters are provided in Appendix B, Table B.2.

The HRA includes the default exposure pathways for all receptors as identified in Section 4.4 of the SCAQMD Supplemental Guidelines. The exposure pathways of drinking water consumption, fish ingestion, dairy milk ingestion, and meat ingestion are excluded since LMI does not impact a local water reservoir, a local fishable body of water, a dairy, or grazing land, respectively.

Figure 4-1: LMI and Surrounding Area

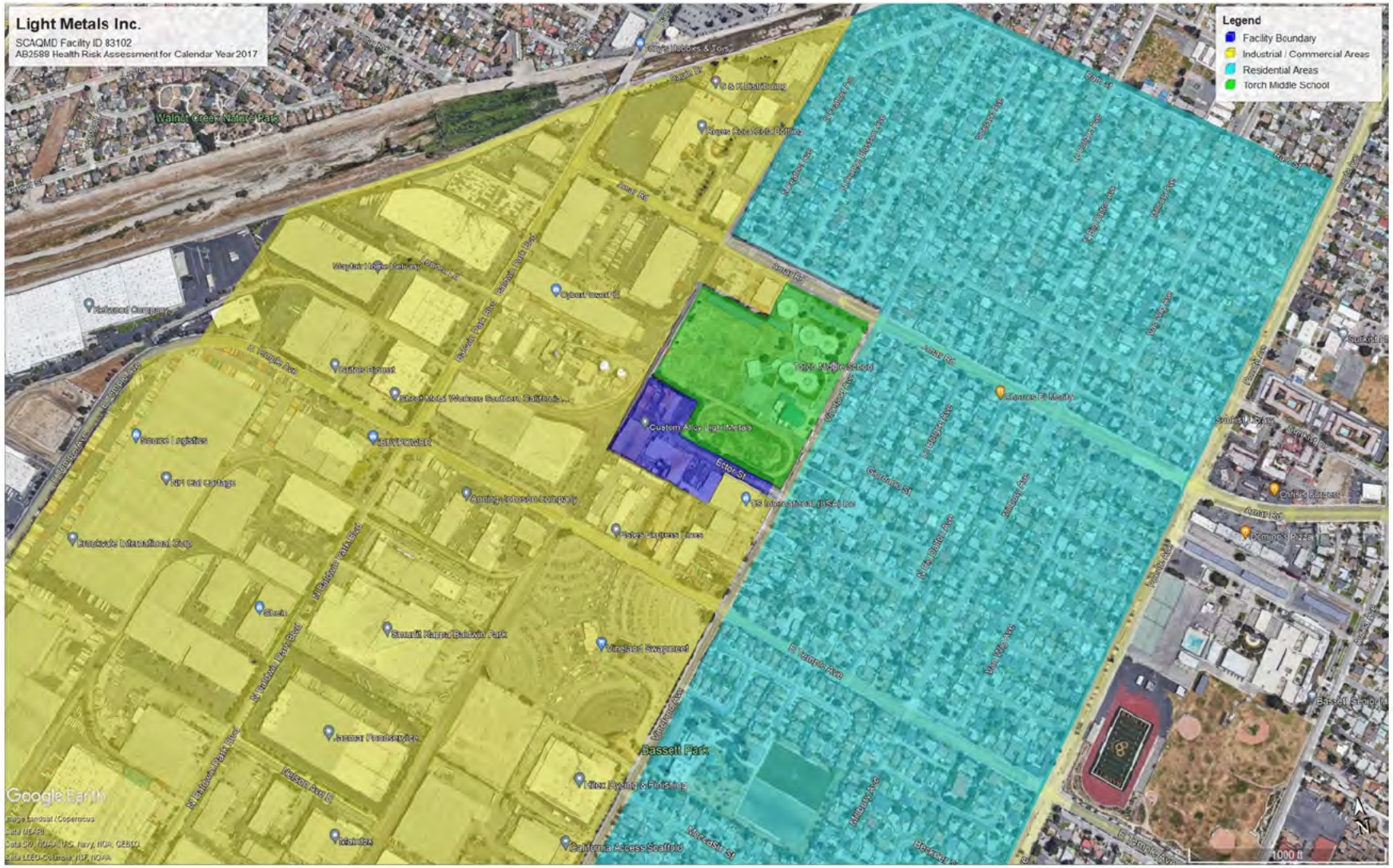
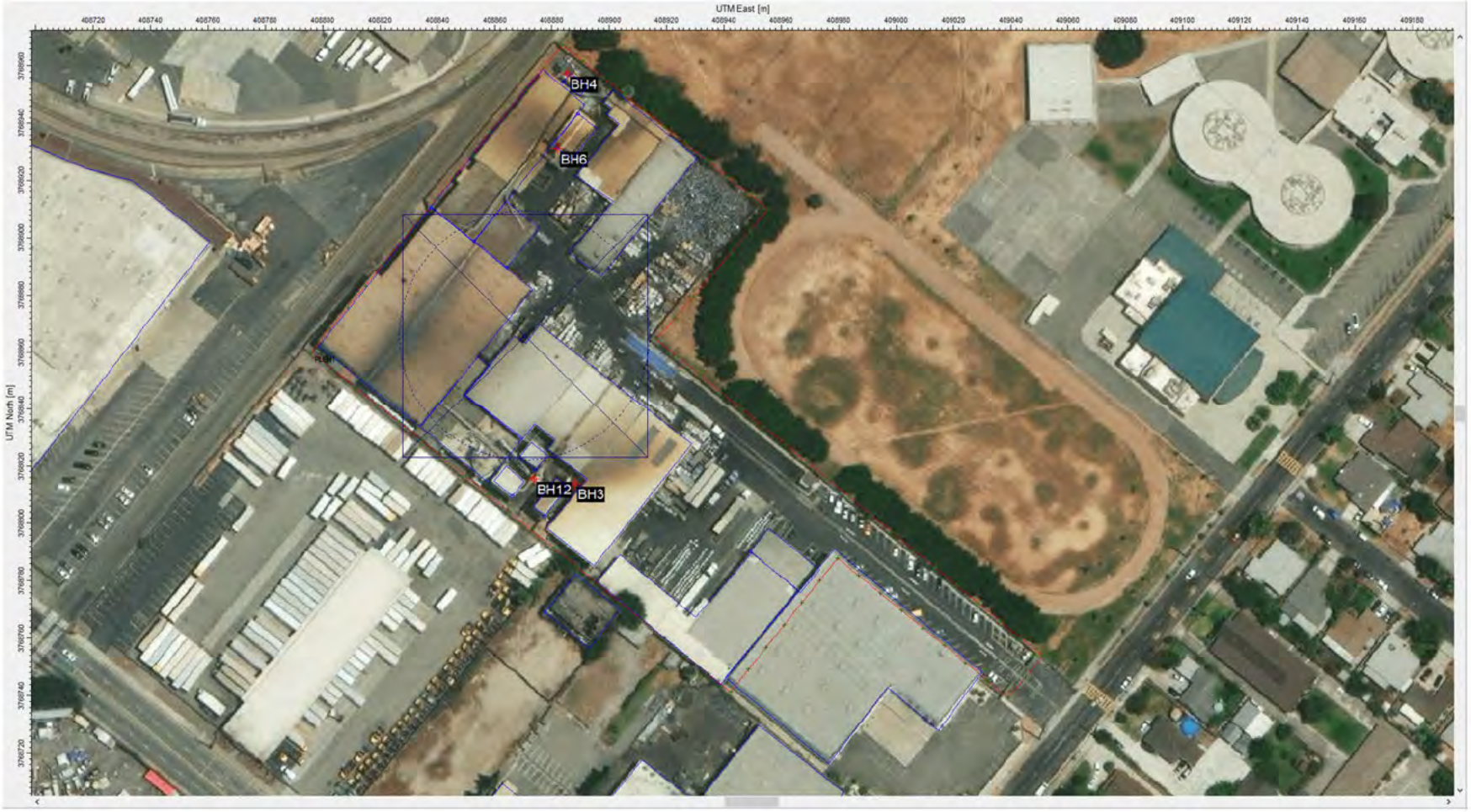


Figure 4-2: Releases to Atmosphere



Legend:
Red Cross..... Point Source, 4 total; BH = Baghouse, for example, BH3 = Baghouse 3
Blue Square..... Volume Source, 3 total; Crusher, Miscellaneous Natural Gas Combustion, and Propane-Fueled Welders

Figure 4-3: Rectangular Buildings

Legend:
Blue Polygon ..... Building

Figure 4-4: Circular Buildings

Legend:
Blue Polygon ..... Building

Figure 4-5: Polygonal Buildings

Legend:
Blue Polygon ..... Building

4.2 Release Parameters

The dispersion model includes seven releases: four Point Sources and three Volume Sources. Point Source parameters are provided in Appendix C, Table C.1. Volume Source parameters are provided in Appendix C, Table C.2. The assignment of emissions from each emission source to each release and the emission source operating schedule are shown in Appendix C, Table C.3.

4.3 Air Dispersion Modeling

Air dispersion models calculate the atmospheric transport and fate of pollutants from the emission sources. The models calculate the concentration of selected pollutants at specific downwind ground-level points, such as residential or off-site workplace receptors. The transformation (fate) of an airborne pollutant, its movement with the prevailing winds (transport), its crosswind and vertical movement due to atmospheric turbulence (dispersion), and its removal due to dry and wet deposition are influenced by the pollutant's physical and chemical properties and by meteorological and environmental conditions. Factors such as distance from the source to the receptor, meteorological conditions, intervening land use and terrain, pollutant release characteristics, and background pollutant concentrations affect the predicted concentration of an air pollutant. Air dispersion models take all these factors into consideration when calculating downwind ground-level pollutant concentrations.

The air dispersion model used for this HRA is the **A**MS/**E**PA **R**egulatory **Mod**el (AERMOD). AERMOD is a steady-state plume dispersion model that incorporates air dispersion calculations based on planetary boundary layer turbulence structure and scaling concepts. AERMOD includes the treatment of both surface and elevated sources and simple and complex terrain. AERMOD, like most dispersion models, uses mathematical algorithms to characterize the atmospheric processes that disperse pollutants emitted by a source. Using emission rates, exhaust parameters, terrain characteristics, and meteorological inputs, AERMOD calculates downwind pollutant concentrations at specified receptor locations. For this facility, the results from the AERMOD runs were imported into an HRA program for further processing and analysis. AERMOD is recommended by both the EPA and the SCAQMD for stationary source air dispersion modeling projects. The air dispersion modeling methodology was based extensively on SCAQMD guidance and is described in Sections 4.3.1 through 4.3.7.

The Lakes Environmental Software implementation/user interface, AERMOD View™, Version 10.2.1, was used for this project. AERMOD View™, Version 10.2.1 implements Version 21112 of AERMOD

Electronic modeling files have been provided to the SCAQMD with the HRA report. These files include the AERMOD meteorological files and dispersion model input and output files, including the summary file and the individual source 1-hour and period plot files containing the X/Q (Chi/Q) concentrations.

4.3.1 Modeling Options

AERMOD View™ allows the user to select from a variety of dispersion options. The HRA uses "Regulatory Default" options and outputs unitized Ground-Level Concentrations (GLC) for each emission source for the period average and the maximum 1-hour average. The Lead Non-Carcinogenic Assessment uses "Regulatory Default" options, actual lead emissions for each source, as applicable, and outputs total GLC for the maximum 1-hour average and the monthly average.

4.3.2 Receptor Grids

Satellite maps within the AERMOD View™ program were used for visualizing the results of the HRA and developing the receptor grid.

The modeling domain is sufficiently large to encompass both the cancer risk and non-cancer risk Zones of Impact (ZOI). The ZOI for cancer risk is assumed to be all receptors within the 1 x 10^{-6} cancer risk isopleth and each ZOI for non-cancer risk (non-cancer chronic, 8-hour non-cancer chronic, and non-cancer acute) is assumed to include all receptors within the 0.5 Hazard Index (HI) isopleths.

The dispersion model contains a combination of a fenceline grid and a multi-tier grid. The fenceline grid and multi-tier grid capture health effects at the fenceline and areas surrounding the facility, respectively. All receptors are set at a height of 0 meters, i.e., the dispersion model does not consider flagpole receptors.

The fenceline grid places a receptor every 10 meters along the facility boundary. The multi-tier grid is centered on the centroid of the polygon formed by the emission sources and created using:

- 10-meter receptor spacing within 400 meters of the grid origin;
- 25-meter receptor spacing between 400 meters and 600 meters from the grid origin;
- 50-meter receptor spacing between 600 meters and 1,000 meters from the grid origin; and
- 100-meter spacing between 1,000 meters and 2,000 meters from the grid origin.

There are two sensitive receptors within the ZOI for cancer risk and no sensitive receptors within the ZOI for non-cancer risk. The multi-tier grid has sufficient resolution to identify the highest cancer risk at each sensitive receptor: additional receptors are not included in the dispersion model. The sensitive receptors within the ZOI for cancer risk are identified in Table 4-1.

Table 4-1: Sensitive Receptors within ZOI for Cancer Risk

Sensitive Receptor	Type of Sensitive Receptor	Address
Torch Middle School	School	751 Vineland Avenue Baldwin Park, CA 91746
Kaiser Permanente Baldwin Park Medical Center	Hospital	1011 Baldwin Park Boulevard Baldwin Park, CA 91706

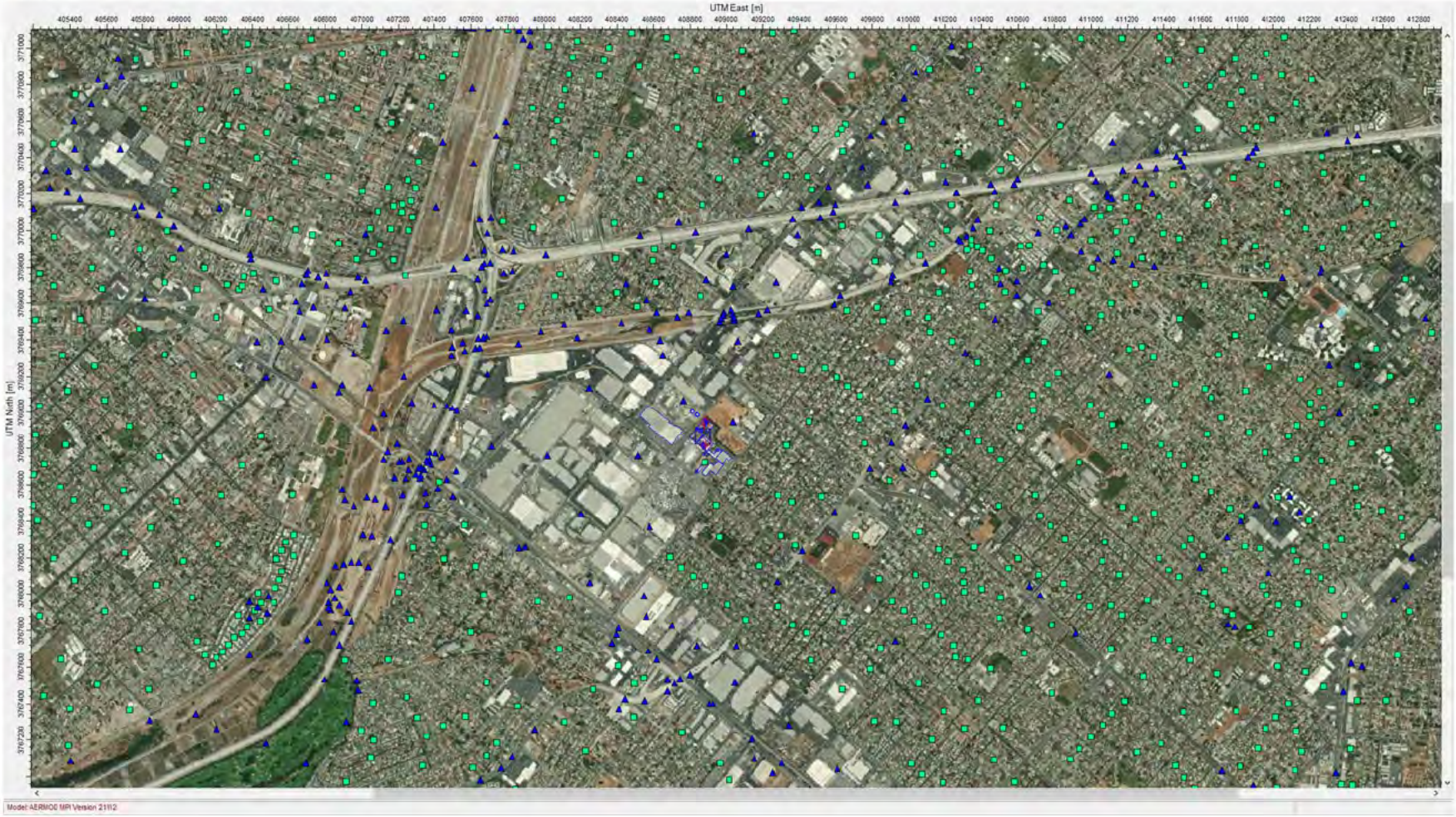
The receptor grid is shown in Figure 4-6.

The population exposure assessment is based on a separate grid of census receptors. The population exposure assessment includes all census receptors within 4,000 meters of the facility boundary. Census receptors are shown in Figure 4-7.

Figure 4-6: Receptor Grid

Legend:
Yellow Cross ..... Multi-Tier Grid Receptor
Pink Polygon..... Sensitive Receptor Location

Figure 4-7: Census Receptors



Legend:
Blue Triangle ..... Census Receptors with Zero Population
Green Square ..... Census Receptors with Non-Zero Population

4.3.3 Terrain Options

The dispersion modeling uses the regulatory default elevated terrain option. Terrain data is imported directly into AERMOD View™ using the WebGIS import feature. The terrain data is from the United States Geological Survey (USGS) National Elevation Dataset (NED) and has a spatial resolution of approximately 10 meters (1/3 arcsecond). The terrain data files are processed by AERMOD View™ using AERMAP Version 18081, with elevations assigned to receptors, buildings, and emission sources accordingly.

4.3.4 Building Downwash

Building downwash effects are assessed using Building Profile Input Program for PRIME (BPIPPRM). The dispersion model includes the buildings shown in Figures 4-3 through 4-5.

4.3.5 Meteorology

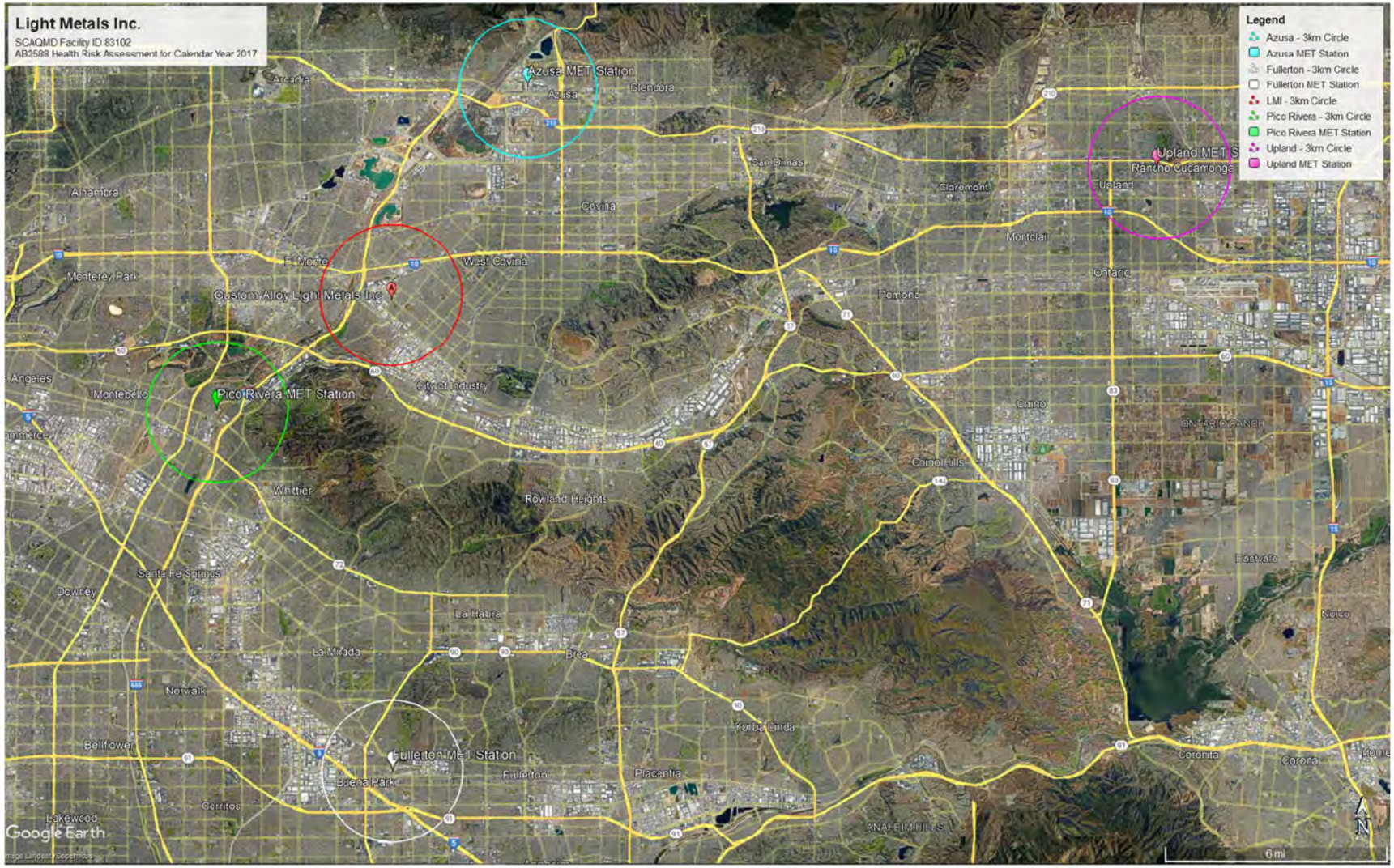
Meteorological (MET) data is available on the SCAQMD website. Figure 4-8 shows the four MET stations that are closest to LMI, along with a circle of radius 3 kilometers centered on LMI and each station.

LMI is closest to the Pico Rivera MET station. The distance from LMI to the Pico Rivera MET station is approximately 30,000 feet, while the distance from LMI to the Azusa MET station is approximately 36,000 feet; the distance from LMI to the Fullerton MET station is approximately 66,000 feet; and the distance from LMI to the Upland MET station is approximately 110,000 feet.

The area within 3 kilometers of LMI is more similar topographically to the area within 3 kilometers of the Pico Rivera MET station. Additionally, the mountains immediately to the north of the Azusa MET station would be expected to result in wind patterns different from wind patterns at LMI.

For these reasons, the HRA uses data from the Pico Rivera MET station. The base elevation of the station is 58 meters; the files contain data for 2010-2012 and 2015-2016. A wind rose for the Pico Rivera MET station is provided in Appendix D..

Figure 4-8: MET Stations Near LMI



4.3.6 Deposition

Deposition is accounted for in the multipathway exposure assessment, as necessary, but not in the air dispersion modeling.

4.3.7 Urban / Rural Dispersion

AERMOD allows for the use of urban or rural dispersion coefficients. The determination of whether a facility is in an urban or rural area follows the Auer method noted in the References section of 40 CFR Part 51 Appendix W. The Auer method requires drawing a circle with a 3-kilometer radius centered on the centroid of the emission source locations and classifying the land use types within the circle as urban or rural according to a set of criteria. Per the SCAQMD Supplemental Guidelines, the default assumption is urban, and the population of the urban area should be set to the county the facility resides in. LMI is in Los Angeles County: the population of Los Angeles County from the SCAQMD website is 9,818,605.

4.4 Ground-Level Concentrations

GLCs are provided in Appendix E for the Point of Maximum Impact (PMI), the Maximally Exposed Individual Resident (MEIR), the highest exposed Sensitive receptor, and the Maximally Exposed Individual Worker (MEIW) for cancer risk and non-cancer risk.

5.0 RISK CHARACTERIZATION

The TAC emission inventory is described in Section 3.0. The exposure assessment is conducted through dispersion modeling as described in Section 4.0. Section 5.0 describes how these analyses are combined with the current OEHHA cancer potency factors and RELs from Appendix A, Table A.14 to calculate health risk.

5.1 HRA Methodology

HARP2 was used to conduct the dose-response assessment and risk characterization. The dose-response assessment is the relationship between pollutant exposure and potential incidence of an adverse health effect in the exposed populations. It is determined for each chemical using the most current OEHHA potency factors for cancer risk and RELs for non-cancer risks, which are incorporated into HARP2. Human doses were calculated for the modeled environmental exposures over specified time periods via multiple environmental pathways using the AERMOD dispersion modeling results. The risk characterization integrates the health effects and public exposure information and provides quantitative estimates of health risks resulting from facility TAC emissions.

The health risk calculations were performed using HARP2's Air Dispersion Modeling and Risk Tool (ADMRT, version 21081). The HARP2 model uses OEHHA equations and algorithms to calculate health risks based on input parameters, such as emissions, X/Q concentrations, and toxicological data, as presented in the OEHHA risk assessment guidelines.

A description of the health risk indices and associated calculations is provided in Sections 5.1.1 through 5.1.4.

HARP2 input and output files have been provided to the SCAQMD with the HRA report.

5.1.1 Cancer Risk

Cancer risk is the estimated probability of a maximally exposed individual potentially contracting cancer as a result of exposure to TACs over an extended period. Per the SCAQMD Supplemental Guidelines, this HRA estimates cancer risk over a 30-year period for residential, sensitive, and PMI grid receptor locations, and a 25-year period for off-site worker receptor locations.

Residential/sensitive/grid receptor cancer risk estimates were calculated using the California Air Resources Board's (ARB's) Risk Management Policy (RMP), "RMP Using the Derived Method," and off-site workplace cancer risk estimates used the "OEHHA Derived" calculation method. The RMP uses high-end breathing rates (95th percentile) for children from the 3rd trimester through age 2 and 80th percentile breathing rates for all other ages for residential exposures (ARB/CAPCOA 2015). The "OEHHA Derived" method uses high-end exposure parameters for the top two exposure pathways and mean exposure parameters for the remaining pathways for cancer risk estimates. The "RMP Using the Derived Method" combines the two approaches.

5.1.2 Non-Cancer Chronic Risk

Long-term (chronic) exposure to some TACs may be associated with non-cancer health effects. The non-cancer chronic Hazard Index (HIC) is the sum of the individual substance HICs for all TACs affecting the same target organ system. Chronic risk was calculated using the "OEHHA Derived" Method at all receptors for an annual exposure duration.

To ensure potential offsite worker exposure is fully assessed, an 8-hour non-cancer chronic Hazard Index (HIC-8) was estimated in a similar manner to the annual HIC. The 8-hour RELs were developed principally for exposure of individuals during 8-hour work schedules. OEHHA recommends estimating the HIC-8 from daily average 8-hour exposure for those chemicals with 8-hour RELs at worker receptors. The HRA conservatively calculates HIC-8 from the annual average GLC.

5.1.3 Non-Cancer Acute Risk

Short-term (acute) exposure to some TACs may be associated with non-cancer health effects. The non-cancer acute Hazard Index (HIA) is the sum of the individual substance HIAs for all TACs affecting the same target organ system. Acute risk was calculated at all receptors from the maximum 1-hour average GLC of each TAC.

5.1.4 Cancer Burden

Cancer burden is the estimated increase in the occurrence of cancer cases in a population subject to a cancer risk of greater than or equal to one in one million (1.0×10^{-6}) based on a 70-year exposure to TACs. The cancer burden is determined for the population located within the ZOI, which is defined as the area within the one in one million cancer risk isopleth for a 70-year exposure.

Since the cancer risk based on a 70-year exposure was predicted to be greater than one in one million, the HRA includes an estimate of cancer burden. A separate grid of specific "census receptors" was developed in HARP2. For each "census" location, the corresponding population represented by the receptor is from the 2010 census. At the receptors where the 70-year cancer risk was predicted to be greater than one in one million, the cancer risk was multiplied by the population, then the cancer burden was calculated as the sum of these values.

5.2 HARP2 Model Options

The HRA includes a multipathway assessment. The relevant HARP2 model options are shown in Table 5-1. Grid, residential, and sensitive receptors are evaluated using the residential exposure assumptions. Worker receptors are evaluated using the worker exposure assumptions.

Table 5-1: HARP2 Model Options

Parameter	Assumptions				Comments
Multipathway					
Inhalation	Res	☒	Work	☒	–
Soil	Res	☒	Work	☒	–
Dermal	Res	☒	Work	☒	"Warm" climate
Mother's Milk	Res	☒	Work	☐	–
Drinking Water	Res	☐	Work	☐	–
Fish	Res	☐	Work	☐	–
Homegrown Produce	Res	☒	Work	☐	Households that Garden defaults
Beef/Dairy	Res	☐	Work	☐	–
Pigs, Chickens, and/or Eggs	Res	☐	Work	☐	
Deposition Velocity	0.02 m/s				SCAQMD Supplemental Guidelines, Table 8
Residential Cancer Risk Assumptions					
Exposure Duration	30 years				–
Fraction of Time at Home (FAH)	3rd Trimester to 16 years: Off 16 years to 30 years: On				Torch Middle School is in the ZOI for cancer risk
Inhalation Rate Basis	RMP				–
Analysis Option	RMP Using the Derived Method				–
Worker Cancer Risk Assumptions					
Exposure Duration	25 years				–
Analysis Option	OEHHA Derived Method				–
Inhalation Rate Basis	8-hr breathing rates, moderate intensity				–
Worker Adjustment Factor (WAF)	1.0				24 hours/day, 7 days/week
Residential and Worker Non-Cancer Risk Assumptions					
Analysis Option	OEHHA Derived Method				–
Inhalation Rate Basis	Long-term 24-hour (resident) Moderate 8-hour (worker)				–
Worker Adjustment Factor (applies only to 8-hour non-cancer chronic) (WAF-8)	1.0				24 hours/day, 7 days/week
Cancer Burden Risk Assumptions					
Exposure Duration	70 years				–
Fraction of Time at Home (FAH)	3rd Trimester to 16 years: Off 16 years to 70 years: Off				–
Inhalation Rate Basis	RMP				–
Analysis Option	RMP Using the Derived Method				–

5.3 HRA Results

Table 5-2 summarizes the HRA results and presents the MICR and Hazard Index (HI) for non-cancer health effects for the PMI, the MEIR, the highest exposed Sensitive Receptor, and the MEIW.

The cancer burden is calculated to be 0.002. This is less than the 0.5 Action Risk Level. An estimated 1,661 persons may be exposed to MICR greater than 1 in one million over a 70-year lifetime.

Table 5-2: HRA Results

Health Risk	UTM Easting (m)	UTM Northing (m)	Result
MICR (in one million) [Notification Risk Level = 10; Action Risk Level = 25; Significant Risk Level = 100]			
PMI[1]	408916	3768864	7.56
MEIR[1]	409079	3769185	2.97
Sensitive[1]	408949	3768885	5.95
MEIW[2]	408949	3768885	0.20
Non-Cancer Chronic HI (HIC) (dimensionless) [Notification Risk Level = 1.0; Action Risk Level = 3.0; Significant Risk Level = 5.0]			
PMI[3]	408916	3768864	0.22
MEIR[3]	409079	3769185	0.05
Sensitive[3]	408949	3768875	0.11
MEIW[4]	408839	3768825	0.13
8-Hour Non-Cancer Chronic HI (HIC-8) (dimensionless) [Notification Risk Level = 1.0; Action Risk Level = 3.0; Significant Risk Level = 5.0]			
PMI	408916	3768864	0.07
MEIR	409079	3769185	0.005
Sensitive	408949	3768875	0.03
MEIW	408839	3768825	0.05
Non-Cancer Acute HI (HIA) (dimensionless) [Notification Risk Level = 1.0; Action Risk Level = 3.0; Significant Risk Level = 5.0]			
PMI	408827	3768899	0.27
MEIR	409119	3768785	0.016
Sensitive	408916	3768864	0.20
MEIW	408916	3768864	0.20

Notes:

1. Based on a 30-year exposure duration and Residential/Sensitive exposure pathways.
2. Based on a 25-year exposure duration and Worker exposure pathways.
3. Based on Residential/Sensitive exposure pathways.
4. Based on Worker exposure pathways.

5.3.1 Cancer Risk

The receptors identified in Table 5-2 with 30-year exposure duration are shown in Figure 5-1. The PMI (MICR = 7.56 in one million) is located at Receptor No. 9956 on unimproved property on the grounds of Torch Middle School. The MEIR (MICR = 2.97 in one million) is located at Receptor No. 4715, approximately 1,000 feet northeast of the facility boundary near the intersection of Amar Road and North Feather Avenue. The highest exposed Sensitive receptor (MICR = 5.95 in one million) is located at Receptor No. 3662 on the grounds of Torch Middle School[6].

The SCAQMD Supplemental Guidelines require identification of all sensitive receptors within the ZOI. The ZOI for cancer risk is defined as 1 in one million. Figure 5-1 also shows another Sensitive receptor within the ZOI for cancer risk, the Kaiser Permanente Baldwin Park Medical Center (KP). The estimated MICR at this receptor, Receptor No. 7780, is 1.15 in one million.

There are no residential/sensitive receptors with an estimated MICR that exceeds 10 in one million.

The MEIW (MICR = 0.20 in one million) is located at Receptor No. 3662 on the grounds of Torch Middle School[7]. This receptor is shown in Figure 5-2. There are no worker receptors with an estimated MICR that exceeds 10 in one million.

[6] Receptor No. 3662 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating cancer risk as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3662 is expected to provide a conservative estimate of the highest exposed Sensitive receptor as it is unlikely that a person would experience the long-term exposure assumed for the cancer risk calculation.

[7] Receptor No. 3662 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating cancer risk as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3662 is expected to provide a conservative estimate of the MEIW as it is unlikely that a person would experience the long-term exposure assumed for the cancer risk calculation.

The relative contribution of each exposure pathway to the totals is provided in Table 5-3. The non-inhalation exposure pathways contribute to at least 70% of the cancer risk at each receptor identified in Table 5-3.

Table 5-3: HRA Results – Cancer Risk by Exposure Pathway

Exposure Pathway	PMI	MEIR	Sensitive	MEIW
Inhalation	17.45%	5.83%	10.56%	26.92%
Soil Ingestion	36.90%	42.07%	39.18%	50.16%
Dermal	2.05%	2.34%	2.19%	22.92%
Mother's Milk	34.46%	41.89%	40.75%	--
Homegrown Produce	9.14%	7.88%	7.31%	--
Total Non-Inhalation	82.55%	94.17%	89.44%	73.08%

The TACs that account for at least 90% of the totals are provided in Table 5-4. Chlorinated D/F accounts for approximately 60% of the cancer risk at the PMI and the MEIW, and approximately 75% of the cancer risk at the MEIR and the highest exposed Sensitive receptor, with arsenic, cadmium, formaldehyde, and polycyclic aromatic hydrocarbons accounting for the remainder of the totals shown in Table 5-4.

Table 5-4: HRA Results – Cancer Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
7440382	Arsenic	17.25%	14.46%	12.18%	14.22%
7440439	Cadmium	1.95%	--	--	2.42%
50000	Formaldehyde	8.74%	--	4.41%	11.06%
1151	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	2.12%	--	--	--
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin[1]	8.60%	9.99%	10.08%	7.46%
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin[1]	34.66%	40.67%	41.13%	30.42%
57117314	2,3,4,7,8-Pentachlorodibenzofuran[1]	16.76%	21.94%	20.20%	21.13%
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran[1]	--	2.00%	1.52%	1.59%
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran[1]	--	2.60%	1.87%	1.95%
	[1]Chlorinated D/F	60.02%	77.20%	74.81%	62.56%
	Total Shown	90.08%	91.65%	91.40%	90.26%

Appendix F, Table F.1 contains a detailed breakdown of contribution by substance; Appendix F, Table F.2 contains a detailed breakdown of contribution by emission source/process.

Figure 5-1: HRA Results – Residential / Sensitive Cancer Risk

Legend:
Blue Square..... PMI; Torch Middle School; Receptor No. 9956
Orange Triangle..... MEIR; Receptor No. 4715
Purple Triangle ..... Sensitive Receptor; Torch Middle School; Receptor No. 3662
Pink Circle..... Kaiser Permanente Baldwin Park Medical Center; Receptor No. 7780

Figure 5-2: HRA Results – Worker Cancer Risk

Legend:
Green Circle..... MEIW; Receptor No. 3662

5.3.2 Non-Cancer Chronic Risk

Although residential and worker non-cancer chronic risk are evaluated over the same exposure duration, multipathway exposure effects can create different results for the same receptor.

The PMI, MEIR, and highest exposed Sensitive receptors identified in Table 5-2 are shown in Figure 5-3. The PMI (HIC = 0.22) is located at Receptor No. 9956 on unimproved property on the grounds of Torch Middle School. The MEIR (HIC = 0.005) is located at Receptor No. 4715, approximately 1,000 feet northeast of the facility boundary near the intersection of Amar Road and North Feather Avenue. The highest exposed Sensitive receptor (HIC = 0.11) is located at Receptor No. 3661 on the grounds of Torch Middle School[8]. There are no receptors with an estimated HIC that exceeds 1.0. The primary target organ for the PMI and the highest exposed Sensitive receptor is the Central Nervous System. The primary target organ for the MEIR is the Respiratory System.

The MEIW (HIC = 0.13) is located at Receptor No. 2937. Receptor No. 2937 is on the grounds of Estes Van Lines. A parking lot would not typically be considered a worker receptor but, due to the nature of the business, the HRA considers Receptor No. 2937 to be a worker receptor. There are no receptors with an estimated HIC that exceeds 1.0. The primary target organ for the MEIW is the Central Nervous System.

The relative contribution of each exposure pathway to the totals is provided in Table 5-5. The non-inhalation exposure pathways contribute to at least 40% of the non-cancer chronic risk at the PMI, the MEIR, and the highest exposed Sensitive receptor, and approximately 20% of the non-cancer chronic risk at the MEIW.

Table 5-5: HRA Results – Non-Cancer Chronic Risk by Exposure Pathway

Exposure Pathway	PMI	MEIR	Sensitive	MEIW
Inhalation	56.38%	22.04%	49.12%	79.41%
Soil Ingestion	19.39%	28.58%	22.63%	16.02%
Dermal	1.40%	2.08%	1.64%	4.57%
Mother's Milk	0.00%	14.26%	0.00%	--
Homegrown Produce	22.82%	33.05%	26.61%	--
Total Non-Inhalation	43.62%	77.96%	50.88%	20.59%

[8] Receptor No. 3661 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating HIC as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3661 is expected to provide a conservative estimate of the highest exposed Sensitive receptor as it is unlikely that a person would experience the long-term exposure assumed for the HIC calculation.

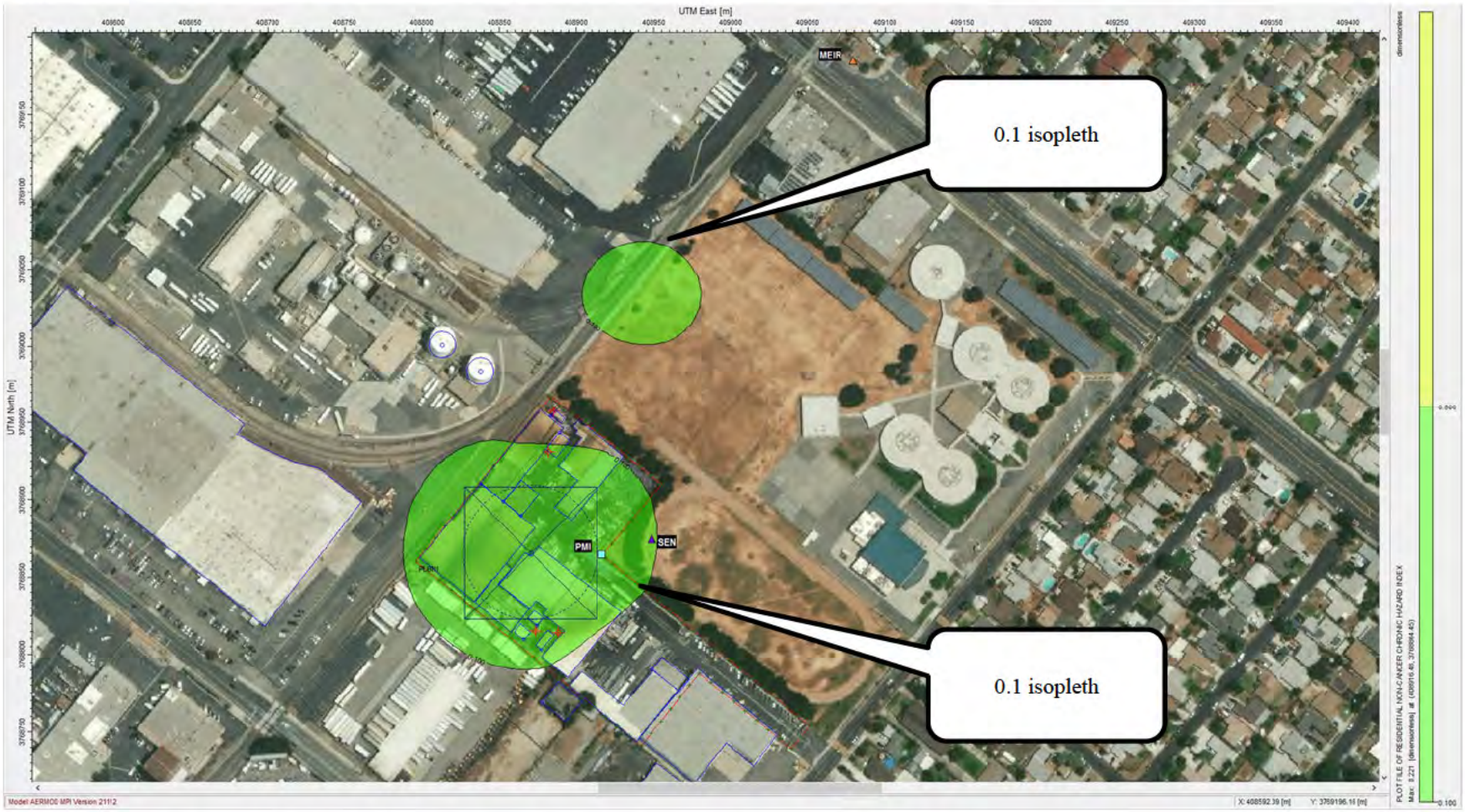
The TACs that account for at least 90% of the totals are provided in Table 5-6. Arsenic, manganese, mercury, and selenium account for essentially 100% of the non-cancer chronic risk at the PMI, the highest exposed Sensitive receptor, and the MEIW. Arsenic, hydrochloric acid, hydrogen sulfide, and two chlorinated dioxins and furans account for approximately 91.5% of the non-cancer chronic risk at the MEIR.

Table 5-6: HRA Results – Non-Cancer Chronic Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
7440382	Arsenic	43.90%	63.84%	51.27%	21.26%
7439965	Manganese	55.84%	--	48.51%	78.61%
7439976	Mercury	0.13%	--	0.11%	0.10%
7782492	Selenium	0.12%	--	0.11%	0.02%
7647010	Hydrochloric Acid	--	12.49%	--	--
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	--	8.20%	--	--
7783064	Hydrogen Sulfide	--	3.75%	--	--
57117314	2,3,4,7,8-Pentachlorodibenzofuran	--	3.18%	--	--
	Total Shown	100.00%	91.46%	100.00%	100.00%

Appendix F, Table F.3 contains a detailed breakdown of contribution by substance; Appendix F, Table F.4 contains a detailed breakdown of contribution by emission source/process.

Figure 5-3: HRA Results – Residential / Sensitive Non-Cancer Chronic Risk



Legend:
Blue Square..... PMI; Torch Middle School; Receptor No. 9956
Orange Triangle..... MEIR; Receptor No. 4715
Purple Triangle ..... Sensitive Receptor; Torch Middle School; Receptor No. 3661

Figure 5-4: HRA Results – Worker Non-Cancer Chronic Risk

Legend:
Green Circle..... MEIW; Receptor No. 2937

5.3.3 8-Hour Non-Cancer Chronic Risk

The 8-hour non-cancer chronic risk calculation is identical for both residential and worker receptors. The PMI, MEIR, highest exposed Sensitive receptor, and MEIW identified in Table 5-2 are shown in Figure 5-5. The PMI (HIC-8 = 0.07) is located at Receptor No. 9956 on unimproved property on the grounds of Torch Middle School. The MEIR (HIC-8 = 0.005) is located at Receptor No. 4715, approximately 1,000 feet northeast of the facility boundary near the intersection of Amar Road and North Feather Avenue. The highest exposed Sensitive receptor (HIC-8 = 0.03) is located at Receptor No. 3661 on the grounds of Torch Middle School[9]. The MEIW (HIC-8 = 0.05) is located at Receptor No. 2937. Receptor No. 2937 is on the grounds of Estes Van Lines. A parking lot would not typically be considered a worker receptor but, due to the nature of the business, the HRA considers Receptor No. 2937 to be a worker receptor. There are no receptors with an estimated HIC-8 that exceeds 1.0. The primary target organ for all four receptors is the Central Nervous System.

The TACs that account for at least 90% of the totals are provided in Table 5-7. Arsenic, manganese, and mercury account for 100% of the 8-hour non-cancer chronic risk at all four receptors.

Table 5-7: HRA Results – 8-Hour Non-Cancer Chronic Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
7440382	Arsenic	1.66%	6.77%	2.22%	1.77%
7439965	Manganese	98.29%	93.19%	97.73%	98.18%
7439976	Mercury	0.06%	0.04%	0.06%	0.06%
	Total Shown	100.00%	100.00%	100.00%	100.00%

Appendix F, Table F.5 contains a detailed breakdown of contribution by substance; Appendix F, Table F.6 contains a detailed breakdown of contribution by emission source/process.

[9] Receptor No. 3661 is the receptor with highest risk that is not on unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(B) defines Receptor Location for the purpose of calculating HIC-8 as "… any location outside the boundaries of the facility at which a person could experience chronic exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 3661 is expected to provide a conservative estimate of the highest exposed Sensitive receptor as it is unlikely that a person would experience the long-term exposure assumed for the HIC-8 calculation.

Figure 5-5: HRA Results – 8-Hour Non-Cancer Chronic Risk

Legend:
Blue Square..... PMI; Torch Middle School; Receptor No. 9956
Orange Triangle..... MEIR; Receptor No. 4715
Purple Triangle ..... Sensitive Receptor; Torch Middle School; Receptor No. 3661
Green Circle..... MEIW; Receptor No. 2937

5.3.4 Non-Cancer Acute Risk

The non-cancer acute risk calculation is identical for both residential and worker receptors. The PMI, MEIR, highest exposed Sensitive receptor, and MEIW identified in Table 5-2 are shown in Figure 5-6. The PMI (HIA = 0.27) is located at Receptor No. 9965 on the western facility boundary. The MEIR (HIA = 0.016) is located at Receptor No. 4999, approximately 250 north of the facility entrance on Vineland Avenue, near the intersection of Vineland Avenue and Giordano Street. The highest exposed Sensitive receptor (HIA = 0.20) and the MEIW (HIA = 0.20) are both located at Receptor No. 9956, adjacent to the facility on unimproved property on the grounds of Torch Middle School[10]. There are no receptors with an estimated HIA that exceeds 1.0. The primary target organ for all receptors is the Immune System.

The TACs that accounts for at least 90% of the totals are provided in Table 5-8. Nickel and benzene account for 100% of the non-cancer acute risk at all receptors.

Table 5-8: HRA Results – Non-Cancer Acute Risk by Substance

CAS No.	Pollutant	PMI	MEIR	Sensitive	MEIW
71432	Benzene	0.19%%	0.28%	0.20%	0.20%
7440020	Nickel	99.81%	99.72%	99.80%	999.80%
	Total Shown	100.00%	95.99%	100.00%	100.00%

Appendix F, Table F.7 contains a detailed breakdown of contribution by substance; Appendix F, Table F.8 contains a detailed breakdown of contribution by emission source/process.

[10] Receptor No. 9956 corresponds to unimproved property on the grounds of Torch Middle School. Rule 1402(c)(15)(A) defines Receptor Location for the purpose of calculating HIA as "… any location outside the boundaries of the facility at which a person could experience acute exposure", and further states that "the Executive Officer shall consider the possibility of potential exposure at a location in determining whether the location will be considered a receptor location." Receptor No. 9956 is expected to provide a conservative estimate of the highest exposed Sensitive receptor and the MEIW, as acute, i.e., 1-hour, exposure could occur on unimproved property.

Figure 5-6: HRA Results – Non-Cancer Acute Risk

Legend:
Blue Square..... PMI; Receptor No. 9965
Orange Triangle..... MEIR; Receptor No. 4999
Green Circle..... Sensitive Receptor / MEIW; Torch Middle School; Receptor No. 9956

5.3.5 Cancer Burden

The 70-year MICR is shown in Figure 5-7. As shown in Figure 5-7, there are eight Census receptors with non-zero population with 70-year MICR that exceed 1 in one million. The cancer burden calculation is shown in Table 5-9.

The maximum distance from the center of the facility to the edge of the 1 in one million isopleth is approximately 4,265 feet (1,300 meters)

Please note that the receptor numbering for the cancer burden analysis is different from the receptor numbering for the other analyses.

Table 5-9: Summary of Results – Cancer Burden

Receptor No.	Census Tract No. – Block No.	Population [A]	MICR [B]	Cancer Burden[1] [C]
123	404703 – 1004	22	1.05E-06	2.32E-05
155	404703 – 2016	139	1.11E-06	1.54E-04
522	407001 – 1005	304	1.08E-06	3.28E-04
523	407001 – 1006	325	1.36E-06	4.43E-04
524	407001 – 1007	272	1.74E-06	4.74E-04
525	407001 – 1008	310	1.50E-06	4.64E-04
560	407001 – 3003	284	1.07E-06	3.04E-04
604	407002 – 2021	5	2.18E-06	1.09E-05
	Total	1,661	--	0.002

Notes:

1. [C] = [A] x [B]

Appendix F, Table F.9 shows the cancer burden calculation in detail.

Figure 5-7: HRA Results – Cancer Burden

Legend:
Blue Triangle ..... Census Receptors with Zero Population
Green Square ..... Census Receptors with Non-Zero Population

5.3.6 Other Population Exposure Assessments

There are no residential receptors with non-cancer HI greater than 0.5. The HRA does not include an assessment of population exposure for non-cancer risk.

5.3.7 Lead Non-Carcinogenic Assessment

Lead is unique among TACs because of the way it accumulates in the blood stream. ARB has developed methods to assess non-carcinogenic impacts from lead. The methods are outlined in the Risk Management Guidelines for Lead (ARB 2001).

The HRA includes a comparison of 30-day average GLC of lead to the Tier I high exposure scenario (HES) level of 0.12 ug/m^3. The 30-day average GLC of lead is estimated to be approximately 9E-05 ug/m^3. This is expected to be a conservative estimate as it is based on actual annual emissions from each emission source, converted to grams per second. No further action is required.

5.4 Uncertainty Analysis

Yorke used appropriate engineering and scientific methods in the health risk analysis presented in this report. However, there is a certain amount of uncertainty associated with the process of risk assessments. Uncertainty may be defined as what is not known and may be reduced with further scientific studies. The uncertainty arises from a lack of data in many areas, which necessitates the use of assumptions. Sources of uncertainty, which may either underestimate or more likely overestimate the off-site impact, include:

- Exposure Estimates – These uncertainties are typically associated with the air dispersion model, which uses mathematical equations to simulate pollutant dispersion in ambient air.
- Toxicity Data – This area represents great uncertainty due to a lack of human data. Toxicologists use various assumptions, safety factors, and uncertainty factors to adjust the toxicity data from animal studies to human.
- Health Risk Characterization – Various assumptions are used in the health risk calculations that overestimate the potential risks; however, OEHHA recommends the use of these parameters in preparing AB 2588 HRAs to allow comparisons of different facilities in the AB 2588 program.
- Operating Schedule – The actual equipment operating schedule is variable, but the HRA assumes the equipment could emit TACs in any hour. It is unlikely that all equipment operates during every hour without shutdown periods for maintenance, outages, etc.

In general, a conservative approach was used throughout the risk assessment.

In summary, the risk estimates generated by this HRA should not be interpreted as the expected rates of disease in the exposed population, but rather as estimates of potential risks, based on current knowledge and several conservative assumptions.

5.5 Control Alternatives and Remedial Measures

The HRA results from Section 5.3 demonstrate that the health risk from LMI's Calendar Year 2017 operations is below the applicable Notification Risk Levels, Action Risk Levels, and Significant Risk Levels from Rule 1402. Public Notice and preparation of a Risk Reduction Plan are not required.

6.0 REFERENCES

California Air Resource Board (ARB) and California Air Pollution Control Officers Association (CAPCOA). 2015. Risk Management Guidance for Stationary Sources of Air Toxics. July 23.

California Air Resource Board (ARB). 2001. Risk Management Guidelines for New, Modified, and Existing Sources of Lead. March 2001.

California Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments. February 2015.

South Coast Air Quality Management District (SCAQMD). 2020. AB2588 and Rule 1402 Supplemental Guidelines (Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act). October 2020.

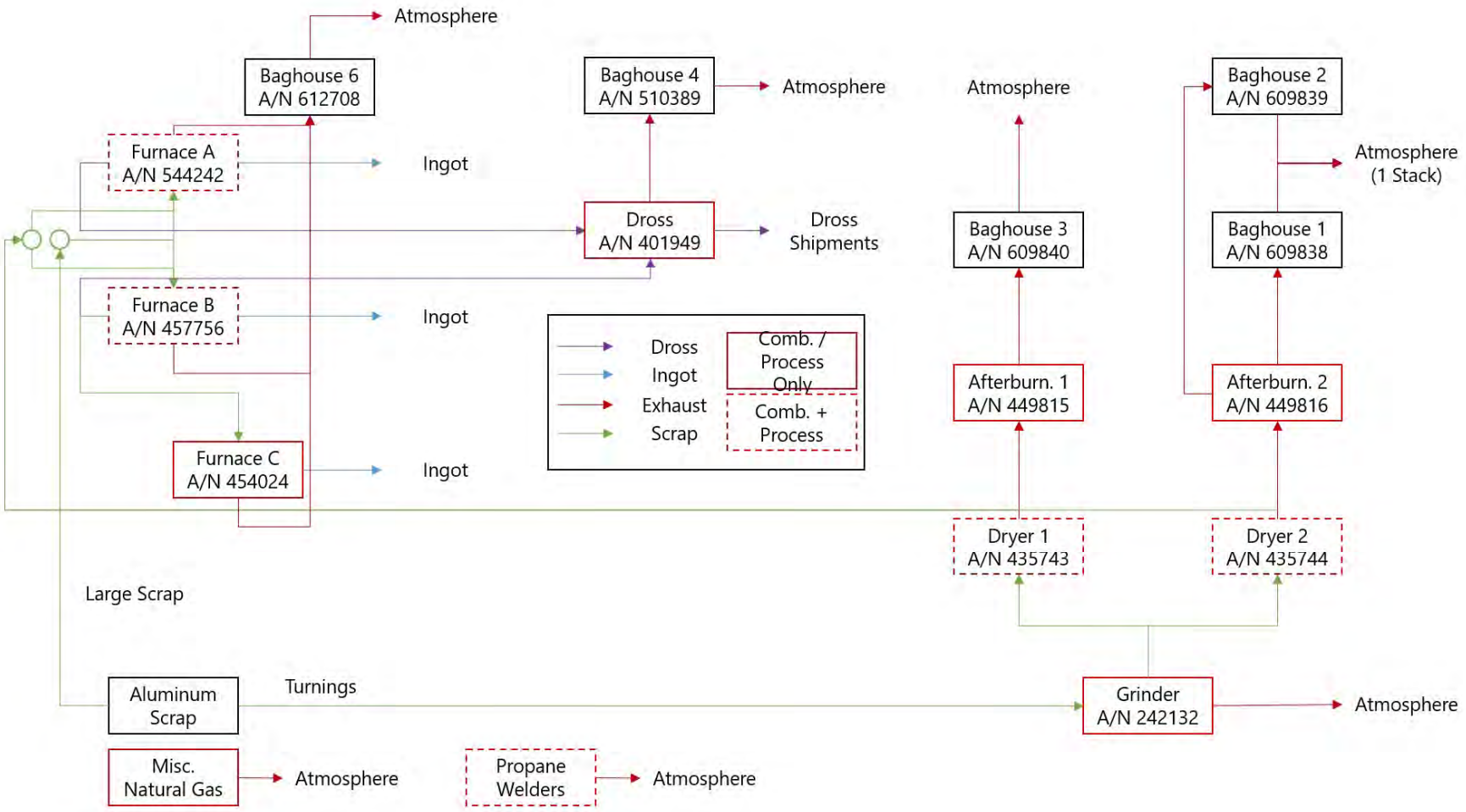
APPENDIX A – EMISSION INVENTORY

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix A Hazard Identification (Emission Inventory)

Hazard Identification (Emission Inventory)

Appendix A Contains

Process Flow Diagram



Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix A Hazard Identification (Emission Inventory)

Table A.1 Crusher

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Crusher	242132	--	--	--	--

Emission Inv. Process Emissions (Grinding) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	PM Speciation (ppmw)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7440382	Arsenic	4 30	[redacted]	2 87E-03	1 08E-06
7439921	Lead	27 00	[redacted]	1 80E-02	6 75E-06
7440020	Nickel	8 00	[redacted]	5 34E-03	2 00E-06
7440417	Beryllium	0 59	[redacted]	3 94E-04	1 48E-07
7440508	Copper	380 00	[redacted]	2 54E-01	9 50E-05
7440439	Cadmium	5 10	[redacted]	3 40E-03	1 28E-06
7439976	Mercury	0 780	[redacted]	5 21E-04	1 95E-07
7782492	Selenium	9 70	[redacted]	6 48E-03	2 43E-06

Emission Factor Reference

1 PM emission factor from A/N 242132
0 1 lb/ton

2 PM speciation from laboratory analysis of Baghouse 6 (A/N 61708) dust, sampled May 15, 2017
Metal Emission Factor (lb/ton) PM Emission Factor (lb/ton) x PM Speciation (ppmw) / 1,000,000

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix A Hazard Identification (Emission Inventory)

Table A.2 Dryer 1

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	0 5	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	3 88E-02	8 10E-06
1151	PAHs-w/o	[redacted]	2 28E-04	4 76E-08
91203	Naphthalene	[redacted]	6 84E-04	1 43E-07
71432	Benzene	[redacted]	1 82E-02	3 81E-06
75070	Acetaldehyde	[redacted]	9 80E-03	2 05E-06
107028	Acrolein	[redacted]	6 16E-03	1 29E-06
7664417	NH3	[redacted]	7 30E+00	1 52E-03
100414	Ethyl Benzene	[redacted]	2 17E-02	4 52E-06
110543	Hexane	[redacted]	1 44E-02	3 00E-06
108883	Toluene	[redacted]	8 34E-02	1 74E-05
1330207	Xylenes	[redacted]	6 20E-02	1 30E-05

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Dryer, <10 mmBtu/hr

Emission Inv. Process Emissions (Drying; Metals)

Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	PM Speciation (ppmw)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7440382	Arsenic	4 30	[redacted]	1 24E-03	3 70E-07
7439921	Lead	27 00	[redacted]	7 80E-03	2 32E-06
7440020	Nickel	8 00	[redacted]	2 31E-03	6 88E-07
7440417	Beryllium	0 59	[redacted]	1 70E-04	5 07E-08
7440508	Copper	380 00	[redacted]	1 10E-01	3 27E-05
7440439	Cadmium	5 10	[redacted]	1 47E-03	4 39E-07
7439976	Mercury	0 780	[redacted]	2 25E-04	6 71E-08
7782492	Selenium	9 70	[redacted]	2 80E-03	8 34E-07

Emission Factor Reference

1 PM emission factor from AP-42, Table 12 8-2, Smelting Furnace, Reverberatory
4 3 lb/ton
98% Control Efficiency

2 PM speciation from laboratory analysis of Baghouse 6 (A/N 61708) dust, sampled May 15, 2017
Metal Emission Factor (lb/ton) PM Emission Factor (lb/ton) x PM Speciation (ppmw) / 1,000,000 x (1 - Control Efficiency)

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix A Hazard Identification (Emission Inventory)

Table A.2 Dryer 1

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	0 5	mmBtu/hr

Emission Inv. Process Emissions (Drying; Chlorinated D/F) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (ug/Mg Feed)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
1746016	2,3,7,8-TCDD	[redacted]	[redacted]	8 27E-07	2 46E-10
40321764	1-3,7,8PeCDD	[redacted]	[redacted]	4 16E-06	1 24E-09
39227286	1-4,7,8HxCDD	[redacted]	[redacted]	3 16E-07	9 40E-11
57653857	1-3,6-8HxCDD	[redacted]	[redacted]	5 64E-07	1 68E-10
19408743	1-3,7-9HxCDD	[redacted]	[redacted]	3 16E-07	9 40E-11
35822469	1-4,6-8HpCDD	[redacted]	[redacted]	6 72E-08	2 00E-11
3268879	1-8OctaCDD	[redacted]	[redacted]	0 00E+00	0 00E+00
51207319	2,3,7,8-TCDF	[redacted]	[redacted]	1 24E-06	3 68E-10
57117416	1-3,7,8PeCDF	[redacted]	[redacted]	5 51E-07	1 64E-10
57117314	2-4,7,8PeCDF	[redacted]	[redacted]	1 03E-05	3 07E-09
70648269	1-4,7,8HxCDF	[redacted]	[redacted]	2 22E-06	6 60E-10
57117449	1-3,6-8HxCDF	[redacted]	[redacted]	2 04E-06	6 08E-10
60851345	2-4,6-8HxCDF	[redacted]	[redacted]	1 61E-06	4 78E-10
72918219	1-3,7-9HxCDF	[redacted]	[redacted]	3 09E-07	9 20E-11
67562394	1-4,6-8HpCDF	[redacted]	[redacted]	2 42E-07	7 20E-11
55673897	1-4,7-9HpCDF	[redacted]	[redacted]	1 34E-08	4 00E-12
39001020	1-8OctaCDF	[redacted]	[redacted]	0 00E+00	0 00E+00

Emission Factor Reference

1 Chlorinated D/F emission factors from July 6-7, 2005 test conducted on Dryer 1 S/T ID R20225
Note that the emission factors are the Toxicity Equivalent Values (TEQ) based on the WHO-2005 Toxicity Equivalent Factors

2 Emission Factor (lb/ton) Emission Factor (ug D/F / Mg Feed) x (1 g D/F / 1,000,000 ug D/F) x (1 lb D/F / 454 g D/F) x (1 MG Feed / 1,000,000 g Feed) x (454 g Feed / 1 lb Feed) x (2,000 lb Feed / 1 ton Feed)

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix A Hazard Identification (Emission Inventory)

Table A.3 Dryer 2

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	1 2	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	9 30E-02	1 94E-05
1151	PAHs-w/o	[redacted]	5 47E-04	1 14E-07
91203	Naphthalene	[redacted]	1 64E-03	3 43E-07
71432	Benzene	[redacted]	4 38E-02	9 14E-06
75070	Acetaldehyde	[redacted]	2 35E-02	4 91E-06
107028	Acrolein	[redacted]	1 48E-02	3 09E-06
7664417	NH3	[redacted]	1 75E+01	3 66E-03
100414	Ethyl Benzene	[redacted]	5 20E-02	1 09E-05
110543	Hexane	[redacted]	3 45E-02	7 20E-06
108883	Toluene	[redacted]	2 00E-01	4 18E-05
1330207	Xylenes	[redacted]	1 49E-01	3 11E-05

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Dryer, <10 mmBtu/hr

Emission Inv. Process Emissions (Drying; Metals)

Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	PM Speciation (ppmw)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7440382	Arsenic	4 30	[redacted]	1 23E-03	3 70E-07
7439921	Lead	27 00	[redacted]	7 70E-03	2 32E-06
7440020	Nickel	8 00	[redacted]	2 28E-03	6 88E-07
7440417	Beryllium	0 59	[redacted]	1 68E-04	5 07E-08
7440508	Copper	380 00	[redacted]	1 08E-01	3 27E-05
7440439	Cadmium	5 10	[redacted]	1 45E-03	4 39E-07
7439976	Mercury	0 780	[redacted]	2 22E-04	6 71E-08
7782492	Selenium	9 70	[redacted]	2 77E-03	8 34E-07

Emission Factor Reference

1 PM emission factor from AP-42, Table 12 8-2, Smelting Furnace, Reverberatory
4 3 lb/ton
98% Control Efficiency

2 PM speciation from laboratory analysis of Baghouse 6 (A/N 61708) dust, sampled May 15, 2017
Metal Emission Factor (lb/ton) PM Emission Factor (lb/ton) x PM Speciation (ppmw) / 1,000,000 x (1 - Control Efficiency)

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix A Hazard Identification (Emission Inventory)

Table A.3 Dryer 2

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	1 2	mmBtu/hr

Emission Inv. Process Emissions (Drying; Chlorinated D/F) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (ug/Mg Feed)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
1746016	2,3,7,8-TCDD	[redacted]	[redacted]	1 03E-06	3 10E-10
40321764	1-3,7,8PeCDD	[redacted]	[redacted]	3 71E-06	1 12E-09
39227286	1-4,7,8HxCDD	[redacted]	[redacted]	2 45E-07	7 40E-11
57653857	1-3,6-8HxCDD	[redacted]	[redacted]	4 24E-07	1 28E-10
19408743	1-3,7-9HxCDD	[redacted]	[redacted]	2 85E-07	8 60E-11
35822469	1-4,6-8HpCDD	[redacted]	[redacted]	1 13E-07	3 40E-11
3268879	1-8OctaCDD	[redacted]	[redacted]	0 00E+00	0 00E+00
51207319	2,3,7,8-TCDF	[redacted]	[redacted]	1 10E-06	3 32E-10
57117416	1-3,7,8PeCDF	[redacted]	[redacted]	3 71E-07	1 12E-10
57117314	2-4,7,8PeCDF	[redacted]	[redacted]	7 10E-06	2 14E-09
70648269	1-4,7,8HxCDF	[redacted]	[redacted]	1 41E-06	4 26E-10
57117449	1-3,6-8HxCDF	[redacted]	[redacted]	1 21E-06	3 66E-10
60851345	2-4,6-8HxCDF	[redacted]	[redacted]	1 37E-06	4 14E-10
72918219	1-3,7-9HxCDF	[redacted]	[redacted]	1 13E-07	3 40E-11
67562394	1-4,6-8HpCDF	[redacted]	[redacted]	2 06E-07	6 20E-11
55673897	1-4,7-9HpCDF	[redacted]	[redacted]	1 99E-08	6 00E-12
39001020	1-8OctaCDF	[redacted]	[redacted]	0 00E+00	0 00E+00

Emission Factor Reference

1 Chlorinated D/F emission factors from September 22-23, 2005 test conducted on Dryer 2 S/T ID R20190
Note that the emission factors are the Toxicity Equivalent Values (TEQ) based on the WHO-2005 Toxicity Equivalent Factors

2 Emission Factor (lb/ton) Emission Factor (ug D/F / Mg Feed) x (1 g D/F / 1,000,000 ug D/F) x (1 lb D/F / 454 g D/F) x (1 MG Feed / 1,000,000 g Feed) x (454 g Feed / 1 lb Feed) x (2,000 lb Feed / 1 ton Feed)

Table A.4 Afterburner 1

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Afterburner 1	449815	Baghouse 3	609840	3 2	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	2 48E-01	5 18E-05
1151	PAHs-w/o	[redacted]	1 46E-03	3 05E-07
91203	Naphthalene	[redacted]	4 37E-03	9 14E-07
71432	Benzene	[redacted]	1 17E-01	2 44E-05
75070	Acetaldehyde	[redacted]	6 27E-02	1 31E-05
107028	Acrolein	[redacted]	3 94E-02	8 23E-06
7664417	NH3	[redacted]	4 67E+01	9 75E-03
100414	Ethyl Benzene	[redacted]	1 39E-01	2 90E-05
110543	Hexane	[redacted]	9 19E-02	1 92E-05
108883	Toluene	[redacted]	5 34E-01	1 12E-04
1330207	Xylenes	[redacted]	3 97E-01	8 29E-05

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Afterburner, <10 mmBtu/hr

Table A.5 Afterburner 2

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Afterburner 2	449816	Baghouse 1/2	609838/609839	6 204	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	4 81E-01	1 00E-04
1151	PAHs-w/o	[redacted]	2 83E-03	5 91E-07
91203	Naphthalene	[redacted]	8 48E-03	1 77E-06
71432	Benzene	[redacted]	2 26E-01	4 73E-05
75070	Acetaldehyde	[redacted]	1 22E-01	2 54E-05
107028	Acrolein	[redacted]	7 63E-02	1 60E-05
7664417	NH3	[redacted]	9 05E+01	1 89E-02
100414	Ethyl Benzene	[redacted]	2 69E-01	5 61E-05
110543	Hexane	[redacted]	1 78E-01	3 72E-05
108883	Toluene	[redacted]	1 03E+00	2 16E-04
1330207	Xylenes	[redacted]	7 69E-01	1 61E-04

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Afterburner, <10 mmBtu/hr

Table A.6 Furnace A

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace A	544242	Baghouse 6	612708	10	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas; Non-Aldehyde)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
1151	PAHs-w/o	[redacted]	5 67E-03	9 52E-07
91203	Naphthalene	[redacted]	1 70E-02	2 86E-06
71432	Benzene	[redacted]	3 29E-01	5 52E-05
107028	Acrolein	[redacted]	1 53E-01	2 57E-05
7664417	NH3	[redacted]	1 81E+02	3 05E-02
100414	Ethyl Benzene	[redacted]	3 91E-01	6 57E-05
110543	Hexane	[redacted]	2 61E-01	4 38E-05
108883	Toluene	[redacted]	1 50E+00	2 52E-04
1330207	Xylenes	[redacted]	1 12E+00	1 88E-04

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Furnace, 10-100 mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas; Aldehyde)

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	3 00E+01	8 13E-03
75070	Acetaldehyde	[redacted]	1 51E+01	4 11E-03

Emission Factor Reference

1 Formaldehyde and acetaldehyde emission factors from December 15-16, 2020 test conducted on Furnace A and Furnace B S/T ID PR20313

Table A.6 Furnace A

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace A	544242	Baghouse 6	612708	10	mmBtu/hr

Emission Inv. Process Emissions (Melting; Metals) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	PM Speciation (ppmw)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	
7440382	Arsenic	--	[redacted]	1 06E-01	2 88E-05	Source Test Data
7439921	Lead	27 00	[redacted]	3 66E-02	9 94E-06	PM Speciation
7440020	Nickel	--	[redacted]	2 52E-01	6 84E-05	Source Test Data
7440417	Beryllium	0 59	[redacted]	8 00E-04	2 17E-07	PM Speciation
7440508	Copper	380 00	[redacted]	5 15E-01	1 40E-04	PM Speciation
7439976	Mercury	0 780	[redacted]	1 06E-03	2 87E-07	PM Speciation
7782492	Selenium	9 70	[redacted]	1 32E-02	3 57E-06	PM Speciation
7439965	Manganese	--	[redacted]	1 18E+01	3 20E-03	CATEF

Emission Factor Reference

1 PM emission factor from AP-42, Table 12 8-2, Smelting Furnace, Reverberatory
4 3 lb/ton
98% Control Efficiency

2 PM speciation from laboratory analysis of Baghouse 6 (A/N 61708) dust, sampled May 15, 2017
Metal Emission Factor (lb/ton) PM Emission Factor (lb/ton) x PM Speciation (ppmw) / 1,000,000 x (1 - Control Efficiency)

3 Arsenic and nickel emission factors from December 15-16, 2020 Rule 1407 test conducted on Furnace A and Furnace B S/T ID PR20341

	Run 1	Run 2	Run 3	
ton/hr	7 215	2 999	7 0555	
Arsenic, lb/hr	6 10E-05	2 45E-05	2 53E-05	
Arsenic, lb/ton	8 45E-06	8 17E-06	3 59E-06	6 74E-06
Nickel, lb/hr	6 40E-05	8 70E-05	7 10E-05	
Nickel, lb/ton	8 87E-06	2 90E-05	1 01E-05	1 60E-05

Per the SCAQMD, since cadmium was non-detect for all three runs, cadmium emissions are not reportable for this emission source

4 Uncontrolled manganese emission factor from CATEF SCC 30400103
3 74E-02 lb/ton
98% Control Efficiency

Emission Inv. Process Emissions (Melting; Hydrogen Sulfide)

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7783064	H2S	[redacted]	3 94E+02	1 07E-01

Emission Factor Reference

1 Hydrogen sulfide emission factor from CATEF SCC 30400103

Table A.6 Furnace A

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace A	544242	Baghouse 6	612708	10	mmBtu/hr

Emission Inv. Process Emissions (Melting; Chlorinated D/F) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (ug/Mg Feed)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
1746016	2,3,7,8-TCDD	[redacted]	[redacted]	1 92E-06	5 22E-10
40321764	1-3,7,8PeCDD	[redacted]	[redacted]	7 70E-06	2 09E-09
39227286	1-4,7,8HxCDD	[redacted]	[redacted]	7 89E-07	2 14E-10
57653857	1-3,6-8HxCDD	[redacted]	[redacted]	1 45E-06	3 94E-10
19408743	1-3,7-9HxCDD	[redacted]	[redacted]	9 78E-07	2 65E-10
35822469	1-4,6-8HpCDD	[redacted]	[redacted]	4 42E-07	1 20E-10
3268879	1-8OctaCDD	[redacted]	[redacted]	0 00E+00	0 00E+00
51207319	2,3,7,8-TCDF	[redacted]	[redacted]	3 19E-06	8 65E-10
57117416	1-3,7,8PeCDF	[redacted]	[redacted]	1 14E-06	3 08E-10
57117314	2-4,7,8PeCDF	[redacted]	[redacted]	2 08E-05	5 63E-09
70648269	1-4,7,8HxCDF	[redacted]	[redacted]	8 52E-06	2 31E-09
57117449	1-3,6-8HxCDF	[redacted]	[redacted]	6 34E-06	1 72E-09
60851345	2-4,6-8HxCDF	[redacted]	[redacted]	6 25E-06	1 69E-09
72918219	1-3,7-9HxCDF	[redacted]	[redacted]	1 96E-06	5 31E-10
67562394	1-4,6-8HpCDF	[redacted]	[redacted]	1 61E-06	4 37E-10
55673897	1-4,7-9HpCDF	[redacted]	[redacted]	1 58E-07	4 28E-11
39001020	1-8OctaCDF	[redacted]	[redacted]	0 00E+00	0 00E+00

Emission Factor Reference

1 Chlorinated D/F emission factors from October 19-20, 2005 test conducted on Furnace A and Furnace B S/T ID R20191
Note that the emission factors are the Toxicity Equivalent Values (TEQ) based on the WHO-2005 Toxicity Equivalent Factors

2 Emission Factor (lb/ton) Emission Factor (ug D/F / Mg Feed) x (1 g D/F / 1,000,000 ug D/F) x (1 lb D/F / 454 g D/F) x (1 MG Feed / 1,000,000 g Feed) x (454 g Feed / 1 lb Feed) x (2,000 lb Feed / 1 ton Feed)

Emission Inv. Process Emissions (Melting; Chlorine Addition)

Throughputs

Annual Throughput (lb/yr)	Maximum Hourly Throughput (lb/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/lb Cl)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7647010	HCl	[redacted]	1 50E+03	1 80E+00
7782505	Chlorine	[redacted]	4 18E+00	5 01E-03

Emission Factor Reference

1 HCl and Cl emission factors from October 28, 2004 test conducted on Baghouse 6

	lb/hr	lb/lb Cl
HCl	1 8	[redacted]
Chlorine	0 005	
Chlorine Inj , lb/hr	500	

Table A.7 Furnace B

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace B	457756	Baghouse 6	612708	16	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas; Non-Aldehyde)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
1151	PAHs-w/o	[redacted]	7 66E-03	1 52E-06
91203	Naphthalene	[redacted]	2 30E-02	4 57E-06
71432	Benzene	[redacted]	4 44E-01	8 84E-05
107028	Acrolein	[redacted]	2 07E-01	4 11E-05
7664417	NH3	[redacted]	2 45E+02	4 88E-02
100414	Ethyl Benzene	[redacted]	5 28E-01	1 05E-04
110543	Hexane	[redacted]	3 52E-01	7 01E-05
108883	Toluene	[redacted]	2 03E+00	4 04E-04
1330207	Xylenes	[redacted]	1 51E+00	3 00E-04

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Furnace, 10-100 mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas; Aldehyde)

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	4 79E+01	1 38E-02
75070	Acetaldehyde	[redacted]	2 42E+01	6 98E-03

Emission Factor Reference

1 Formaldehyde and acetaldehyde emission factors from December 15-16, 2020 test conducted on Furnace A and Furnace B S/T ID PR20313

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Table A.7 Furnace B

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace B	457756	Baghouse 6	612708	16	mmBtu/hr

Emission Inv. Process Emissions (Melting; Metals) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	PM Speciation (ppmw)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	
7440382	Arsenic	--	[redacted]	1 70E-01	4 90E-05	Source Test Data
7439921	Lead	27 00	[redacted]	5 86E-02	1 69E-05	PM Speciation
7440020	Nickel	--	[redacted]	4 03E-01	1 16E-04	Source Test Data
7440417	Beryllium	0 59	[redacted]	1 28E-03	3 69E-07	PM Speciation
7440508	Copper	380 00	[redacted]	8 25E-01	2 38E-04	PM Speciation
7439976	Mercury	0 780	[redacted]	1 69E-03	4 88E-07	PM Speciation
7782492	Selenium	9 70	[redacted]	2 10E-02	6 06E-06	PM Speciation
7439965	Manganese	--	[redacted]	1 89E+01	5 44E-03	CATEF

Emission Factor Reference

1 PM emission factor from AP-42, Table 12 8-2, Smelting Furnace, Reverberatory
4 3 lb/ton
98% Control Efficiency

2 PM speciation from laboratory analysis of Baghouse 6 (A/N 61708) dust, sampled May 15, 2017
Metal Emission Factor (lb/ton) PM Emission Factor (lb/ton) x PM Speciation (ppmw) / 1,000,000 x (1 - Control Efficiency)

3 Arsenic and nickel emission factors from December 15-16, 2020 Rule 1407 test conducted on Furnace A and Furnace B S/T ID PR20341

	Run 1	Run 2	Run 3	
ton/hr	7 215	2 999	7 0555	
Arsenic, lb/hr	6 10E-05	2 45E-05	2 53E-05	
Arsenic, lb/ton	[redacted]	[redacted]	[redacted]	[redacted]
Nickel, lb/hr	6 40E-05	8 70E-05	7 10E-05	
Nickel, lb/ton	[redacted]	[redacted]	[redacted]	[redacted]

Per the SCAQMD, since cadmium was non-detect for all three runs, cadmium emissions are not reportable for this emission source

4 Uncontrolled manganese emission factor from CATEF SCC 30400103
3 74E-02 lb/ton
98% Control Efficiency

Emission Inv. Process Emissions (Melting; Hydrogen Sulfide)

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7783064	H2S	[redacted]	6 31E+02	1 82E-01

Emission Factor Reference

1 Hydrogen sulfide emission factor from CATEF SCC 30400103

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Appendix A Hazard Identification (Emission Inventory)

Table A.7 Furnace B

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace B	457756	Baghouse 6	612708	16	mmBtu/hr

Emission Inv. Process Emissions (Melting; Chlorinated D/F) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (ug/Mg Feed)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
1746016	2,3,7,8-TCDD	[redacted]	[redacted]	3 08E-06	8 87E-10
40321764	1-3,7,8PeCDD	[redacted]	[redacted]	1 23E-05	3 55E-09
39227286	1-4,7,8HxCDD	[redacted]	[redacted]	1 26E-06	3 64E-10
57653857	1-3,6-8HxCDD	[redacted]	[redacted]	2 32E-06	6 69E-10
19408743	1-3,7-9HxCDD	[redacted]	[redacted]	1 56E-06	4 51E-10
35822469	1-4,6-8HpCDD	[redacted]	[redacted]	7 06E-07	2 04E-10
3268879	1-8OctaCDD	[redacted]	[redacted]	0 00E+00	0 00E+00
51207319	2,3,7,8-TCDF	[redacted]	[redacted]	5 10E-06	1 47E-09
57117416	1-3,7,8PeCDF	[redacted]	[redacted]	1 82E-06	5 23E-10
57117314	2-4,7,8PeCDF	[redacted]	[redacted]	3 32E-05	9 57E-09
70648269	1-4,7,8HxCDF	[redacted]	[redacted]	1 36E-05	3 93E-09
57117449	1-3,6-8HxCDF	[redacted]	[redacted]	1 01E-05	2 92E-09
60851345	2-4,6-8HxCDF	[redacted]	[redacted]	9 99E-06	2 88E-09
72918219	1-3,7-9HxCDF	[redacted]	[redacted]	3 13E-06	9 01E-10
67562394	1-4,6-8HpCDF	[redacted]	[redacted]	2 57E-06	7 42E-10
55673897	1-4,7-9HpCDF	[redacted]	[redacted]	2 52E-07	7 27E-11
39001020	1-8OctaCDF	[redacted]	[redacted]	0 00E+00	0 00E+00

Emission Factor Reference

1 Chlorinated D/F emission factors from October 19-20, 2005 test conducted on Furnace A and Furnace B S/T ID R20191
Note that the emission factors are the Toxicity Equivalent Values (TEQ) based on the WHO-2005 Toxicity Equivalent Factors

2 Emission Factor (lb/ton) Emission Factor (ug D/F / Mg Feed) x (1 g D/F / 1,000,000 ug D/F) x (1 lb D/F / 454 g D/F) x (1 MG Feed / 1,000,000 g Feed) x (454 g Feed / 1 lb Feed) x (2,000 lb Feed / 1 ton Feed)

Emission Inv. Process Emissions (Melting; Chlorine Addition)

Throughputs

Annual Throughput (lb/yr)	Maximum Hourly Throughput (lb/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/lb Cl)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7647010	HCl	[redacted]	1 57E+03	1 80E+00
7782505	Chlorine	[redacted]	4 37E+00	5 00E-03

Emission Factor Reference

1 HCl and Cl emission factors from October 28, 2004 test conducted on Baghouse 6

	lb/hr	lb/lb Cl
HCl	1 8	[redacted]
Chlorine	0 005	
Chlorine Inj , lb/hr	500	

Table A.8 Dross Handling

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Dross Handling	401949	Baghouse 4	510389	--	--

Emission Inv. Process Emissions (Dross Handling) Change from ATIR

Throughputs

Annual Throughput (tons/yr)	Maximum Hourly Throughput (tons/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	PM Speciation (ppmw)	Emission Factor (lb/ton)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7440382	Arsenic	4 30	[redacted]	3 86E-04	5 01E-07
7439921	Lead	27 00	[redacted]	2 42E-03	3 14E-06
7440020	Nickel	8 00	[redacted]	7 17E-04	9 31E-07
7440417	Beryllium	0 59	[redacted]	5 29E-05	6 87E-08
7440508	Copper	380 00	[redacted]	3 41E-02	4 42E-05
7440439	Cadmium	5 10	[redacted]	4 57E-04	5 94E-07
7439976	Mercury	0 780	[redacted]	6 99E-05	9 08E-08
7782492	Selenium	9 70	[redacted]	8 70E-04	1 13E-06

Emission Factor Reference

1 PM emission factor from A/N 357807
0 3 lb/ton
95% Control Efficiency

2 PM speciation from laboratory analysis of Baghouse 6 (A/N 61708) dust, sampled May 15, 2017
Metal Emission Factor (lb/ton) PM Emission Factor (lb/ton) x PM Speciation (ppmw) / 1,000,000

Table A.9 Furnace C

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Furnace C	454024	Baghouse 6	612708	5	mmBtu/hr

Emission Inv. Combustion Emissions (Natural Gas)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	2 39E-01	8 10E-05
1151	PAHs-w/o	[redacted]	1 40E-03	4 76E-07
91203	Naphthalene	[redacted]	4 21E-03	1 43E-06
71432	Benzene	[redacted]	1 12E-01	3 81E-05
75070	Acetaldehyde	[redacted]	6 04E-02	2 05E-05
107028	Acrolein	[redacted]	3 79E-02	1 29E-05
7664417	NH3	[redacted]	4 49E+01	1 52E-02
100414	Ethyl Benzene	[redacted]	1 33E-01	4 52E-05
110543	Hexane	[redacted]	8 85E-02	3 00E-05
108883	Toluene	[redacted]	5 14E-01	1 74E-04
1330207	Xylenes	[redacted]	3 82E-01	1 30E-04

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Furnace, <10 mmBtu/hr

Table A.10 Miscellaneous Natural Gas-Fueled Combustion Equipment

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Misc NG	--	--	--	--	--

Emission Inv. Combustion Emissions (Natural Gas)

Throughputs

Annual Usage (mmscf/yr)	Maximum Hourly Usage (mmscf/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mmscf)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
50000	Formaldehyde	[redacted]	7 33E-02	1 53E-05
1151	PAHs-w/o	[redacted]	4 31E-04	9 00E-08
91203	Naphthalene	[redacted]	1 29E-03	2 70E-07
71432	Benzene	[redacted]	3 45E-02	7 20E-06
75070	Acetaldehyde	[redacted]	1 85E-02	3 87E-06
107028	Acrolein	[redacted]	1 16E-02	2 43E-06
7664417	NH3	[redacted]	1 38E+01	2 88E-03
100414	Ethyl Benzene	[redacted]	4 09E-02	8 55E-06
110543	Hexane	[redacted]	2 72E-02	5 67E-06
108883	Toluene	[redacted]	1 58E-01	3 29E-05
1330207	Xylenes	[redacted]	1 17E-01	2 45E-05

Emission Factor Reference

1 SCAQMD defaults for Natural Gas Combustion in Furnace, <10 mmBtu/hr

Table A.11 Propane-Fueled Welders

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Propane Welders	--	--	--	--	--

Emission Inv. Combustion Emissions (Propane)

Throughputs

Annual Usage (mgal/yr)	Maximum Hourly Usage (mgal/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/mgal)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
107062	EDC	[redacted]	4 83E-03	4 63E-06
50000	Formaldehyde	[redacted]	1 08E+01	1 04E-02
75092	Methylene Chlor	[redacted]	4 09E-03	3 92E-06
129000	Pyrene	[redacted]	2 78E-04	2 67E-07
191242	B[g,h,i]perylen	[redacted]	8 47E-05	8 12E-08
192972	B[e]pyrene	[redacted]	8 49E-05	8 13E-08
205992	B[b]fluoranthen	[redacted]	3 40E-05	3 25E-08
206440	Fluoranthene	[redacted]	2 27E-04	2 18E-07
208968	Acenaphthylene	[redacted]	1 13E-03	1 08E-06
218019	Chrysene	[redacted]	1 42E-04	1 36E-07
83329	Acenaphthene	[redacted]	2 56E-04	2 45E-07
85018	Phenanthrene	[redacted]	2 13E-03	2 04E-06
86737	Fluorene	[redacted]	1 16E-03	1 11E-06
91203	Naphthalene	[redacted]	1 52E-02	1 46E-05
91576	2MeNaphthalene	[redacted]	6 79E-03	6 51E-06
71432	Benzene	[redacted]	9 00E-02	8 63E-05
75014	Vinyl Chloride	[redacted]	3 05E-03	2 92E-06
79345	TetraClEthane	[redacted]	8 18E-03	7 84E-06
79005	1,1,2TriClEthan	[redacted]	6 50E-03	6 23E-06
95636	1,2,4TriMeBenze	[redacted]	2 92E-03	2 80E-06
78875	1,2-DiClPropane	[redacted]	5 50E-03	5 27E-06
542756	1,3-DiClPropene	[redacted]	5 40E-03	5 18E-06
75070	Acetaldehyde	[redacted]	1 71E+00	1 64E-03
107028	Acrolein	[redacted]	1 05E+00	1 01E-03
7664417	NH3	[redacted]	6 78E-01	6 50E-04
67663	Chloroform	[redacted]	5 83E-03	5 59E-06
106990	1,3-Butadiene	[redacted]	5 46E-02	5 23E-05
100414	Ethyl Benzene	[redacted]	8 12E-03	7 78E-06
110543	Hexane	[redacted]	2 27E-01	2 18E-04
67561	Methanol	[redacted]	5 11E-01	4 90E-04
56235	CCl4	[redacted]	7 51E-03	7 19E-06
100425	Styrene	[redacted]	4 83E-03	4 63E-06
108883	Toluene	[redacted]	8 34E-02	8 00E-05
1330207	Xylenes	[redacted]	3 76E-02	3 61E-05
106934	EDB	[redacted]	9 06E-03	8 68E-06

Emission Factor Reference

1 SCAQMD defaults for propane combustion in ICE, 4 Stroke, Lean Burn

Table A.11 Propane-Fueled Welders

Emission Source Data

Description	A/N	Control Device	Control Device A/N	Size	Size Units
Propane Welders	--	--	--	--	--

Emission Inv. Process Emissions (Welding)

Throughputs

Annual Usage (lb/yr)	Maximum Hourly Usage (lb/hr)
[redacted]	[redacted]

Emission Factors and Emission Calculations

Pollutant	Pollutant Name	Emission Factor (lb/lb)	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
7440020	Nickel	[redacted]	5 00E-03	3 96E-04
7439965	Manganese	[redacted]	2 56E+00	2 03E-01

Emission Factor Reference

1 Weighted-average emission factors for E7018, E7024, E6011, and E6013, as applicable, from AP-42, Chapter 12 19

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Crusher	242132	--	--	7440382	Arsenic	2 87E-03	1 08E-06
Crusher	242132	--	--	7439921	Lead	1 80E-02	6 75E-06
Crusher	242132	--	--	7440020	Nickel	5 34E-03	2 00E-06
Crusher	242132	--	--	7440417	Beryllium	3 94E-04	1 48E-07
Crusher	242132	--	--	7440508	Copper	2 54E-01	9 50E-05
Crusher	242132	--	--	7440439	Cadmium	3 40E-03	1 28E-06
Crusher	242132	--	--	7439976	Mercury	5 21E-04	1 95E-07
Crusher	242132	--	--	7782492	Selenium	6 48E-03	2 43E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	50000	Formaldehyde	3 88E-02	8 10E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	1151	PAHs-w/o	2 28E-04	4 76E-08
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	91203	Naphthalene	6 84E-04	1 43E-07
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	71432	Benzene	1 82E-02	3 81E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	75070	Acetaldehyde	9 80E-03	2 05E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	107028	Acrolein	6 16E-03	1 29E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7664417	NH3	7 30E+00	1 52E-03
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	100414	Ethyl Benzene	2 17E-02	4 52E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	110543	Hexane	1 44E-02	3 00E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	108883	Toluene	8 34E-02	1 74E-05
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	1330207	Xylenes	6 20E-02	1 30E-05
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7440382	Arsenic	1 24E-03	3 70E-07
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7439921	Lead	7 80E-03	2 32E-06
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7440020	Nickel	2 31E-03	6 88E-07
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7440417	Beryllium	1 70E-04	5 07E-08
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7440508	Copper	1 10E-01	3 27E-05
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7440439	Cadmium	1 47E-03	4 39E-07
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7439976	Mercury	2 25E-04	6 71E-08
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	7782492	Selenium	2 80E-03	8 34E-07
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	1746016	2,3,7,8-TCDD	8 27E-07	2 46E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	40321764	1-3,7,8PeCDD	4 16E-06	1 24E-09
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	39227286	1-4,7,8HxCDD	3 16E-07	9 40E-11

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	57653857	1-3,6-8HxCDD	5 64E-07	1 68E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	19408743	1-3,7-9HxCDD	3 16E-07	9 40E-11
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	35822469	1-4,6-8HpCDD	6 72E-08	2 00E-11
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	3268879	1-8OctaCDD	0 00E+00	0 00E+00
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	51207319	2,3,7,8-TCDF	1 24E-06	3 68E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	57117416	1-3,7,8PeCDF	5 51E-07	1 64E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	57117314	2-4,7,8PeCDF	1 03E-05	3 07E-09
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	70648269	1-4,7,8HxCDF	2 22E-06	6 60E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	57117449	1-3,6-8HxCDF	2 04E-06	6 08E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	60851345	2-4,6-8HxCDF	1 61E-06	4 78E-10
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	72918219	1-3,7-9HxCDF	3 09E-07	9 20E-11
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	67562394	1-4,6-8HpCDF	2 42E-07	7 20E-11
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	55673897	1-4,7-9HpCDF	1 34E-08	4 00E-12
Dryer 1	435743	Afterburner 1 -> Baghouse 3	449815 -> 609840	39001020	1-8OctaCDF	0 00E+00	0 00E+00
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	50000	Formaldehyde	9 30E-02	1 94E-05
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	1151	PAHs-w/o	5 47E-04	1 14E-07
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	91203	Naphthalene	1 64E-03	3 43E-07
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	71432	Benzene	4 38E-02	9 14E-06
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	75070	Acetaldehyde	2 35E-02	4 91E-06
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	107028	Acrolein	1 48E-02	3 09E-06
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7664417	NH3	1 75E+01	3 66E-03
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	100414	Ethyl Benzene	5 20E-02	1 09E-05
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	110543	Hexane	3 45E-02	7 20E-06
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	108883	Toluene	2 00E-01	4 18E-05
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	1330207	Xylenes	1 49E-01	3 11E-05
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7440382	Arsenic	1 23E-03	3 70E-07

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7439921	Lead	7 70E-03	2 32E-06
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7440020	Nickel	2 28E-03	6 88E-07
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7440417	Beryllium	1 68E-04	5 07E-08
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7440508	Copper	1 08E-01	3 27E-05
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7440439	Cadmium	1 45E-03	4 39E-07
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7439976	Mercury	2 22E-04	6 71E-08
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	7782492	Selenium	2 77E-03	8 34E-07
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	1746016	2,3,7,8-TCDD	1 03E-06	3 10E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	40321764	1-3,7,8PeCDD	3 71E-06	1 12E-09
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	39227286	1-4,7,8HxCDD	2 45E-07	7 40E-11
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	57653857	1-3,6-8HxCDD	4 24E-07	1 28E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	19408743	1-3,7-9HxCDD	2 85E-07	8 60E-11
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	35822469	1-4,6-8HpCDD	1 13E-07	3 40E-11
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	3268879	1-8OctaCDD	0 00E+00	0 00E+00
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	51207319	2,3,7,8-TCDF	1 10E-06	3 32E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	57117416	1-3,7,8PeCDF	3 71E-07	1 12E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	57117314	2-4,7,8PeCDF	7 10E-06	2 14E-09
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	70648269	1-4,7,8HxCDF	1 41E-06	4 26E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	57117449	1-3,6-8HxCDF	1 21E-06	3 66E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	60851345	2-4,6-8HxCDF	1 37E-06	4 14E-10
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	72918219	1-3,7-9HxCDF	1 13E-07	3 40E-11
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	67562394	1-4,6-8HpCDF	2 06E-07	6 20E-11
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	55673897	1-4,7-9HpCDF	1 99E-08	6 00E-12
Dryer 2	435744	Afterburner 2 -> Baghouse 1/2	449816 -> 609838/609839	39001020	1-8OctaCDF	0 00E+00	0 00E+00
Afterburner 1	449815	Baghouse 3	609840	50000	Formaldehyde	2 48E-01	5 18E-05
Afterburner 1	449815	Baghouse 3	609840	1151	PAHs-w/o	1 46E-03	3 05E-07
Afterburner 1	449815	Baghouse 3	609840	91203	Naphthalene	4 37E-03	9 14E-07
Afterburner 1	449815	Baghouse 3	609840	71432	Benzene	1 17E-01	2 44E-05

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Afterburner 1	449815	Baghouse 3	609840	75070	Acetaldehyde	6 27E-02	1 31E-05
Afterburner 1	449815	Baghouse 3	609840	107028	Acrolein	3 94E-02	8 23E-06
Afterburner 1	449815	Baghouse 3	609840	7664417	NH3	4 67E+01	9 75E-03
Afterburner 1	449815	Baghouse 3	609840	100414	Ethyl Benzene	1 39E-01	2 90E-05
Afterburner 1	449815	Baghouse 3	609840	110543	Hexane	9 19E-02	1 92E-05
Afterburner 1	449815	Baghouse 3	609840	108883	Toluene	5 34E-01	1 12E-04
Afterburner 1	449815	Baghouse 3	609840	1330207	Xylenes	3 97E-01	8 29E-05
Afterburner 2	449816	Baghouse 1/2	609838/609839	50000	Formaldehyde	4 81E-01	1 00E-04
Afterburner 2	449816	Baghouse 1/2	609838/609839	1151	PAHs-w/o	2 83E-03	5 91E-07
Afterburner 2	449816	Baghouse 1/2	609838/609839	91203	Naphthalene	8 48E-03	1 77E-06
Afterburner 2	449816	Baghouse 1/2	609838/609839	71432	Benzene	2 26E-01	4 73E-05
Afterburner 2	449816	Baghouse 1/2	609838/609839	75070	Acetaldehyde	1 22E-01	2 54E-05
Afterburner 2	449816	Baghouse 1/2	609838/609839	107028	Acrolein	7 63E-02	1 60E-05
Afterburner 2	449816	Baghouse 1/2	609838/609839	7664417	NH3	9 05E+01	1 89E-02
Afterburner 2	449816	Baghouse 1/2	609838/609839	100414	Ethyl Benzene	2 69E-01	5 61E-05
Afterburner 2	449816	Baghouse 1/2	609838/609839	110543	Hexane	1 78E-01	3 72E-05
Afterburner 2	449816	Baghouse 1/2	609838/609839	108883	Toluene	1 03E+00	2 16E-04
Afterburner 2	449816	Baghouse 1/2	609838/609839	1330207	Xylenes	7 69E-01	1 61E-04
Furnace A	544242	Baghouse 6	612708	1151	PAHs-w/o	5 67E-03	9 52E-07
Furnace A	544242	Baghouse 6	612708	91203	Naphthalene	1 70E-02	2 86E-06
Furnace A	544242	Baghouse 6	612708	71432	Benzene	3 29E-01	5 52E-05
Furnace A	544242	Baghouse 6	612708	107028	Acrolein	1 53E-01	2 57E-05
Furnace A	544242	Baghouse 6	612708	7664417	NH3	1 81E+02	3 05E-02
Furnace A	544242	Baghouse 6	612708	100414	Ethyl Benzene	3 91E-01	6 57E-05
Furnace A	544242	Baghouse 6	612708	110543	Hexane	2 61E-01	4 38E-05
Furnace A	544242	Baghouse 6	612708	108883	Toluene	1 50E+00	2 52E-04
Furnace A	544242	Baghouse 6	612708	1330207	Xylenes	1 12E+00	1 88E-04
Furnace A	544242	Baghouse 6	612708	50000	Formaldehyde	3 00E+01	8 13E-03
Furnace A	544242	Baghouse 6	612708	75070	Acetaldehyde	1 51E+01	4 11E-03
Furnace A	544242	Baghouse 6	612708	7440382	Arsenic	1 06E-01	2 88E-05
Furnace A	544242	Baghouse 6	612708	7439921	Lead	3 66E-02	9 94E-06
Furnace A	544242	Baghouse 6	612708	7440020	Nickel	2 52E-01	6 84E-05
Furnace A	544242	Baghouse 6	612708	7440417	Beryllium	8 00E-04	2 17E-07
Furnace A	544242	Baghouse 6	612708	7440508	Copper	5 15E-01	1 40E-04
Furnace A	544242	Baghouse 6	612708	7439976	Mercury	1 06E-03	2 87E-07
Furnace A	544242	Baghouse 6	612708	7782492	Selenium	1 32E-02	3 57E-06
Furnace A	544242	Baghouse 6	612708	7439965	Manganese	1 18E+01	3 20E-03
Furnace A	544242	Baghouse 6	612708	7783064	H2S	3 94E+02	1 07E-01
Furnace A	544242	Baghouse 6	612708	1746016	2,3,7,8-TCDD	1 92E-06	5 22E-10
Furnace A	544242	Baghouse 6	612708	40321764	1-3,7,8PeCDD	7 70E-06	2 09E-09
Furnace A	544242	Baghouse 6	612708	39227286	1-4,7,8HxCDD	7 89E-07	2 14E-10
Furnace A	544242	Baghouse 6	612708	57653857	1-3,6-8HxCDD	1 45E-06	3 94E-10
Furnace A	544242	Baghouse 6	612708	19408743	1-3,7-9HxCDD	9 78E-07	2 65E-10
Furnace A	544242	Baghouse 6	612708	35822469	1-4,6-8HpCDD	4 42E-07	1 20E-10
Furnace A	544242	Baghouse 6	612708	3268879	1-8OctaCDD	0 00E+00	0 00E+00
Furnace A	544242	Baghouse 6	612708	51207319	2,3,7,8-TCDF	3 19E-06	8 65E-10
Furnace A	544242	Baghouse 6	612708	57117416	1-3,7,8PeCDF	1 14E-06	3 08E-10
Furnace A	544242	Baghouse 6	612708	57117314	2-4,7,8PeCDF	2 08E-05	5 63E-09
Furnace A	544242	Baghouse 6	612708	70648269	1-4,7,8HxCDF	8 52E-06	2 31E-09
Furnace A	544242	Baghouse 6	612708	57117449	1-3,6-8HxCDF	6 34E-06	1 72E-09
Furnace A	544242	Baghouse 6	612708	60851345	2-4,6-8HxCDF	6 25E-06	1 69E-09
Furnace A	544242	Baghouse 6	612708	72918219	1-3,7-9HxCDF	1 96E-06	5 31E-10
Furnace A	544242	Baghouse 6	612708	67562394	1-4,6-8HpCDF	1 61E-06	4 37E-10

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Furnace A	544242	Baghouse 6	612708	55673897	1-4,7-9HpCDF	1 58E-07	4 28E-11
Furnace A	544242	Baghouse 6	612708	39001020	1-8OctaCDF	0 00E+00	0 00E+00
Furnace A	544242	Baghouse 6	612708	7647010	HCl	1 50E+03	1 80E+00
Furnace A	544242	Baghouse 6	612708	7782505	Chlorine	4 18E+00	5 01E-03
Furnace B	457756	Baghouse 6	612708	1151	PAHs-w/o	7 66E-03	1 52E-06
Furnace B	457756	Baghouse 6	612708	91203	Naphthalene	2 30E-02	4 57E-06
Furnace B	457756	Baghouse 6	612708	71432	Benzene	4 44E-01	8 84E-05
Furnace B	457756	Baghouse 6	612708	107028	Acrolein	2 07E-01	4 11E-05
Furnace B	457756	Baghouse 6	612708	7664417	NH3	2 45E+02	4 88E-02
Furnace B	457756	Baghouse 6	612708	100414	Ethyl Benzene	5 28E-01	1 05E-04
Furnace B	457756	Baghouse 6	612708	110543	Hexane	3 52E-01	7 01E-05
Furnace B	457756	Baghouse 6	612708	108883	Toluene	2 03E+00	4 04E-04
Furnace B	457756	Baghouse 6	612708	1330207	Xylenes	1 51E+00	3 00E-04
Furnace B	457756	Baghouse 6	612708	50000	Formaldehyde	4 79E+01	1 38E-02
Furnace B	457756	Baghouse 6	612708	75070	Acetaldehyde	2 42E+01	6 98E-03
Furnace B	457756	Baghouse 6	612708	7440382	Arsenic	1 70E-01	4 90E-05
Furnace B	457756	Baghouse 6	612708	7439921	Lead	5 86E-02	1 69E-05
Furnace B	457756	Baghouse 6	612708	7440020	Nickel	4 03E-01	1 16E-04
Furnace B	457756	Baghouse 6	612708	7440417	Beryllium	1 28E-03	3 69E-07
Furnace B	457756	Baghouse 6	612708	7440508	Copper	8 25E-01	2 38E-04
Furnace B	457756	Baghouse 6	612708	7439976	Mercury	1 69E-03	4 88E-07
Furnace B	457756	Baghouse 6	612708	7782492	Selenium	2 10E-02	6 06E-06
Furnace B	457756	Baghouse 6	612708	7439965	Manganese	1 89E+01	5 44E-03
Furnace B	457756	Baghouse 6	612708	7783064	H2S	6 31E+02	1 82E-01
Furnace B	457756	Baghouse 6	612708	1746016	2,3,7,8-TCDD	3 08E-06	8 87E-10
Furnace B	457756	Baghouse 6	612708	40321764	1-3,7,8PeCDD	1 23E-05	3 55E-09
Furnace B	457756	Baghouse 6	612708	39227286	1-4,7,8HxCDD	1 26E-06	3 64E-10
Furnace B	457756	Baghouse 6	612708	57653857	1-3,6-8HxCDD	2 32E-06	6 69E-10
Furnace B	457756	Baghouse 6	612708	19408743	1-3,7-9HxCDD	1 56E-06	4 51E-10
Furnace B	457756	Baghouse 6	612708	35822469	1-4,6-8HpCDD	7 06E-07	2 04E-10
Furnace B	457756	Baghouse 6	612708	3268879	1-8OctaCDD	0 00E+00	0 00E+00
Furnace B	457756	Baghouse 6	612708	51207319	2,3,7,8-TCDF	5 10E-06	1 47E-09
Furnace B	457756	Baghouse 6	612708	57117416	1-3,7,8PeCDF	1 82E-06	5 23E-10
Furnace B	457756	Baghouse 6	612708	57117314	2-4,7,8PeCDF	3 32E-05	9 57E-09
Furnace B	457756	Baghouse 6	612708	70648269	1-4,7,8HxCDF	1 36E-05	3 93E-09
Furnace B	457756	Baghouse 6	612708	57117449	1-3,6-8HxCDF	1 01E-05	2 92E-09
Furnace B	457756	Baghouse 6	612708	60851345	2-4,6-8HxCDF	9 99E-06	2 88E-09
Furnace B	457756	Baghouse 6	612708	72918219	1-3,7-9HxCDF	3 13E-06	9 01E-10
Furnace B	457756	Baghouse 6	612708	67562394	1-4,6-8HpCDF	2 57E-06	7 42E-10
Furnace B	457756	Baghouse 6	612708	55673897	1-4,7-9HpCDF	2 52E-07	7 27E-11
Furnace B	457756	Baghouse 6	612708	39001020	1-8OctaCDF	0 00E+00	0 00E+00
Furnace B	457756	Baghouse 6	612708	7647010	HCl	1 57E+03	1 80E+00
Furnace B	457756	Baghouse 6	612708	7782505	Chlorine	4 37E+00	5 00E-03
Dross Handling	401949	Baghouse 4	510389	7440382	Arsenic	3 86E-04	5 01E-07
Dross Handling	401949	Baghouse 4	510389	7439921	Lead	2 42E-03	3 14E-06
Dross Handling	401949	Baghouse 4	510389	7440020	Nickel	7 17E-04	9 31E-07
Dross Handling	401949	Baghouse 4	510389	7440417	Beryllium	5 29E-05	6 87E-08
Dross Handling	401949	Baghouse 4	510389	7440508	Copper	3 41E-02	4 42E-05
Dross Handling	401949	Baghouse 4	510389	7440439	Cadmium	4 57E-04	5 94E-07
Dross Handling	401949	Baghouse 4	510389	7439976	Mercury	6 99E-05	9 08E-08
Dross Handling	401949	Baghouse 4	510389	7782492	Selenium	8 70E-04	1 13E-06
Furnace C	454024	Baghouse 6	612708	50000	Formaldehyde	2 39E-01	8 10E-05
Furnace C	454024	Baghouse 6	612708	1151	PAHs-w/o	1 40E-03	4 76E-07

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Appendix A Hazard Identification (Emission Inventory)

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Furnace C	454024	Baghouse 6	612708	91203	Naphthalene	4 21E-03	1 43E-06
Furnace C	454024	Baghouse 6	612708	71432	Benzene	1 12E-01	3 81E-05
Furnace C	454024	Baghouse 6	612708	75070	Acetaldehyde	6 04E-02	2 05E-05
Furnace C	454024	Baghouse 6	612708	107028	Acrolein	3 79E-02	1 29E-05
Furnace C	454024	Baghouse 6	612708	7664417	NH3	4 49E+01	1 52E-02
Furnace C	454024	Baghouse 6	612708	100414	Ethyl Benzene	1 33E-01	4 52E-05
Furnace C	454024	Baghouse 6	612708	110543	Hexane	8 85E-02	3 00E-05
Furnace C	454024	Baghouse 6	612708	108883	Toluene	5 14E-01	1 74E-04
Furnace C	454024	Baghouse 6	612708	1330207	Xylenes	3 82E-01	1 30E-04
Misc NG	--	--	--	50000	Formaldehyde	7 33E-02	1 53E-05
Misc NG	--	--	--	1151	PAHs-w/o	4 31E-04	9 00E-08
Misc NG	--	--	--	91203	Naphthalene	1 29E-03	2 70E-07
Misc NG	--	--	--	71432	Benzene	3 45E-02	7 20E-06
Misc NG	--	--	--	75070	Acetaldehyde	1 85E-02	3 87E-06
Misc NG	--	--	--	107028	Acrolein	1 16E-02	2 43E-06
Misc NG	--	--	--	7664417	NH3	1 38E+01	2 88E-03
Misc NG	--	--	--	100414	Ethyl Benzene	4 09E-02	8 55E-06
Misc NG	--	--	--	110543	Hexane	2 72E-02	5 67E-06
Misc NG	--	--	--	108883	Toluene	1 58E-01	3 29E-05
Misc NG	--	--	--	1330207	Xylenes	1 17E-01	2 45E-05
Propane Welders	--	--	--	107062	EDC	4 83E-03	4 63E-06
Propane Welders	--	--	--	50000	Formaldehyde	1 08E+01	1 04E-02
Propane Welders	--	--	--	75092	Methylene Chlor	4 09E-03	3 92E-06
Propane Welders	--	--	--	129000	Pyrene	2 78E-04	2 67E-07
Propane Welders	--	--	--	191242	B[g,h,i]perylen	8 47E-05	8 12E-08
Propane Welders	--	--	--	192972	B[e]pyrene	8 49E-05	8 13E-08
Propane Welders	--	--	--	205992	B[b]fluoranthen	3 40E-05	3 25E-08
Propane Welders	--	--	--	206440	Fluoranthene	2 27E-04	2 18E-07
Propane Welders	--	--	--	208968	Acenaphthylene	1 13E-03	1 08E-06
Propane Welders	--	--	--	218019	Chrysene	1 42E-04	1 36E-07
Propane Welders	--	--	--	83329	Acenaphthene	2 56E-04	2 45E-07
Propane Welders	--	--	--	85018	Phenanthrene	2 13E-03	2 04E-06
Propane Welders	--	--	--	86737	Fluorene	1 16E-03	1 11E-06
Propane Welders	--	--	--	91203	Naphthalene	1 52E-02	1 46E-05
Propane Welders	--	--	--	91576	2MeNaphthalene	6 79E-03	6 51E-06
Propane Welders	--	--	--	71432	Benzene	9 00E-02	8 63E-05
Propane Welders	--	--	--	75014	Vinyl Chloride	3 05E-03	2 92E-06
Propane Welders	--	--	--	79345	TetraClEthane	8 18E-03	7 84E-06
Propane Welders	--	--	--	79005	1,1,2TriClEthan	6 50E-03	6 23E-06
Propane Welders	--	--	--	95636	1,2,4TriMeBenze	2 92E-03	2 80E-06
Propane Welders	--	--	--	78875	1,2-DiClPropane	5 50E-03	5 27E-06
Propane Welders	--	--	--	542756	1,3-DiClPropene	5 40E-03	5 18E-06
Propane Welders	--	--	--	75070	Acetaldehyde	1 71E+00	1 64E-03
Propane Welders	--	--	--	107028	Acrolein	1 05E+00	1 01E-03
Propane Welders	--	--	--	7664417	NH3	6 78E-01	6 50E-04
Propane Welders	--	--	--	67663	Chloroform	5 83E-03	5 59E-06
Propane Welders	--	--	--	106990	1,3-Butadiene	5 46E-02	5 23E-05
Propane Welders	--	--	--	100414	Ethyl Benzene	8 12E-03	7 78E-06
Propane Welders	--	--	--	110543	Hexane	2 27E-01	2 18E-04
Propane Welders	--	--	--	67561	Methanol	5 11E-01	4 90E-04
Propane Welders	--	--	--	56235	CCl4	7 51E-03	7 19E-06
Propane Welders	--	--	--	100425	Styrene	4 83E-03	4 63E-06
Propane Welders	--	--	--	108883	Toluene	8 34E-02	8 00E-05

Table A.12 Emissions by Source

Description	A/N	Control Device	Control Device A/N	Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)
Propane Welders	--	--	--	1330207	Xylenes	3 76E-02	3 61E-05
Propane Welders	--	--	--	106934	EDB	9 06E-03	8 68E-06
Propane Welders	--	--	--	7440020	Nickel	5 00E-03	3 96E-04
Propane Welders	--	--	--	7439965	Manganese	2 56E+00	2 03E-01

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Appendix A Hazard Identification (Emission Inventory)

Table A.13 Facility-Wide Emissions

						Cancer Risk		Non-Cancer Chronic Risk		8-Hour Non-Cancer Chronic Risk	Non-Cancer Acute Risk
Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	Average Annual Emissions (g/s)	Maximum Hourly Emissions (g/s)	Inhalation Pathway	Non-Inhalation Pathways	Inhalation Pathway	Non-Inhalation Pathways	Inhalation Pathway	Inhalation Pathway
79005	1,1,2TriClEthan	6 50E-03	6 23E-06	9 36E-08	7 86E-07	X					
95636	1,2,4TriMeBenze	2 92E-03	2 80E-06	4 21E-08	3 54E-07						
78875	1,2-DiClPropane	5 50E-03	5 27E-06	7 92E-08	6 65E-07						
106990	1,3-Butadiene	5 46E-02	5 23E-05	7 86E-07	6 60E-06	X		X		X	X
542756	1,3-DiClPropene	5 40E-03	5 18E-06	7 77E-08	6 53E-07						
57653857	1-3,6-8HxCDD	4 76E-06	1 36E-09	6 85E-11	1 71E-10	X	X	X	X		
57117449	1-3,6-8HxCDF	1 97E-05	5 62E-09	2 84E-10	7 08E-10	X	X	X	X		
40321764	1-3,7,8PeCDD	2 79E-05	7 99E-09	4 01E-10	1 01E-09	X	X	X	X		
57117416	1-3,7,8PeCDF	3 87E-06	1 11E-09	5 58E-11	1 40E-10	X	X	X	X		
19408743	1-3,7-9HxCDD	3 14E-06	8 96E-10	4 53E-11	1 13E-10	X	X	X	X		
72918219	1-3,7-9HxCDF	5 51E-06	1 56E-09	7 93E-11	1 97E-10	X	X	X	X		
35822469	1-4,6-8HpCDD	1 33E-06	3 77E-10	1 91E-11	4 76E-11	X	X	X	X		
67562394	1-4,6-8HpCDF	4 63E-06	1 31E-09	6 67E-11	1 65E-10	X	X	X	X		
39227286	1-4,7,8HxCDD	2 61E-06	7 46E-10	3 76E-11	9 40E-11	X	X	X	X		
70648269	1-4,7,8HxCDF	2 58E-05	7 32E-09	3 71E-10	9 24E-10	X	X	X	X		
55673897	1-4,7-9HpCDF	4 43E-07	1 26E-10	6 38E-12	1 58E-11	X	X	X	X		
3268879	1-8OctaCDD	0 00E+00	0 00E+00	0 00E+00	0 00E+00	X	X	X	X		
39001020	1-8OctaCDF	0 00E+00	0 00E+00	0 00E+00	0 00E+00	X	X	X	X		
1746016	2,3,7,8-TCDD	6 86E-06	1 97E-09	9 87E-11	2 48E-10	X	X	X	X		
51207319	2,3,7,8-TCDF	1 06E-05	3 03E-09	1 53E-10	3 83E-10	X	X	X	X		
60851345	2-4,6-8HxCDF	1 92E-05	5 47E-09	2 77E-10	6 89E-10	X	X	X	X		
57117314	2-4,7,8PeCDF	7 14E-05	2 04E-08	1 03E-09	2 57E-09	X	X	X	X		
91576	2MeNaphthalene	6 79E-03	6 51E-06	9 78E-08	8 21E-07						
83329	Acenaphthene	2 56E-04	2 45E-07	3 68E-09	3 09E-08						
208968	Acenaphthylene	1 13E-03	1 08E-06	1 63E-08	1 37E-07						
75070	Acetaldehyde	4 14E+01	1 28E-02	5 96E-04	1 61E-03	X		X		X	X
107028	Acrolein	1 60E+00	1 12E-03	2 30E-05	1 41E-04			X		X	X
7440382	Arsenic	2 82E-01	8 01E-05	4 06E-06	1 01E-05	X	X	X	X	X	X
205992	B[b]fluoranthen	3 40E-05	3 25E-08	4 89E-10	4 10E-09	X	X				
192972	B[e]pyrene	8 49E-05	8 13E-08	1 22E-09	1 03E-08						
191242	B[g,h,i]perylen	8 47E-05	8 12E-08	1 22E-09	1 02E-08						
71432	Benzene	1 41E+00	3 60E-04	2 04E-05	4 54E-05	X		X		X	X
7440417	Beryllium	2 87E-03	9 04E-07	4 13E-08	1 14E-07	X		X	X		
7440439	Cadmium	6 79E-03	2 75E-06	9 78E-08	3 46E-07	X		X	X		
56235	CCl4	7 51E-03	7 19E-06	1 08E-07	9 07E-07	X		X			X
7782505	Chlorine	8 55E+00	1 00E-02	1 23E-04	1 26E-03			X			X
67663	Chloroform	5 83E-03	5 59E-06	8 39E-08	7 05E-07	X		X			X
218019	Chrysene	1 42E-04	1 36E-07	2 04E-09	1 71E-08	X	X				
7440508	Copper	1 85E+00	5 82E-04	2 66E-05	7 34E-05						X
106934	EDB	9 06E-03	8 68E-06	1 30E-07	1 10E-06	X		X			
107062	EDC	4 83E-03	4 63E-06	6 95E-08	5 83E-07	X		X			
100414	Ethyl Benzene	1 58E+00	3 33E-04	2 28E-05	4 20E-05	X		X			
206440	Fluoranthene	2 27E-04	2 18E-07	3 27E-09	2 74E-08						
86737	Fluorene	1 16E-03	1 11E-06	1 67E-08	1 40E-07						
50000	Formaldehyde	8 99E+01	3 26E-02	1 29E-03	4 11E-03	X		X		X	X
7783064	H2S	1 03E+03	2 89E-01	1 48E-02	3 64E-02			X			X
7647010	HCl	3 08E+03	3 60E+00	4 43E-02	4 54E-01			X			X
110543	Hexane	1 27E+00	4 34E-04	1 83E-05	5 47E-05			X			
7439921	Lead	1 31E-01	4 14E-05	1 89E-06	5 22E-06	X	X				
7439965	Manganese	3 32E+01	2 11E-01	4 78E-04	2 66E-02			X		X	
7439976	Mercury	3 79E-03	1 19E-06	5 45E-08	1 51E-07			X	X	X	X

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Table A.13 Facility-Wide Emissions

						Cancer Risk		Non-Cancer Chronic Risk		8-Hour Non-Cancer Chronic Risk	Non-Cancer Acute Risk
Pollutant	Pollutant Name	Average Annual Emissions (lb/yr)	Maximum Hourly Emissions (lb/hr)	Average Annual Emissions (g/s)	Maximum Hourly Emissions (g/s)	Inhalation Pathway	Non-Inhalation Pathways	Inhalation Pathway	Non-Inhalation Pathways	Inhalation Pathway	Inhalation Pathway
67561	Methanol	5 11E-01	4 90E-04	7 36E-06	6 18E-05			X			X
75092	Methylene Chlor	4 09E-03	3 92E-06	5 89E-08	4 94E-07	X		X			X
91203	Naphthalene	7 59E-02	2 69E-05	1 09E-06	3 39E-06	X		X			
7664417	NH3	6 48E+02	1 32E-01	9 32E-03	1 66E-02			X			X
7440020	Nickel	6 71E-01	5 85E-04	9 66E-06	7 38E-05	X		X	X	X	X
1151	PAHs-w/o	2 02E-02	4 10E-06	2 91E-07	5 17E-07	X	X				
85018	Phenanthrene	2 13E-03	2 04E-06	3 06E-08	2 57E-07						
129000	Pyrene	2 78E-04	2 67E-07	4 00E-09	3 36E-08						
7782492	Selenium	4 71E-02	1 49E-05	6 78E-07	1 87E-06			X	X		
100425	Styrene	4 83E-03	4 63E-06	6 95E-08	5 83E-07			X			X
79345	TetraClEthane	8 18E-03	7 84E-06	1 18E-07	9 89E-07	X					
108883	Toluene	6 14E+00	1 33E-03	8 84E-05	1 68E-04			X		X	X
75014	Vinyl Chloride	3 05E-03	2 92E-06	4 39E-08	3 68E-07	X					X
1330207	Xylenes	4 54E+00	9 66E-04	6 53E-05	1 22E-04			X			X

Table A.14 Cancer Potency Factors and Reference Exposure Levels

		Cancer Risk		Non-Cancer Chronic Risk		8-Hour Non-Cancer Chronic Risk	Non-Cancer Acute Risk
Pollutant	Pollutant Name	Inhalation Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Oral Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Inhalation Reference Exposure Level (ug/m^3)	Oral Reference Exposure Level (mg/kg-day)	Inhalation Reference Exposure Level (ug/m^3)	Inhalation Reference Exposure Level (ug/m^3)
7440382	Arsenic	12	1 5	0 015	0 0000035	0 015	0 2
7439921	Lead	0 042	0 0085				
7440020	Nickel	0 91		0 014	0 011	0 06	0 2
7440417	Beryllium	8 4		0 007	0 002		
7440508	Copper						100
7440439	Cadmium	15		0 02	0 0005		
7439976	Mercury			0 03	0 00016	0 06	0 6
7782492	Selenium			20	0 005		
50000	Formaldehyde	0 021		9		9	55
1151	PAHs-w/o	3 9	12				
91203	Naphthalene	0 12		9			
71432	Benzene	0 1		3		3	27
75070	Acetaldehyde	0 01		140		300	470
107028	Acrolein			0 35		0 7	2 5
7664417	NH3			200			3200
100414	Ethyl Benzene	0 0087		2000			
110543	Hexane			7000			
108883	Toluene			420		830	5000
1330207	Xylenes			700			22000
1746016	2,3,7,8-TCDD	130000	130000	0 00004	0 00000001		
40321764	1-3,7,8PeCDD	130000	130000	0 00004	0 00000001		
39227286	1-4,7,8HxCDD	13000	13000	0 0004	0 0000001		
57653857	1-3,6-8HxCDD	13000	13000	0 0004	0 0000001		
19408743	1-3,7-9HxCDD	13000	13000	0 0004	0 0000001		
35822469	1-4,6-8HpCDD	1300	1300	0 004	0 000001		
3268879	1-8OctaCDD	39	39	0 13	0 000033		
51207319	2,3,7,8-TCDF	13000	13000	0 0004	0 0000001		
57117416	1-3,7,8PeCDF	3900	3900	0 0013	0 00000033		
57117314	2-4,7,8PeCDF	39000	39000	0 00013	0 000000033		
70648269	1-4,7,8HxCDF	13000	13000	0 0004	0 0000001		
57117449	1-3,6-8HxCDF	13000	13000	0 0004	0 0000001		
60851345	2-4,6-8HxCDF	13000	13000	0 0004	0 0000001		
72918219	1-3,7-9HxCDF	13000	13000	0 0004	0 0000001		
67562394	1-4,6-8HpCDF	1300	1300	0 004	0 000001		
55673897	1-4,7-9HpCDF	1300	1300	0 004	0 000001		
39001020	1-8OctaCDF	39	39	0 13	0 000033		
7439965	Manganese			0 09		0 17	
7783064	H2S			10			42
7647010	HCl			9			2100
7782505	Chlorine			0 2			210
107062	EDC	0 072		400			
75092	Methylene Chlor	0 0035		400			14000
129000	Pyrene						
191242	B[g,h,i]perylen						
192972	B[e]pyrene						
205992	B[b]fluoranthen	0 39	1 2				
206440	Fluoranthene						
208968	Acenaphthylene						
218019	Chrysene	0 039	0 12				
83329	Acenaphthene						
85018	Phenanthrene						

Table A.14 Cancer Potency Factors and Reference Exposure Levels

		Cancer Risk		Non-Cancer Chronic Risk		8-Hour Non-Cancer Chronic Risk	Non-Cancer Acute Risk
Pollutant	Pollutant Name	Inhalation Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Oral Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Inhalation Reference Exposure Level (ug/m^3)	Oral Reference Exposure Level (mg/kg-day)	Inhalation Reference Exposure Level (ug/m^3)	Inhalation Reference Exposure Level (ug/m^3)
86737	Fluorene						
91576	2MeNaphthalene						
75014	Vinyl Chloride	0 27					180000
79345	TetraClEthane	0 2					
79005	1,1,2TriClEthan	0 057					
95636	1,2,4TriMeBenze						
78875	1,2-DiClPropane						
542756	1,3-DiClPropene						
67663	Chloroform	0 019		300			150
106990	1,3-Butadiene	0 6		2		9	660
67561	Methanol			4000			28000
56235	CCl4	0 15		40			1900
100425	Styrene			900			21000
106934	EDB	0 25		0 8			

Table A.15 Target Organs for Non-Cancer Effects

"C" Non-Cancer Chronic Effects; "8" 8-Hour Non-Cancer Chronic Effects; "A" Non-Cancer Acute Effects

Pollutant	Pollutant Name	Cardiovascular System (CV)	Central Nervous System (CNS)	Immune System (IMMUN)	Kidneys (KIDNEY)	Gastrointestinal Tract & Liver or Alimentary Tract (GILV)	Reproductive & Developmental Systems (REPRO_DEVEL)	Respiratory System (RESP)	Skin (SKIN)	Eyes (EYE)	Bones and Teeth (BONE)	Endocrine System (ENDO)	Hematologic System (BLOOD)
7440382	Arsenic	C 8 A	C 8 A				C 8 A	C 8	C 8				
7439921	Lead												
7440020	Nickel			8 A			C	C 8					C
7440417	Beryllium			C		C		C					
7440508	Copper							A					
7440439	Cadmium				C			C					
7439976	Mercury		C 8 A		C 8		C 8 A						
7782492	Selenium	C	C			C							
50000	Formaldehyde							C 8		A			
1151	PAHs-w/o												
91203	Naphthalene							C					
71432	Benzene			A			A						C 8 A
75070	Acetaldehyde							C 8 A		A			
107028	Acrolein							C 8 A		A			
7664417	NH3							C A		A			
100414	Ethyl Benzene				C	C	C					C	
110543	Hexane		C										
108883	Toluene		A					A		C 8 A			
1330207	Xylenes		C A					C A		C A			
1746016	2,3,7,8-TCDD					C	C	C				C	C
40321764	1-3,7,8PeCDD					C	C	C				C	C
39227286	1-4,7,8HxCDD					C	C	C				C	C
57653857	1-3,6-8HxCDD					C	C	C				C	C
19408743	1-3,7-9HxCDD					C	C	C				C	C
35822469	1-4,6-8HpCDD					C	C	C				C	C
3268879	1-8OctaCDD					C	C	C				C	C
51207319	2,3,7,8-TCDF					C	C	C				C	C
57117416	1-3,7,8PeCDF					C	C	C				C	C
57117314	2-4,7,8PeCDF					C	C	C				C	C
70648269	1-4,7,8HxCDF					C	C	C				C	C
57117449	1-3,6-8HxCDF					C	C	C				C	C
60851345	2-4,6-8HxCDF					C	C	C				C	C
72918219	1-3,7-9HxCDF					C	C	C				C	C
67562394	1-4,6-8HpCDF					C	C	C				C	C
55673897	1-4,7-9HpCDF					C	C	C				C	C
39001020	1-8OctaCDF					C	C	C				C	C
7439965	Manganese		C 8										
7783064	H2S		A					C					
7647010	HCl							C A		A			
7782505	Chlorine							C A		A			
107062	EDC					C							
75092	Methylene Chlor	C A	C A										
129000	Pyrene												
191242	B[g,h,i]perylen												
192972	B[e]pyrene												
205992	B[b]fluoranthen												
206440	Fluoranthene												
208968	Acenaphthylene												
218019	Chrysene												
83329	Acenaphthene												
85018	Phenanthrene												
86737	Fluorene												
91576	2MeNaphthalene												
75014	Vinyl Chloride		A					A		A			

Table A.15 Target Organs for Non-Cancer Effects

"C" Non-Cancer Chronic Effects; "8" 8-Hour Non-Cancer Chronic Effects; "A" Non-Cancer Acute Effects

Pollutant	Pollutant Name	Cardiovascular System (CV)	Central Nervous System (CNS)	Immune System (IMMUN)	Kidneys (KIDNEY)	Gastrointestinal Tract & Liver or Alimentary Tract (GILV)	Reproductive & Developmental Systems (REPRO_DEVEL)	Respiratory System (RESP)	Skin (SKIN)	Eyes (EYE)	Bones and Teeth (BONE)	Endocrine System (ENDO)	Hematologic System (BLOOD)
79345	TetraClEthane												
79005	1,1,2TriClEthan												
95636	1,2,4TriMeBenze												
78875	1,2-DiClPropane												
542756	1,3-DiClPropene												
67663	Chloroform		A		C	C	C A	A					
106990	1,3-Butadiene						C 8 A						
67561	Methanol		A				C						
56235	CCl4		C A			C A	C A						
100425	Styrene		C				A	A		A			
106934	EDB						C						

Baghouse Dust Analysis

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 7E17032

Project: BH #6 Lime Dust

Attn: Nick Drakos

Client: Custom Alloy Light Metals
13329 Ector Street
City of Industry, CA 91746

Report Date: 6/21/2017
Received Date: 5/17/2017
Turnaround Time: Normal
Phones: (626) 242-4010
Fax: (626) 336-8312
P.O. #:
Billing Code:

Dear Nick Drakos,

Enclosed are the results of analyses for samples received 5/17/17 with the Chain-of-Custody document. The samples were received in good condition, at 20.1 °C. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: BH #6 Lime Dust — Sampled: 05/15/17 14:00 by Client
7E17032-01 [Solid]

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 6010B	**Batch ID:** W7E1167	**Instr:** ICP02		**Prepared:** 05/23/17 12:33		**Analyst:** JCK
Antimony, Total	[redacted]	2.0	mg/kg	1	06/09/17 14:10	
Arsenic, Total		1.0	mg/kg	1	06/09/17 14:10	
Barium, Total		2.0	mg/kg	1	06/09/17 14:10	
Beryllium, Total		0.50	mg/kg	1	06/09/17 14:10	
Cadmium, Total		0.50	mg/kg	1	06/09/17 14:10	
Chromium, Total		1.0	mg/kg	1	06/09/17 14:10	
Cobalt, Total		1.0	mg/kg	1	06/09/17 14:10	
Copper, Total		5.0	mg/kg	1	06/09/17 14:10	
Lead, Total		1.0	mg/kg	1	06/09/17 14:10	
Molybdenum, Total		5.0	mg/kg	1	06/09/17 14:10	
Nickel, Total		2.0	mg/kg	1	06/09/17 14:10	
Selenium, Total		1.0	mg/kg	1	06/09/17 14:10	
Silver, Total		0.50	mg/kg	1	06/09/17 14:10	
Thallium, Total		3.0	mg/kg	1	06/09/17 14:10	
Vanadium, Total		1.0	mg/kg	1	06/09/17 14:10	
Zinc, Total		50	mg/kg	10	06/09/17 14:27	
Method: EPA 7471B	**Batch ID:** W7E1085	**Instr:** CVAA		**Prepared:** 05/18/17 09:23		**Analyst:** mrg
Mercury, Total		40	ug/kg	4	05/18/17 16:32	

Sample: BH #6 Lime Dust — Sampled: 05/15/17 14:00 by Client
7E17032-02 [STLC]

7E17032 Page 1 of 5

Dryer 1 Chlorinated D/F Source Test Results

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

S/T ID: **R20225**

SOUTH COAST AQMD ID/FACILITY ID NO: 83102 A/N: 435743, 449815, 609840
COMPANY: Light Metals (Custom Alloy), City of Industry
EQUIPMENT: Scrap Dryer 1 (D6)
Afterburner (C9)
Baghouse (C23)

LOCATION: 13329 Ector Streeet, City of Industry, CA 91746

REQUESTED BY: Alberto Jasso (Memo Dated June 16, 2020)
TYPE OF TEST: PERFORMANCE/COMPLIANCE REPORT
DOCUMENT DATE: August 26, 2005
REASON FOR TEST: (TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS):
- Development of reporting factors for AB2588 and AER
- 40 CFR Part 63 Subpart RRR Section 1505(e)(1)(iii): 5.0 µg D/F TEQ/Mg of feed

REQUESTED EVAL: Dioxins and Furans
TEST DATE: July 6-7, 2005
TEST FIRM: GE Energy

SITE EVALUATOR: Peter Ko EXT: 2545 REVIEW DATE: August 7, 2020

PCDDs (dioxins)	ng/m3	lbs/hr	µg/Mg	TEQ ng/hr	TEQ µg/Mg
2,3,7,8-TCDD	[redacted]				
1,2,3,7,8-PeCDD					
1,2,3,4,7,8-HxCDD					
1,2,3,6,7,8-HxCDD					
1,2,3,7,8,9-HxCDD					
1,2,3,4,6,7,8-HpCDD					
1,2,3,4,6,7,8,9-OCDD					
Total					
PCDFs (furans)					
2,3,7,8-TCDF					
1,2,3,7,8-PeCDF					
2,3,4,7,8-PeCDF					
1,2,3,4,7,8-HxCDF					
1,2,3,6,7,8-HxCDF					
2,3,4,6,7,8-HxCDF					
1,2,3,7,8,9-HxCDF					
1,2,3,4,6,7,8-HpCDF					
1,2,3,4,7,8,9-HpCDF					
1,2,3,4,6,7,8,9-OCDF					
Total					
Combined Total					

Dryer 2 Chlorinated D/F Source Test Results

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

S.T.ID: **R20190**

SOUTH COAST AQMD ID/FACILITY ID NO: **83102** A/N: **435744, 449816, 609838, 609839**
COMPANY: **Light Metals (Custom Alloy), City of Industry**
EQUIPMENT: **Scrap Dryer 2 (D24)**
Afterburner 2 (C25)
Baghouse 1 (C15)
Baghouse 2 (C16)

LOCATION: **13329 Ector Streeet, City of Industry, CA 91746**

REQUESTED BY: **Alberto Jasso (Memo Dated June 16, 2020)**
TYPE OF TEST: **PERFORMANCE/COMPLIANCE REPORT**
DOCUMENT DATE: **November 18, 2005**
REASON FOR TEST: *(TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS)*
- Development of reporting factors for AB2588 and AER
- 40 CFR Part 63 Subpart RRR Section 1505(e)(1)(iii): 5.0 µg D/F TEQ/Mg of feed

REQUESTED EVAL: **Dioxins and Furans**
TEST DATE: **September 22-23, 2005**
TEST FIRM: **GE Energy**

SITE EVALUATOR: **Peter Ko** EXT: **2545** REVIEW DATE: **July 30, 2020**

PCDDs (dioxins)	ng/m3	lbs/hr	µg/Mg	TEQ ng/hr	TEQ µg/Mg
2,3,7,8-TCDD	[redacted]				
1,2,3,7,8-PeCDD					
1,2,3,4,7,8-HxCDD					
1,2,3,6,7,8-HxCDD					
1,2,3,7,8,9-HxCDD					
1,2,3,4,6,7,8-HpCDD					
1,2,3,4,6,7,8,9-OCDD					
Total					
PCDFs (furans)					
2,3,7,8-TCDF					
1,2,3,7,8-PeCDF					
2,3,4,7,8-PeCDF					
1,2,3,4,7,8-HxCDF					
1,2,3,6,7,8-HxCDF					
2,3,4,6,7,8-HxCDF					
1,2,3,7,8,9-HxCDF					
1,2,3,4,6,7,8-HpCDF					
1,2,3,4,7,8,9-HpCDF					
1,2,3,4,6,7,8,9-OCDF					
Total					
Combined Total					

Furnace A and Furnace B Chlorinated D/F Source Test Results

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

S/T ID: **R20191**

SOUTH COAST AQMD ID/ FACILITY ID NO: 83102 A/N: 544242, 457756, 612708
COMPANY: Light Metals (Custom Alloy), City of Industry
EQUIPMENT: Furnace A (D11)
Furnace B (D21)
Baghouse 6 (C50)

LOCATION: 13329 Ector Streeet, City of Industry, CA 91746

REQUESTED BY: Alberto Jasso (Memo Dated June 16, 2020)
TYPE OF TEST: PERFORMANCE/COMPLIANCE REPORT
DOCUMENT DATE: December 12, 2005
REASON FOR TEST: (TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS):
- Development of reporting factors for AB2588 and AER
- 40 CFR Part 63 Subpart RRR Section 1505(i)(3): 15.0 µg D/F TEQ/Mg of feed

REQUESTED EVAL: Dioxins and Furans
TEST DATE: October 19-20, 2005
TEST FIRM: GE Energy

STE EVALUATOR: Peter Ko EXT: 2545 REVIEW DATE: July 31, 2020

PCDDs (dioxins)	ng/m3	lbs/hr	µg/Mg	TEQ ng/hr	TEQ µg/Mg
2,3,7,8-TCDD	[redacted]				
1,2,3,7,8-PeCDD					
1,2,3,4,7,8-HxCDD					
1,2,3,6,7,8-HxCDD					
1,2,3,7,8,9-HxCDD					
1,2,3,4,6,7,8-HpCDD					
1,2,3,4,6,7,8,9-OCDD					
Total					
PCDFs (furans)					
2,3,7,8-TCDF					
1,2,3,7,8-PeCDF					
2,3,4,7,8-PeCDF					
1,2,3,4,7,8-HxCDF					
1,2,3,6,7,8-HxCDF					
2,3,4,6,7,8-HxCDF					
1,2,3,7,8,9-HxCDF					
1,2,3,4,6,7,8-HpCDF					
1,2,3,4,7,8,9-HpCDF					
1,2,3,4,6,7,8,9-OCDF					
Total					
Combined Total					

CATEF Emission Factors for Hydrogen Sulfide and Manganese

ARB CATEF Factors

SOURCEID	SYSTEM	MATERIAL	SCC	TYPE	DESCRITION	CAS	SUBSTANCE	MAXIMUM	MEAN	MEDIAN	UNIT
2362	Furnace	Aluminum	30400103	None	Reverberatory	7440-38-2	Arsenic	8.16E-06	7.52E-06	7.20E-06	lbs/ton
2363	Furnace	Aluminum	30400103	None	Reverberatory	7440-41-7	Beryllium	3.31E-05	2.99E-05	2.88E-05	lbs/ton
2364	Furnace	Aluminum	30400103	None	Reverberatory	7440-43-9	Cadmium	5.76E-05	4.77E-05	5.76E-05	lbs/ton
2365	Furnace	Aluminum	30400103	None	Reverberatory	18540-29-9	Chromium (Hex)	5.28E-05	2.21E-05	1.65E-05	lbs/ton
2366	Furnace	Aluminum	30400103	None	Reverberatory	7440-47-3	Chromium (Total)	1.54E-04	5.07E-05	2.99E-05	lbs/ton
2367	Furnace	Aluminum	30400103	None	Reverberatory	7440-50-8	Copper	2.16E-04	1.22E-04	9.12E-05	lbs/ton
2368	Furnace	Aluminum	30400103	None	Reverberatory	6/4/1983	Hydrogen Sulfide	[redacted]	2.32E-02	2.40E-02	lbs/ton
2369	Furnace	Aluminum	30400103	None	Reverberatory	7439-92-1	Lead	1.87E-03	7.71E-04	2.98E-04	lbs/ton
2370	Furnace	Aluminum	30400103	None	Reverberatory	7439-96-5	Manganese	[redacted]	1.26E-02	3.74E-04	lbs/ton
2371	Furnace	Aluminum	30400103	None	Reverberatory	7439-97-6	Mercury	7.68E-06	4.64E-06	3.12E-06	lbs/ton
2372	Furnace	Aluminum	30400103	None	Reverberatory	7440-02-0	Nickel	7.68E-04	3.31E-04	1.58E-04	lbs/ton
2373	Furnace	Aluminum	30400103	None	Reverberatory	7782-49-2	Selenium	1.06E-05	8.16E-06	7.20E-06	lbs/ton
2374	Furnace	Aluminum	30400103	None	Reverberatory	7440-66-6	Zinc	9.60E-04	5.14E-04	4.18E-04	lbs/ton

Hydrogen Chloride and Chlorine Source Test Results

Source Test Report Of:

EMISSIONS TESTING FOR HYDROGEN CHLORIDE AND CHLORINE OF BAGHOUSE NO. 6 AT LIGHT METALS, INC.

Conducted At:

LIGHT METALS, INC.
13329 Ector Street
City of Industry, CA 91746

Conducted On:
October 28, 2004

For Submittal To:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive
Diamond Bar, California 91765-4182

Prepared By:

PROFESSIONAL ENVIRONMENTAL SERVICES, INC.
5027 Irwindale Avenue, Suite 100
Irwindale, CA 91706

TABLE 2
SUMMARY OF EMISSIONS DATA
FOR BAGHOUSE NO. 6
CUSTOM ALLOY LIGHT METALS, INC.
CITY OF INDUSTRY, CALIFORNIA
Conducted On: October 28, 2004

Parameter	Test Condition	Baghouse Inlet	Baghouse Outlet	Efficiency (%)
Hydrogen Chloride [1] ppmd (v/v) lbs/hr	Both Furnaces Operating	[redacted]		
Chlorine ppmd (v/v) lbs/hr	Both Furnaces Operating			
Gas Flow Data Temperature Velocity (fps) ACFM DSCFM				

[1] Reported as hydrogen chloride but includes all chloride compounds

Formaldehyde and Acetaldehyde Source Test Results

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

S.T. ID: **PR20313**

SOUTH COAST AQMD ID: FACILITY ID NO. 141437 A/N: 544242, 457756
COMPANY: Light Metals, City of Industry
EQUIPMENT: Furnace A (D11) andFurnace B (D21
Baghouse No. 6 (C50)

LOCATION: 13329 Ector St., City of Industry, CA 91746

REQUESTED BY: Alberto Jasso (Memo Dated February 16, 2021)
TYPE OF TEST: PERFORMANCE/COMPLIANCE REPORT
DOCUMENT DATE: February 9, 2021
REASON FOR TEST: (TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS)
- AB2588 Air Toxics Program Formaldehyde Emissions Determination

REQUESTED EVAL: Formaldehyde
TEST DATE: December 15-16, 2020
TEST FIRM: Montrose

SITE EVALUATOR: Peter Ko EXT: 2545 REVIEW DATE: July 28, 2021

	Run 1	Run 2	Run 3	Avg
Formaldehyde (lb/ton Al)	[redacted]			
Acetaldehyde (lb.ton Al)				

Arsenic, Cadmium, and Nickel Source Test Results

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING & ANALYSIS DIVISION * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

S/T ID: **PR20341**

SOUTH COAST AQMD ID: FACILITY ID NO. 141437 A/N: 544242, 457756, 612708
COMPANY: **Light Metals, City of Industry**
EQUIPMENT: **Furnace A (D11) andFurnace B (D21)**
Baghouse No. 6 (C50)

LOCATION: **13329 Ector St., City of Industry, CA 91746**

REQUESTED BY: **Jennifer Wang (Memo Dated February 16, 2021)**
TYPE OF TEST: **PERFORMANCE/COMPLIANCE REPORT**
DOCUMENT DATE: **February 9, 2021**
REASON FOR TEST: (TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS):
- Rule 1407(d)(4): As-0.000066 lb/hr, Cd-0.000514 lb/hr, Ni-0.00848 lb/hr

REQUESTED EVAL: **Arsenic, Cadmium, Nickel**
TEST DATE: **December 15-16, 2020**
TEST FIRM: **Montrose**

STE EVALUATOR: **Peter Ko** EXT: **2545** REVIEW DATE: **August 19, 2021**

OVERVIEW OF EVALUATION:

OVERALL CONFIDENCE IN REPORTED TEST RESULTS: ☐ ACCEPTABLE ☒ CONDITIONALLY ACCEPTABLE ☐ UNACCEPTABLE

RESTRICTIONS FOR USE OF REPORTED RESULTS:
- Nickel reported emissions may be used for compliance determination and emission calculations.
- Arsenic and Cadmium emissions, as reported, should not be used for compliance determination and/or emission calculations, without the adjustments specified in the next section of this evaluation.

COMPLIANCE DETERMINATION:
- Nickel emissions, as reported, are in compliance by an acceptable margin[1] with the Rules/Permit Compliance Limits specified above
- Arsenic and Cadmium emissions, as adjusted (see next section of this evaluation), are in compliance by an acceptable margin[1] with the Rules/Permit Compliance Limits specified above.

TABLE 4-1
RULE 1407 TEST RESULTS
LIGHT METALS, INC.
DECEMBER 15-16, 2020

Parameter/Units	Run No. 1	Run No. 2	Run No. 3	Average
Test Date	12/15/2020	12/15/2020	12/16/2020	—
Sample Time, hrs	4	4	4	—
Stack Temperature, °F	155	163	137	—
Exhaust Flow Rate				
ACFM	43,700	44,000	43,200	43,600
DSCFM	37,000	36,800	37,600	37,100
Isokinetic Rate, %	97.3	102.2	97.8	99.1
Multiple Metals Data				
Arsenic				
Concentration (mg/dscm)	[redacted]			
Emission Rate (lb/hr)				
Cadmium				
Concentration (mg/dscm)				
Emission Rate (lb/hr)				
Nickel				
Concentration (mg/dscm)				
Emission Rate (lb/hr)				

	Run 1	Run 2	Run 3	Avg
Arsenic (mg/dscm)	[redacted]			
Arsenic (lb/hr)				

- The Cadmium concentrations and emission rates were reported at one half of reporting limit value since all were below minimum reporting limit. However, they should be reported at full reporting value for worst case scenario. Therefore, all reported Cd numbers should be multiply by 2 to obtain worse case emissions.
- Smoke tests and velocity measurements were performed to ensure good capture efficiency.

On October 5, 2021, Alberto notified LMI that since the results for cadmium during the source testing were non-detect for all three test runs, cadmium can be reported as 0 emissions in accordance with Rule 1401 guidelines

Natural Gas Combustion Emission Factors

Table B-1: DEFAULT EF FOR NATURAL GAS COMBUSTION (LB / MMSCF)

SOURCE: External Combustion Equipment (Boiler, Oven, Dryer, Furnace, Heater, Afterburner)

TAC Code	POLLUTANT	CAS NO.	<10 MMBTU/HR	10-100 MMBTU/HR	>100 MMBTU/HR
2	Benzene	71432	0.0080	0.0058	0.0017
12	Formaldehyde	50000	0.0170	0.0123	0.0036
19	Total PAHs (excluding Naphthalene)	1151	0.0001	0.0001	0.0001
19	Naphthalene	91203	0.0003	0.0003	0.0003
29	Acetaldehyde	75070	0.0043	0.0031	0.0009
30	Acrolein	107028	0.0027	0.0027	0.0008
32	Ammonia*	7664417	18.000	18.000	18.000
40	Ethyl benzene	100414	0.0095	0.0069	0.0020
44	Hexane	110543	0.0063	0.0046	0.0013
68	Toluene	108883	0.0366	0.0265	0.0078
70	Xylene	1330207	0.0272	0.0197	0.0058

Propane Combustion Emission Factors

SOURCE: Stationary and Portable Internal Combustion Engines (ICE)

TAC Code	POLLUTANT	CAS NO.	2 Stroke-Lean Burn	4 Stroke-Lean Burn	4 Stroke-Rich Burn
2	Benzene	71432	0.17757	0.0398	0.143
4	1,3-Butadiene	106990	0.0742	0.0242	0.06
6	Carbon Tetrachloride	56235	0.00549	0.00332	0.0016
9	Ethylene Dibromide	106934	0.00664	0.00401	0.00193
10	1,2-Dichloroethane	107062	0.00382	0.00214	0.00102
12	Formaldehyde	50000	5.00	4.78	1.86
16	Methylene Chloride	75092	0.0133	0.00181	0.00373
19	2-Methylnaphthalene	91576	0.00194	0.003	0
19	Acenaphthene	83329	0.000120	0.000113	0
19	Acenaphthylene	208968	0.000287	0.0005	0
19	Anthracene	120127	0.0000650	0	0
19	Benz(a)anthracene	56553	0.0000304	0	0
19	Benzo(a)pyrene	50328	0.000000514	0	0
19	Benzo(b)fluoranthene	205992	0.000000770	0.000015	0
19	Benzo(e)pyrene	192972	0.00000212	0.0000376	0
19	Benzo(g,h,i)perylene	191242	0.00000224	0.0000375	0
19	Benzo(k)fluoranthene	207089	0.000000386	0	0
19	Chrysene	218019	0.0000608	0.0000627	0
19	Fluoranthene	206440	0.0000327	0.0001	0
19	Fluorene	86737	0.000153	0.000513	0
19	Indeno(1,2,3-c,d)pyrene	193395	0.000000899	0	0
19	Naphthalene	91203	0.00872	0.00673	0.00879
19	Perylene	198550	0.00000045	0	0
19	Phenanthrene	85018	0.000319	0.000941	0
19	Pyrene	129000	0.0000529	0.000123	0
21	Vinyl Chloride	75014	0.00224	0.00135	0.00065
24	1,1,2,2-Tetrachloroethane	79345	0.006	0.00362	0.00229
25	1,1,2-Trichloroethane	79005	0.00477	0.00288	0.00138
26	1,2,4-Trimethylbenzene	95636	0.01	0.00129	0
27	1,2-Dichloropropane	78875	0.00404	0.00243	0.00118
28	1,3-Dichloropropene	542756	0.00396	0.00239	0.00115
29	Acetaldehyde	75070	0.702	0.757	0.252
30	Acrolein	107028	0.704	0.465	0.238
32	Ammonia	7664417	0.30	0.30	0.30
35	Chloroform	67663	0.00426	0.00258	0.00124
40	Ethylbenzene	100414	0.00977	0.00359	0.00224
44	n-Hexane	110543	0.0403	0.10	0
51	Methanol	67561	0.224	0.226	0.277
66	Styrene	100425	0.00496	0.00214	0.00108
68	Toluene	108883	0.0872	0.0369	0.0505
70	Xylene	1330207	0.0243	0.0167	0.0176

APPENDIX B – BUILDING DATA

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix B Buildings

Building Data

Appendix B Contains

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix B Buildings

Table B.1 Rectangular and Circular Buildings

Building ID	Rectangular / Circular	Height (ft)	Reference Point (SW Corner for Rectangular / Center for UTM Easting (m)	Reference Point (SW Corner for Rectangular / Center for UTM Northing (m)	X Length (ft)	Y Length (ft)	Rotation Angle (deg)	Diameter (ft)
BLD_1	Rectangular	31 99	408,837 84	3,768,910 51	203 87	148 92	230 8	--
BLD_2	Rectangular	31 00	408,889 11	3,768,943 37	45 64	27 36	230 8	--
BLD_3	Rectangular	20 01	408,852 76	3,768,898 79	201 71	62 76	50 79	--
BLD_4	Circular	64 01	408,837 89	3,768,983 75	--	--	--	56 14
BLD_5	Circular	66 01	408,813 20	3,769,000 93	--	--	--	56 14
BLD_9	Rectangular	20 01	408,864 29	3,768,889 58	58 60	48 10	50 8	--
BLD_10	Rectangular	29 99	408,883 78	3,768,954 35	25 00	13 91	320 8	--
BLD_11	Rectangular	29 99	408,877 59	3,768,769 10	64 76	55 77	320 8	--
BLD_14	Rectangular	39 99	408,874 22	3,768,818 59	21 62	23 85	50 8	--
BLD_15	Rectangular	39 99	408,866 21	3,768,809 64	21 46	26 61	50 8	--
BLD 16	Rectangular	39 99	408,877 35	3,768,802 63	42 65	16 77	50 8	--
BLD_18	Rectangular	14 99	408,949 10	3,768,790 12	74 31	34 48	320 8	--
BLD_21	Rectangular	20 01	408,833 19	3,768,673 18	51 12	153 44	320 8	--

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix B Buildings

Table B.2 Polygonal Buildings

Building ID	Height (ft)	Number of Vertices	Vertices	
			UTM Easting (m)	UTM Northing (m)
BLD_8	14 01	10	408,901 43	3,768,951 72
			408,930 52	3,768,927 88
			408,897 11	3,768,886 40
			408,885 85	3,768,895 04
			408,901 24	3,768,912 68
			408,888 29	3,768,921 69
			408,903 49	3,768,939 71
			408,898 99	3,768,943 27
			408,900 86	3,768,945 34
			408,897 67	3,768,947 59
BLD_12	25 00	12	408,849 62	3,768,844 92
			408,866 70	3,768,865 76
			408,870 83	3,768,863 13
			408,875 71	3,768,869 70
			408,928 64	3,768,827 66
			408,894 67	3,768,785 43
			408,877 78	3,768,798 75
			408,892 23	3,768,815 46
			408,878 15	3,768,826 15
			408,880 97	3,768,829 34
			408,873 83	3,768,834 60
			408,869 52	3,768,829 34
BLD_13	16 99	6	408,833 86	3,768,834 04
			408,854 13	3,768,858 44
			408,858 07	3,768,855 62
			408,849 43	3,768,845 11
			408,869 71	3,768,829 91
			408,857 69	3,768,814 33
BLD_17	20 01	6	408,895 42	3,768,779 98
			408,903 87	3,768,788 99
			408,930 14	3,768,767 41
			408,949 66	3,768,789 74
			408,965 80	3,768,776 79
			408,938 78	3,768,743 95

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix B Buildings

Table B.2 Polygonal Buildings

Building ID	Height (ft)	Number of Vertices	Vertices	
			UTM Easting (m)	UTM Northing (m)
BLD_19	29 99	6	408,940 46	3,768,746 39
			408,978 57	3,768,791 24
			409,029 99	3,768,748 26
			409,014 79	3,768,727 80
			408,997 15	3,768,743 01
			408,976 50	3,768,716 36
BLD_20	20 01	8	408,867 44	3,768,664 30
			408,911 38	3,768,717 73
			408,930 59	3,768,702 94
			408,952 01	3,768,729 88
			408,981 82	3,768,706 47
			408,941 19	3,768,655 46
			408,911 60	3,768,680 20
			408,886 65	3,768,648 84
BLD_22	25 00	11	408,520 18	3,768,977 98
			408,570 91	3,769,038 81
			408,685 23	3,768,948 95
			408,680 03	3,768,942 22
			408,695 62	3,768,933 67
			408,717 63	3,768,924 19
			408,733 52	3,768,919 91
			408,760 72	3,768,898 52
			408,698 06	3,768,818 13
			408,574 28	3,768,919 30
			408,583 45	3,768,930 00

APPENDIX C – RELEASE PARAMETERS

Release Parameters

Appendix C Contains:

Page Nos	Table Number	Table Title	Changes from ATIR
2 of 7	Table C 1	Point Source Release Parameters	The orientation of the release for Baghouse 1/2 has been changed from horizontal to vertical, consistent with the equipment configuration
3 of 7	Table C 2	Volume Source Release Parameters	
4 of 7	Table C 3	Assignment of Emissions to Releases	

Page Nos	References	From
5 of 7	Baghouse 1/2, Reference for Release Parameters	November 2020 Rule 1155 Source Test
6 of 7	Baghouse 6, Reference for Release Parameters	December 2020 Rule 1407 Source Test
7 of 7	Baghouses 3, 4, Reference for Release Parameters	February 2016 Rule 1155 Source Test

Stack heights are estimated from Google Earth

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix C Release Parameters

Table C.1 Point Source Release Parameters

AERMOD Source ID	Description	Stack Orientation	UTM Easting (m)	UTM Northing (m)	Release Height (ft)	Diameter (ft)	Exit Velocity (fps)	Exit Flowrate (acfm)	Exit Temperature (Deg F)
BH12	Baghouse 1/2	Vertical	408873 73	3768815 53	54	3 96	23 28	17,189	165
BH3	Baghouse 3	Vertical	408888 00	3768814 00	44	3 67	27 53	17,442	180
BH6	Baghouase 6	Vertical	408882 00	3768931 00	50	5 00	37 01	43,600	152
BH4	Baghouse 4	Vertical	408885 47	3768957 40	32	2 92	38 74	15,566	135

Table C.2 Volume Source Release Parameters

AERMOD Source ID	Description	UTM Easting (m)	UTM Northing (m)	Length of Side (ft)	Release Height (ft)	Sigma Y (ft)	Sigma Z (ft)
MISCNG	Miscellaneous Natural Gas Consumption	408870 50	3768865 70	280	10	34 89	4 65
WELD	Propane-Fueled Welders	408870 50	3768865 70	280	10	34 89	4 65
CRSHR	Crusher	408870 50	3768865 70	280	10	34 89	4 65

Sigma Y (ft) Length of Side (ft) / 4 3
Sigma Z (ft) Release Height (ft) / 2 15

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix C Release Parameters

Table C.3 Assignment of Emissions to Releases

					Emission Source Operating Schedule		
Emission Source (HARP2 ID)	Emission Source Description	Emission Category	AERMOD Source ID	Description	Hours per Day	Days per Week	Weeks per Year
FAAS	Furnace A	Process Emissions	BH6	Baghouse 6	24	7	52
FANG		Combustion Emissions	BH6	Baghouse 6			
FBAS	Furnace B	Process Emissions	BH6	Baghouse 6	24	7	52
FBNG		Combustion Emissions	BH6	Baghouse 6			
FCNG	Furnace C	Combustion Emissions	BH6	Baghouse 6	24	7	52
D1NG	Dryer 1	Combustion Emissions	BH3	Baghouse 3	24	7	52
D1AS		Process Emissions	BH3	Baghouse 3			
D2NG	Dryer 2	Combustion Emissions	BH12	Baghouse 1/2	24	7	52
D2AS		Process Emissions	BH12	Baghouse 1/2			
MISCNG	Miscellaneous Natural Gas Combustion	Combustion Emissions	MISCNG	Fugitive Release; Volume Source	24	7	52
WELD	Propane-Fueled Welders	Combustion Emissions + Process Emissions	WELD	Fugitive Release; Volume Source	As-Needed	As-Needed	As-Needed
AB1	Afterburner 1	Combustion Emissions	BH3	Baghouse 3	24	7	52
AB2	Afterburner 2	Combustion Emissions	BH12	Baghouse 1/2	24	7	52
CRSHR	Crusher	Process Emissions	CRSHR	Fugitive Release; Volume Source	24	7	52
DROSS	Dross Handling	Process Emissions	BH4	Baghouse 4	24	7	52

Baghouse 1/2 Reference for Release Parameters

TABLE 4-1
SUMMARY OF PM TEST RESULTS FOR BAGHOUSE NOS. 1 & 2
LIGHT METALS, INC.
TEST DATE: TO BE DETERMINED

Parameter/Units	Baghouse Nos. 1 and 2	Compliance Limit
Date	November 3, 2020	
Sample Time, clock time	11:24-12:24	
Sampling Time, min	60	
Flue Gas Data		
Stack Temperature, °F	165	
Static Pressure, "H_2O	0.1	
Volume Sampled, DSCF	48.467	
Moisture, % v/v	2.7	
Exhaust Flow Rate, DSCFM	14,900	
Oxygen, %	20.9	
Carbon Dioxide, %	0.05	
Total Particulate Matter		
Concentration, gr/dscf	[redacted]	0.01
Emission Rate, lb/hr		

TRAVERSE POINT LOCATION FOR CIRCULAR STACKS

Job Number: 4347 Checked by: SB

Plant: Light Metals
Source: Baghouse #3
Date: 11/3/20
Inside of far wall to outside of nipple (a): 45"
Inside of near wall to outside of nipple (b): 5'
Stack I.D. (a-b): 44"
Nearest upstream disturbance: 10'
Nearest downstream disturbance: 20'
Calculator: JA

Schematic of duct

PLANT: Light Metals
SOURCE: Baghouse 1 & 2
METHOD: SCAQMD Method 5.1
DATE: 11/3/2020
STANDARD TEMP (SCAQMD = 60 DEG.) 60

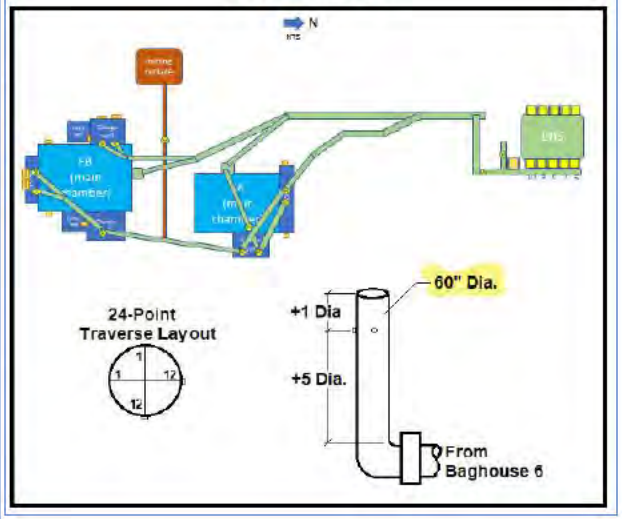
Test Location	Inlet
FIELD DATA INPUTS:	
BAROMETRIC PRESSURE (Pb)	31.99
STACK DIAMETER (Ds)	47.50
PITOT CORRECTION (Cp)	0.84
SQRT DELTA P	0.392
STACK TEMP (DEG. F)	165.0
STATIC PRESSURE (Ps)	0.100
VOLUME SAMPLED (Vm)	48.247
METER TEMPERATURE (DEG. F)	88.8
METER GAMMA	0.9870
DELTA H (INCHES WATER)	2.02
LIQUID COLLECTED (VLC)	29.4
% O2	20.90
%CO2	0.05
SAMPLING TIME (MINUTES)	60.0
NOZZLE DIAMETER (INCHES)	0.344
LABORATORY DATA:	
AQUEOUS FRACTION (mg)	1.70
FILTER FRACTION (mg)	0.00
ORGANIC FRACTION (mg)	0.80
FLOW RESULTS:	
VOLUME SAMPLED, DSCF	48.467
VOLUME SAMPLED, DSCM	1.372
MOISTURE IN SAMPLE (CF)	1.37
MOISTURE (%)	2.74
MOLECULAR WEIGHT (DRY)	28.84
MOLECULAR WEIGHT (WET)	28.55
STACK VELOCITY (FT/SEC)	23.28
ACTUAL CFM	17192
STANDARD CFM	15298
DRY STANDARD CFM	14878
THOUSANDS OF DRY STANDARD CFH	893

Baghouse 6 **Reference for Release Parameters**

TABLE 4-1
RULE 1407 TEST RESULTS
LIGHT METALS, INC.
DECEMBER 15-16, 2020

Parameter/Units	Run No. 1	Run No. 2	Run No. 3	Average
Test Date	12/15/2020	12/15/2020	12/16/2020	—
Sample Time, hrs	4	4	4	—
Stack Temperature, °F	155	163	137	—
Exhaust Flow Rate				
ACFM	43,700	44,000	43,200	43,600
DSCFM	37,000	36,800	37,600	37,100
Isokinetic Rate, %	97.3	102.2	97.8	99.1
Multiple Metals Data				
Arsenic				
Concentration (mg/dscm)	[redacted]			
Emission Rate (lb/hr)				
Cadmium				
Concentration (mg/dscm)				
Emission Rate (lb/hr)				
Nickel				
Concentration (mg/dscm)				
Emission Rate (lb/hr)				

FIGURE 3-1
LAYOUT OF BAGHOUSE



Baghouses 3, 4 Reference for Release Parameters

TABLE 1

DATA SUMMARY FOR
PARTICULATE MATTER EMISSIONS TESTING
LIGHT METALS, INC, CITY OF INDUSTRY, CALIFORNIA

CONDUCTED ON: FEBRUARY 24-25, 2016

Run Number	Baghouse No. 1&2	Baghouse No. 3	Baghouse No. 4	Baghouse No. 6
Field Data				
Date	2/25/2016	2/25/2016	2/24/2016	2/24/2016
Sample Time (clock time)	1030-1130	0915-1015	1240-1340	1115-1215
Stack Temperature (deg F)	175	180	135	180
Exhaust Gas Velocity (ft/sec)	32.61	27.53	38.74	32.72
Static Pressure, in. H_2O	0.3	0.1	0.3	0.5
Exhaust Flow Rate (ACFM)	15,411	17,440	16,429	38,544
Exhaust Flow Rate (DSCFM)	12,269	13,747	13,995	30,472
Moisture (% v/v)	2.4	2.6	2.3	2.5
Sample Volume (DSCF)	46.604	46.872	46.860	47.350
Sampling Time (min)	60	60	60	60
Isokinetic Rate (%)	102.3	104.2	99.2	104.3
PM Emissions Data				
Aqueous Fraction				
Concentration (gr/dscf)	[redacted]			
Emission Rate (lbs/hr)				
Back-up Filter Fraction				
Concentration (gr/dscf)				
Emission Rate (lbs/hr)				
Total PM				
Concentration (gr/dscf)				
Emission Rate (lbs/hr)				

FIGURE 2
LOCATION OF SAMPLING PORTS
BAGHOUSE 3

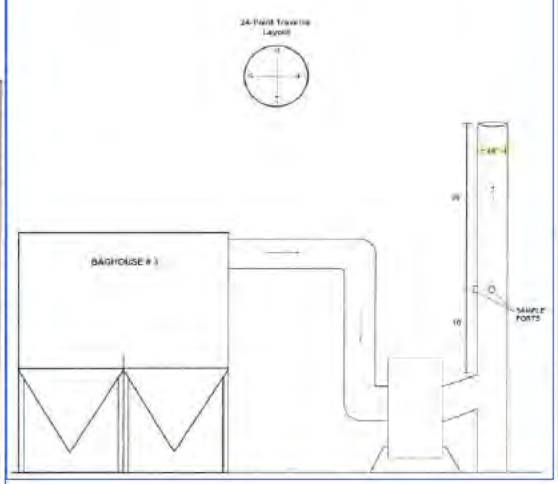
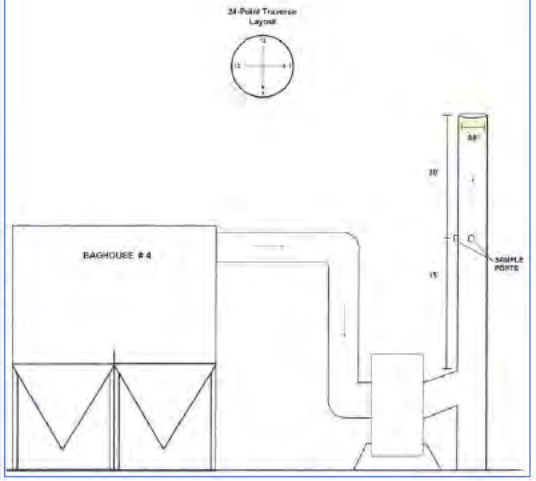


FIGURE 3
LOCATION OF SAMPLING PORTS
BAGHOUSE 4



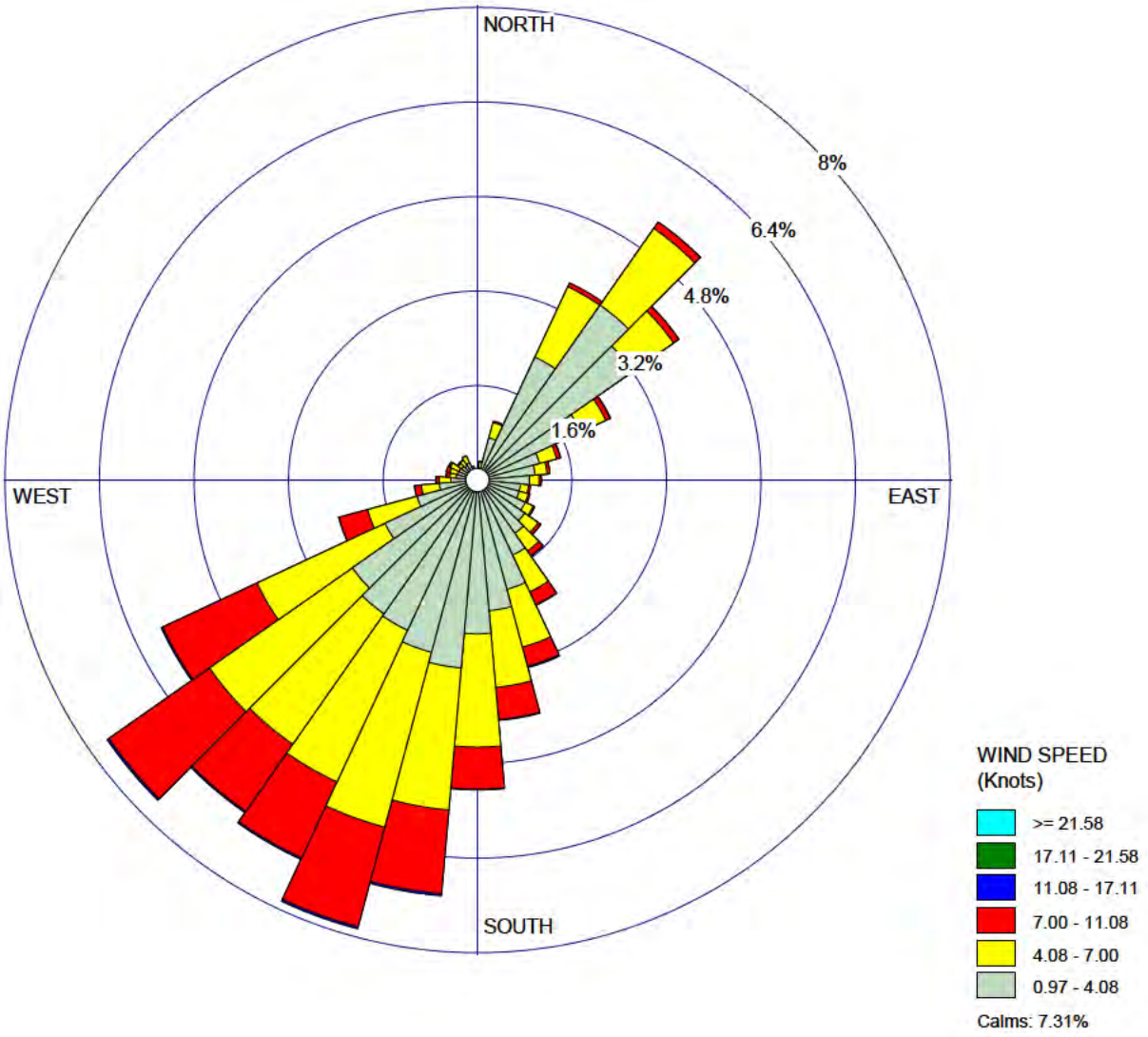
APPENDIX D – WIND ROSE FOR PICO RIVERA MET STATION

W ND ROSE PLOT:

Pico Rivera Monitoring Station - 2010-2012, 2015-2016

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS: Custom Alloy Light Metals CY2017 AB2588 HRA Base Elevation 58 meters	DATA PERIOD: **Start Date: 1/1/2010 - 00:00** **End Date: 12/31/2016 - 23:59**	COMPANY NAME: **Yorke Engineering, LLC**	
		MODELER:	Yorke ENGINEERING, LLC www.YorkeEngr.com
	CALM W NDS: **7.31%**	TOTAL COUNT: **43323 hrs.**	
	AVG. W ND SPEED: **3.87 Knots**	DATE: **2/10/2022**	PROJECT NO.:

APPENDIX E – GROUND-LEVEL CONCENTRATIONS

Yorke ENGINEERING, LLC
www.YorkeEngr.com

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix E Ground-Level Concentrations at Identified Receptors

Ground-Level Concentrations

Appendix E Contains

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017

Appendix E Ground-Level Concentrations at Identified Receptors

Table E.1 Ground-Level Concentrations - Cancer Risk and Non-Cancer Chronic Risk

		Cancer Risk					Non-Cancer Chronic Risk			
		PMI	MEIR	Sensitive	MEIW	Kaiser Permanente Baldwin Park Medical Center	PMI	MEIR	Sensitive	MEIW
		Receptor No. 9956	Receptor No. 4715	Receptor No. 3662	Receptor No. 3662	Receptor No. 7780	Receptor No. 9956	Receptor No. 4715	Receptor No. 3661	Receptor No. 2937
Pollutant	Pollutant Name	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)
7440382	Arsenic	1 65E-05	5 44E-06	9 18E-06	9 18E-06	1 82E-06	1 65E-05	5 44E-06	9 21E-06	1 41E-05
7439921	Lead	7 82E-05	4 20E-06	3 15E-05	3 15E-05	1 34E-06	7 82E-05	4 20E-06	3 21E-05	6 11E-05
7440020	Nickel	5 38E-05	1 33E-05	2 72E-05	2 72E-05	4 41E-06	5 38E-05	1 33E-05	2 74E-05	4 51E-05
7440417	Beryllium	1 71E-06	9 19E-08	6 88E-07	6 88E-07	2 92E-08	1 71E-06	9 19E-08	7 01E-07	1 34E-06
7440508	Copper	1 10E-03	5 92E-05	4 43E-04	4 43E-04	1 88E-05	1 10E-03	5 92E-05	4 52E-04	8 60E-04
7440439	Cadmium	1 45E-05	4 66E-07	5 66E-06	5 66E-06	1 42E-07	1 45E-05	4 66E-07	5 78E-06	1 12E-05
7439976	Mercury	2 26E-06	1 21E-07	9 10E-07	9 10E-07	3 86E-08	2 26E-06	1 21E-07	9 27E-07	1 77E-06
7782492	Selenium	2 81E-05	1 51E-06	1 13E-05	1 13E-05	4 80E-07	2 81E-05	1 51E-06	1 15E-05	2 20E-05
50000	Formaldehyde	4 65E-02	2 67E-03	1 85E-02	1 85E-02	8 03E-04	4 65E-02	2 67E-03	1 88E-02	3 70E-02
1151	PAHs-w/o	2 63E-06	4 26E-07	1 44E-06	1 44E-06	1 63E-07	2 63E-06	4 26E-07	1 44E-06	1 77E-06
91203	Naphthalene	7 12E-05	2 99E-06	2 83E-05	2 83E-05	9 25E-07	7 12E-05	2 99E-06	2 88E-05	5 52E-05
71432	Benzene	5 80E-04	3 88E-05	2 52E-04	2 52E-04	1 38E-05	5 80E-04	3 88E-05	2 56E-04	4 32E-04
75070	Acetaldehyde	7 83E-03	9 19E-04	3 37E-03	3 37E-03	2 95E-04	7 83E-03	9 19E-04	3 43E-03	6 34E-03
107028	Acrolein	4 44E-03	1 30E-04	1 69E-03	1 69E-03	3 45E-05	4 44E-03	1 30E-04	1 73E-03	3 49E-03
7664417	NH3	8 70E-02	1 37E-02	4 72E-02	4 72E-02	5 24E-03	8 70E-02	1 37E-02	4 72E-02	5 88E-02
100414	Ethyl Benzene	2 78E-04	3 50E-05	1 44E-04	1 44E-04	1 36E-05	2 78E-04	3 50E-05	1 45E-04	1 89E-04
110543	Hexane	1 11E-03	4 82E-05	4 45E-04	4 45E-04	1 54E-05	1 11E-03	4 82E-05	4 53E-04	8 52E-04
108883	Toluene	1 29E-03	1 41E-04	6 37E-04	6 37E-04	5 38E-05	1 29E-03	1 41E-04	6 41E-04	8 98E-04
1330207	Xylenes	8 56E-04	1 02E-04	4 35E-04	4 35E-04	3 93E-05	8 56E-04	1 02E-04	4 37E-04	5 88E-04
1746016	2,3,7,8-TCDD	2 87E-10	1 31E-10	2 65E-10	2 65E-10	5 27E-11	2 87E-10	1 31E-10	2 59E-10	1 26E-10
40321764	1-3,7,8PeCDD	1 16E-09	5 33E-10	1 08E-09	1 08E-09	2 16E-10	1 16E-09	5 33E-10	1 05E-09	5 20E-10
39227286	1-4,7,8HxCDD	9 11E-11	4 94E-11	8 63E-11	8 63E-11	1 92E-11	9 11E-11	4 94E-11	8 39E-11	4 78E-11
57653857	1-3,6-8HxCDD	1 62E-10	8 99E-11	1 54E-10	1 54E-10	3 49E-11	1 62E-10	8 99E-11	1 50E-10	8 70E-11
19408743	1-3,7-9HxCDD	1 04E-10	5 92E-11	9 88E-11	9 88E-11	2 28E-11	1 04E-10	5 92E-11	9 62E-11	5 68E-11
35822469	1-4,6-8HpCDD	3 91E-11	2 48E-11	3 68E-11	3 68E-11	9 21E-12	3 91E-11	2 48E-11	3 61E-11	2 33E-11
3268879	1-8OctaCDD	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
51207319	2,3,7,8-TCDF	3 80E-10	2 01E-10	3 58E-10	3 58E-10	7 86E-11	3 80E-10	2 01E-10	3 49E-10	1 94E-10
57117416	1-3,7,8PeCDF	1 41E-10	7 35E-11	1 34E-10	1 34E-10	2 90E-11	1 41E-10	7 35E-11	1 30E-10	7 18E-11
57117314	2-4,7,8PeCDF	2 64E-09	1 36E-09	2 50E-09	2 50E-09	5 37E-10	2 64E-09	1 36E-09	2 43E-09	1 33E-09
70648269	1-4,7,8HxCDF	7 17E-10	4 81E-10	6 93E-10	6 93E-10	1 79E-10	7 17E-10	4 81E-10	6 74E-10	4 61E-10
57117449	1-3,6-8HxCDF	5 86E-10	3 70E-10	5 66E-10	5 66E-10	1 40E-10	5 86E-10	3 70E-10	5 50E-10	3 57E-10
60851345	2-4,6-8HxCDF	5 72E-10	3 60E-10	5 46E-10	5 46E-10	1 35E-10	5 72E-10	3 60E-10	5 32E-10	3 43E-10
72918219	1-3,7-9HxCDF	1 19E-10	1 02E-10	1 19E-10	1 19E-10	3 63E-11	1 19E-10	1 02E-10	1 16E-10	9 64E-11
67562394	1-4,6-8HpCDF	1 13E-10	8 59E-11	1 10E-10	1 10E-10	3 11E-11	1 13E-10	8 59E-11	1 07E-10	8 10E-11
55673897	1-4,7-9HpCDF	1 03E-11	8 20E-12	9 93E-12	9 93E-12	2 92E-12	1 03E-11	8 20E-12	9 73E-12	7 65E-12
39001020	1-8OctaCDF	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
7439965	Manganese	1 11E-02	8 48E-04	4 52E-03	4 52E-03	2 62E-04	1 11E-02	8 48E-04	4 60E-03	8 90E-03
7783064	H2S	1 60E-02	1 87E-02	1 64E-02	1 64E-02	6 32E-03	1 60E-02	1 87E-02	1 61E-02	1 73E-02
7647010	HCl	4 81E-02	5 62E-02	4 91E-02	4 91E-02	1 90E-02	4 81E-02	5 62E-02	4 83E-02	5 19E-02
7782505	Chlorine	1 34E-04	1 56E-04	1 37E-04	1 37E-04	5 28E-05	1 34E-04	1 56E-04	1 34E-04	1 44E-04
107062	EDC	2 01E-05	5 43E-07	7 60E-06	7 60E-06	1 38E-07	2 01E-05	5 43E-07	7 78E-06	1 58E-05
75092	Methylene Chlor	1 70E-05	4 60E-07	6 44E-06	6 44E-06	1 17E-07	1 70E-05	4 60E-07	6 59E-06	1 34E-05
129000	Pyrene	1 16E-06	3 13E-08	4 38E-07	4 38E-07	7 96E-09	1 16E-06	3 13E-08	4 48E-07	9 12E-07
191242	B[g,h,i]perylen	3 52E-07	9 52E-09	1 33E-07	1 33E-07	2 42E-09	3 52E-07	9 52E-09	1 36E-07	2 78E-07
192972	B[e]pyrene	3 53E-07	9 54E-09	1 34E-07	1 34E-07	2 43E-09	3 53E-07	9 54E-09	1 37E-07	2 78E-07
205992	B[b]fluoranthen	1 41E-07	3 82E-09	5 35E-08	5 35E-08	9 72E-10	1 41E-07	3 82E-09	5 47E-08	1 11E-07
206440	Fluoranthene	9 44E-07	2 55E-08	3 57E-07	3 57E-07	6 50E-09	9 44E-07	2 55E-08	3 66E-07	7 44E-07
208968	Acenaphthylene	4 70E-06	1 27E-07	1 78E-06	1 78E-06	3 24E-08	4 70E-06	1 27E-07	1 82E-06	3 71E-06

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix E Ground-Level Concentrations at Identified Receptors

Table E.1 Ground-Level Concentrations - Cancer Risk and Non-Cancer Chronic Risk

		Cancer Risk					Non-Cancer Chronic Risk			
		PMI	MEIR	Sensitive	MEIW	Kaiser Permanente Baldwin Park Medical Center	PMI	MEIR	Sensitive	MEIW
		Receptor No. 9956	Receptor No. 4715	Receptor No. 3662	Receptor No. 3662	Receptor No. 7780	Receptor No. 9956	Receptor No. 4715	Receptor No. 3661	Receptor No. 2937
Pollutant	Pollutant Name	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)
218019	Chrysene	5 89E-07	1 59E-08	2 23E-07	2 23E-07	4 06E-09	5 89E-07	1 59E-08	2 28E-07	4 65E-07
83329	Acenaphthene	1 06E-06	2 87E-08	4 03E-07	4 03E-07	7 32E-09	1 06E-06	2 87E-08	4 12E-07	8 38E-07
85018	Phenanthrene	8 84E-06	2 39E-07	3 35E-06	3 35E-06	6 09E-08	8 84E-06	2 39E-07	3 43E-06	6 97E-06
86737	Fluorene	4 82E-06	1 30E-07	1 83E-06	1 83E-06	3 32E-08	4 82E-06	1 30E-07	1 87E-06	3 80E-06
91576	2MeNaphthalene	2 82E-05	7 64E-07	1 07E-05	1 07E-05	1 94E-07	2 82E-05	7 64E-07	1 09E-05	2 23E-05
75014	Vinyl Chloride	1 27E-05	3 43E-07	4 80E-06	4 80E-06	8 72E-08	1 27E-05	3 43E-07	4 91E-06	9 99E-06
79345	TetraClEthane	3 40E-05	9 20E-07	1 29E-05	1 29E-05	2 34E-07	3 40E-05	9 20E-07	1 32E-05	2 68E-05
79005	1,1,2TriClEthan	2 70E-05	7 31E-07	1 02E-05	1 02E-05	1 86E-07	2 70E-05	7 31E-07	1 05E-05	2 13E-05
95636	1,2,4TriMeBenze	1 22E-05	3 29E-07	4 60E-06	4 60E-06	8 37E-08	1 22E-05	3 29E-07	4 71E-06	9 59E-06
78875	1,2-DiClPropane	2 29E-05	6 19E-07	8 66E-06	8 66E-06	1 58E-07	2 29E-05	6 19E-07	8 86E-06	1 80E-05
542756	1,3-DiClPropene	2 25E-05	6 07E-07	8 50E-06	8 50E-06	1 55E-07	2 25E-05	6 07E-07	8 70E-06	1 77E-05
67663	Chloroform	2 42E-05	6 55E-07	9 18E-06	9 18E-06	1 67E-07	2 42E-05	6 55E-07	9 39E-06	1 91E-05
106990	1,3-Butadiene	2 27E-04	6 14E-06	8 60E-05	8 60E-05	1 56E-06	2 27E-04	6 14E-06	8 80E-05	1 79E-04
67561	Methanol	2 13E-03	5 75E-05	8 05E-04	8 05E-04	1 46E-05	2 13E-03	5 75E-05	8 24E-04	1 68E-03
56235	CCl4	3 12E-05	8 44E-07	1 18E-05	1 18E-05	2 15E-07	3 12E-05	8 44E-07	1 21E-05	2 46E-05
100425	Styrene	2 01E-05	5 43E-07	7 60E-06	7 60E-06	1 38E-07	2 01E-05	5 43E-07	7 78E-06	1 58E-05
106934	EDB	3 77E-05	1 02E-06	1 43E-05	1 43E-05	2 59E-07	3 77E-05	1 02E-06	1 46E-05	2 97E-05

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix E Ground-Level Concentrations at Identified Receptors

Table E.2 Ground-Level Concentrations - 8-Hour Non-Cancer Chronic Risk and Non-Cancer Acute Risk

		8-Hour Non-Cancer Chronic Risk				Non-Cancer Acute Risk			
		PMI	MEIR	Sensitive	MEIW	PMI	MEIR	Sensitive	MEIW
		Receptor No. 9956	Receptor No. 4715	Receptor No. 3661	Receptor No. 2937	Receptor No. 9965	Receptor No. 4999	Receptor No. 9956	Receptor No. 9956
Pollutant	Pollutant Name	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)
7440382	Arsenic	1 65E-05	5 44E-06	9 21E-06	1 41E-05	3 62E-04	1 24E-04	3 18E-04	3 18E-04
7439921	Lead	7 82E-05	4 20E-06	3 21E-05	6 11E-05	1 07E-03	1 12E-04	8 21E-04	8 21E-04
7440020	Nickel	5 38E-05	1 33E-05	2 74E-05	4 51E-05	5 33E-02	3 10E-03	4 08E-02	4 08E-02
7440417	Beryllium	1 71E-06	9 19E-08	7 01E-07	1 34E-06	2 33E-05	2 46E-06	1 79E-05	1 79E-05
7440508	Copper	1 10E-03	5 92E-05	4 52E-04	8 60E-04	1 50E-02	1 58E-03	1 16E-02	1 16E-02
7440439	Cadmium	1 45E-05	4 66E-07	5 78E-06	1 12E-05	1 88E-04	1 39E-05	1 42E-04	1 42E-04
7439976	Mercury	2 26E-06	1 21E-07	9 27E-07	1 77E-06	3 08E-05	3 25E-06	2 37E-05	2 37E-05
7782492	Selenium	2 81E-05	1 51E-06	1 15E-05	2 20E-05	3 83E-04	4 04E-05	2 95E-04	2 95E-04
50000	Formaldehyde	4 65E-02	2 67E-03	1 88E-02	3 70E-02	1 43E+00	1 06E-01	1 11E+00	1 11E+00
1151	PAHs-w/o	2 63E-06	4 26E-07	1 44E-06	1 77E-06	2 80E-05	8 04E-06	2 90E-05	2 90E-05
91203	Naphthalene	7 12E-05	2 99E-06	2 88E-05	5 52E-05	2 02E-03	1 28E-04	1 56E-03	1 56E-03
71432	Benzene	5 80E-04	3 88E-05	2 56E-04	4 32E-04	1 35E-02	1 18E-03	1 09E-02	1 09E-02
75070	Acetaldehyde	7 83E-03	9 19E-04	3 43E-03	6 34E-03	2 47E-01	2 78E-02	1 95E-01	1 95E-01
107028	Acrolein	4 44E-03	1 30E-04	1 73E-03	3 49E-03	1 34E-01	7 37E-03	1 03E-01	1 03E-01
7664417	NH3	8 70E-02	1 37E-02	4 72E-02	5 88E-02	9 83E-01	2 62E-01	9 95E-01	9 95E-01
100414	Ethyl Benzene	2 78E-04	3 50E-05	1 45E-04	1 89E-04	3 53E-03	7 27E-04	3 38E-03	3 38E-03
110543	Hexane	1 11E-03	4 82E-05	4 53E-04	8 52E-04	3 05E-02	1 99E-03	2 38E-02	2 38E-02
108883	Toluene	1 29E-03	1 41E-04	6 41E-04	8 98E-04	2 02E-02	3 15E-03	1 81E-02	1 81E-02
1330207	Xylenes	8 56E-04	1 02E-04	4 37E-04	5 88E-04	1 19E-02	2 18E-03	1 11E-02	1 11E-02
1746016	2,3,7,8-TCDD	2 87E-10	1 31E-10	2 59E-10	1 26E-10	8 38E-09	3 81E-09	1 00E-08	1 00E-08
40321764	1-3,7,8PeCDD	1 16E-09	5 33E-10	1 05E-09	5 20E-10	3 56E-08	1 61E-08	4 14E-08	4 14E-08
39227286	1-4,7,8HxCDD	9 11E-11	4 94E-11	8 39E-11	4 78E-11	3 02E-09	1 41E-09	3 39E-09	3 39E-09
57653857	1-3,6-8HxCDD	1 62E-10	8 99E-11	1 50E-10	8 70E-11	5 45E-09	2 56E-09	6 09E-09	6 09E-09
19408743	1-3,7-9HxCDD	1 04E-10	5 92E-11	9 62E-11	5 68E-11	3 46E-09	1 64E-09	3 89E-09	3 89E-09
35822469	1-4,6-8HpCDD	3 91E-11	2 48E-11	3 61E-11	2 33E-11	1 28E-09	6 31E-10	1 46E-09	1 46E-09
3268879	1-8OctaCDD	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00
51207319	2,3,7,8-TCDF	3 80E-10	2 01E-10	3 49E-10	1 94E-10	1 23E-08	5 73E-09	1 40E-08	1 40E-08
57117416	1-3,7,8PeCDF	1 41E-10	7 35E-11	1 30E-10	7 18E-11	4 71E-09	2 17E-09	5 26E-09	5 26E-09
57117314	2-4,7,8PeCDF	2 64E-09	1 36E-09	2 43E-09	1 33E-09	8 74E-08	4 02E-08	9 80E-08	9 80E-08
70648269	1-4,7,8HxCDF	7 17E-10	4 81E-10	6 74E-10	4 61E-10	2 63E-08	1 28E-08	2 82E-08	2 82E-08
57117449	1-3,6-8HxCDF	5 86E-10	3 70E-10	5 50E-10	3 57E-10	2 12E-08	1 02E-08	2 29E-08	2 29E-08
60851345	2-4,6-8HxCDF	5 72E-10	3 60E-10	5 32E-10	3 43E-10	1 99E-08	9 62E-09	2 19E-08	2 19E-08
72918219	1-3,7-9HxCDF	1 19E-10	1 02E-10	1 16E-10	9 64E-11	4 98E-09	2 54E-09	5 06E-09	5 06E-09
67562394	1-4,6-8HpCDF	1 13E-10	8 59E-11	1 07E-10	8 10E-11	4 27E-09	2 15E-09	4 54E-09	4 54E-09
55673897	1-4,7-9HpCDF	1 03E-11	8 20E-12	9 73E-12	7 65E-12	3 84E-10	1 98E-10	4 11E-10	4 11E-10
39001020	1-8OctaCDF	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00	0 00E+00
7439965	Manganese	1 11E-02	8 48E-04	4 60E-03	8 90E-03	2 69E+01	1 45E+00	2 05E+01	2 05E+01
7783064	H2S	1 60E-02	1 87E-02	1 61E-02	1 73E-02	7 53E-01	4 16E-01	7 37E-01	7 37E-01
7647010	HCl	4 81E-02	5 62E-02	4 83E-02	5 19E-02	9 39E+00	5 19E+00	9 19E+00	9 19E+00
7782505	Chlorine	1 34E-04	1 56E-04	1 34E-04	1 44E-04	2 61E-02	1 44E-02	2 55E-02	2 55E-02
107062	EDC	2 01E-05	5 43E-07	7 78E-06	1 58E-05	6 13E-04	3 28E-05	4 68E-04	4 68E-04
75092	Methylene Chlor	1 70E-05	4 60E-07	6 59E-06	1 34E-05	5 19E-04	2 78E-05	3 97E-04	3 97E-04
129000	Pyrene	1 16E-06	3 13E-08	4 48E-07	9 12E-07	3 53E-05	1 89E-06	2 70E-05	2 70E-05
191242	B[g,h,i]perylen	3 52E-07	9 52E-09	1 36E-07	2 78E-07	1 08E-05	5 76E-07	8 22E-06	8 22E-06
192972	B[e]pyrene	3 53E-07	9 54E-09	1 37E-07	2 78E-07	1 08E-05	5 77E-07	8 24E-06	8 24E-06
205992	B[b]fluoranthen	1 41E-07	3 82E-09	5 47E-08	1 11E-07	4 31E-06	2 31E-07	3 29E-06	3 29E-06
206440	Fluoranthene	9 44E-07	2 55E-08	3 66E-07	7 44E-07	2 88E-05	1 54E-06	2 20E-05	2 20E-05
208968	Acenaphthylene	4 70E-06	1 27E-07	1 82E-06	3 71E-06	1 44E-04	7 69E-06	1 10E-04	1 10E-04
218019	Chrysene	5 89E-07	1 59E-08	2 28E-07	4 65E-07	1 80E-05	9 64E-07	1 38E-05	1 38E-05

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix E Ground-Level Concentrations at Identified Receptors

Table E.2 Ground-Level Concentrations - 8-Hour Non-Cancer Chronic Risk and Non-Cancer Acute Risk

		8-Hour Non-Cancer Chronic Risk				Non-Cancer Acute Risk			
		PMI	MEIR	Sensitive	MEIW	PMI	MEIR	Sensitive	MEIW
		Receptor No. 9956	Receptor No. 4715	Receptor No. 3661	Receptor No. 2937	Receptor No. 9965	Receptor No. 4999	Receptor No. 9956	Receptor No. 9956
Pollutant	Pollutant Name	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Annual Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)	Maximum 1-Hour Ground-Level Concentration (ug/m^3)
83329	Acenaphthene	1 06E-06	2 87E-08	4 12E-07	8 38E-07	3 25E-05	1 74E-06	2 48E-05	2 48E-05
85018	Phenanthrene	8 84E-06	2 39E-07	3 43E-06	6 97E-06	2 70E-04	1 45E-05	2 06E-04	2 06E-04
86737	Fluorene	4 82E-06	1 30E-07	1 87E-06	3 80E-06	1 47E-04	7 89E-06	1 13E-04	1 13E-04
91576	2MeNaphthalene	2 82E-05	7 64E-07	1 09E-05	2 23E-05	8 62E-04	4 62E-05	6 59E-04	6 59E-04
75014	Vinyl Chloride	1 27E-05	3 43E-07	4 91E-06	9 99E-06	3 87E-04	2 07E-05	2 96E-04	2 96E-04
79345	TetraClEthane	3 40E-05	9 20E-07	1 32E-05	2 68E-05	1 04E-03	5 56E-05	7 94E-04	7 94E-04
79005	1,1,2TriClEthan	2 70E-05	7 31E-07	1 05E-05	2 13E-05	8 26E-04	4 42E-05	6 31E-04	6 31E-04
95636	1,2,4TriMeBenze	1 22E-05	3 29E-07	4 71E-06	9 59E-06	3 71E-04	1 99E-05	2 84E-04	2 84E-04
78875	1,2-DiClPropane	2 29E-05	6 19E-07	8 86E-06	1 80E-05	6 99E-04	3 74E-05	5 34E-04	5 34E-04
542756	1,3-DiClPropene	2 25E-05	6 07E-07	8 70E-06	1 77E-05	6 86E-04	3 67E-05	5 24E-04	5 24E-04
67663	Chloroform	2 42E-05	6 55E-07	9 39E-06	1 91E-05	7 40E-04	3 96E-05	5 66E-04	5 66E-04
106990	1,3-Butadiene	2 27E-04	6 14E-06	8 80E-05	1 79E-04	6 93E-03	3 71E-04	5 30E-03	5 30E-03
67561	Methanol	2 13E-03	5 75E-05	8 24E-04	1 68E-03	6 49E-02	3 48E-03	4 96E-02	4 96E-02
56235	CCl4	3 12E-05	8 44E-07	1 21E-05	2 46E-05	9 53E-04	5 10E-05	7 28E-04	7 28E-04
100425	Styrene	2 01E-05	5 43E-07	7 78E-06	1 58E-05	6 13E-04	3 28E-05	4 68E-04	4 68E-04
106934	EDB	3 77E-05	1 02E-06	1 46E-05	2 97E-05	1 15E-03	6 16E-05	8 79E-04	8 79E-04

APPENDIX F – RISK CHARACTERIZATION (DETAILED RESULTS)

Risk Characterization

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.1 Cancer Risk By TAC

PMI		MEIR		Sensitive		MEIW		Kaiser Permanente Baldwin Park Medical Center	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3662	Receptor No.	3662	Receptor No.	7780
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768885	408949	3768885	409029	3769675
Cancer Risk	7 56E-06	Cancer Risk	2 97E-06	Cancer Risk	5 95E-06	Cancer Risk	1 97E-07	Cancer Risk	1 15E-06

Pollutant	Pollutant Name	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)
50000	Formaldehyde	6 61E-07	8 74%	3 79E-08	1 28%	2 62E-07	4 41%	2 18E-08	11 06%	1 14E-08	0 99%
1151	PAHs-w/o	1 60E-07	2 12%	2 60E-08	0 88%	8 79E-08	1 48%	2 09E-09	1 06%	9 95E-09	0 87%
91203	Naphthalene	5 78E-09	0 08%	2 43E-10	0 01%	2 30E-09	0 04%	1 91E-10	0 10%	7 51E-11	0 01%
71432	Benzene	3 92E-08	0 52%	2 63E-09	0 09%	1 71E-08	0 29%	1 42E-09	0 72%	9 35E-10	0 08%
75070	Acetaldehyde	5 30E-08	0 70%	6 22E-09	0 21%	2 28E-08	0 38%	1 90E-09	0 96%	2 00E-09	0 17%
107028	Acrolein	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7664417	NH3	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
100414	Ethyl Benzene	1 64E-09	0 02%	2 06E-10	0 01%	8 48E-10	0 01%	7 05E-11	0 04%	8 00E-11	0 01%
110543	Hexane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
108883	Toluene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
1330207	Xylenes	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440382	Arsenic	1 30E-06	17 25%	4 29E-07	14 46%	7 24E-07	12 18%	2 80E-08	14 22%	1 44E-07	12 50%
7439921	Lead	2 54E-08	0 34%	1 36E-09	0 05%	1 02E-08	0 17%	4 34E-10	0 22%	4 34E-10	0 04%
7440020	Nickel	3 31E-08	0 44%	8 16E-09	0 28%	1 68E-08	0 28%	1 39E-09	0 71%	2 71E-09	0 24%
7440417	Beryllium	9 71E-09	0 13%	5 22E-10	0 02%	3 91E-09	0 07%	3 25E-10	0 17%	1 66E-10	0 01%
7440508	Copper	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439976	Mercury	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7782492	Selenium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440439	Cadmium	1 47E-07	1 95%	4 73E-09	0 16%	5 75E-08	0 97%	4 78E-09	2 42%	1 44E-09	0 12%
107062	EDC	9 78E-10	0 01%	2 64E-11	0 00%	3 70E-10	0 01%	3 08E-11	0 02%	6 73E-12	0 00%
75092	Methylene Chlor	4 03E-11	0 00%	1 09E-12	0 00%	1 53E-11	0 00%	1 27E-12	0 00%	2 77E-13	0 00%
129000	Pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
191242	B[g,h,i]perylen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
192972	B[e]pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
205992	B[b]fluoranthen	8 61E-10	0 01%	2 33E-11	0 00%	3 26E-10	0 01%	7 76E-12	0 00%	5 93E-12	0 00%
206440	Fluoranthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
208968	Acenaphthylene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
218019	Chrysene	3 59E-10	0 00%	9 72E-12	0 00%	1 36E-10	0 00%	3 24E-12	0 00%	2 48E-12	0 00%
83329	Acenaphthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
85018	Phenanthrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
86737	Fluorene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91576	2MeNaphthalene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75014	Vinyl Chloride	2 31E-09	0 03%	6 26E-11	0 00%	8 77E-10	0 01%	7 29E-11	0 04%	1 59E-11	0 00%
79345	TetraClEthane	4 60E-09	0 06%	1 25E-10	0 00%	1 74E-09	0 03%	1 45E-10	0 07%	3 17E-11	0 00%
79005	1,1,2TriClEthan	1 04E-09	0 01%	2 82E-11	0 00%	3 95E-10	0 01%	3 28E-11	0 02%	7 18E-12	0 00%
95636	1,2,4TriMeBenze	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
78875	1,2-DiClPropane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
542756	1,3-DiClPropene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67663	Chloroform	3 12E-10	0 00%	8 43E-12	0 00%	1 18E-10	0 00%	9 81E-12	0 00%	2 15E-12	0 00%
106990	1,3-Butadiene	9 22E-08	1 22%	2 49E-09	0 08%	3 49E-08	0 59%	2 90E-09	1 47%	6 35E-10	0 06%
67561	Methanol	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
56235	CCl4	3 17E-09	0 04%	8 57E-11	0 00%	1 20E-09	0 02%	9 97E-11	0 05%	2 18E-11	0 00%
100425	Styrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
106934	EDB	6 37E-09	0 08%	1 72E-10	0 01%	2 41E-09	0 04%	2 01E-10	0 10%	4 39E-11	0 00%
7439965	Manganese	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.1 Cancer Risk By TAC

PMI		MEIR		Sensitive		MEIW		Kaiser Permanente Baldwin Park Medical Center	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3662	Receptor No.	3662	Receptor No.	7780
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768885	408949	3768885	409029	3769675
Cancer Risk	7 56E-06	Cancer Risk	2 97E-06	Cancer Risk	5 95E-06	Cancer Risk	1 97E-07	Cancer Risk	1 15E-06

Pollutant	Pollutant Name	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)
1746016	2,3,7,8-TCDD	6 50E-07	8 60%	2 96E-07	9 99%	6 00E-07	10 08%	1 47E-08	7 46%	1 19E-07	10 37%
40321764	1-3,7,8PeCDD	2 62E-06	34 66%	1 21E-06	40 67%	2 45E-06	41 13%	6 00E-08	30 42%	4 89E-07	42 50%
39227286	1-4,7,8HxCDD	2 06E-08	0 27%	1 12E-08	0 38%	1 95E-08	0 33%	4 79E-10	0 24%	4 35E-09	0 38%
57653857	1-3,6-8HxCDD	3 68E-08	0 49%	2 03E-08	0 69%	3 49E-08	0 59%	8 56E-10	0 43%	7 89E-09	0 69%
19408743	1-3,7-9HxCDD	2 36E-08	0 31%	1 34E-08	0 45%	2 23E-08	0 38%	5 48E-10	0 28%	5 15E-09	0 45%
35822469	1-4,6-8HpCDD	8 84E-10	0 01%	5 61E-10	0 02%	8 32E-10	0 01%	2 04E-11	0 01%	2 08E-10	0 02%
3268879	1-8OctaCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
51207319	2,3,7,8-TCDF	6 09E-08	0 80%	3 22E-08	1 08%	5 73E-08	0 96%	1 99E-09	1 01%	1 26E-08	1 09%
57117416	1-3,7,8PeCDF	6 77E-09	0 09%	3 53E-09	0 12%	6 43E-09	0 11%	2 23E-10	0 11%	1 39E-09	0 12%
57117314	2-4,7,8PeCDF	1 27E-06	16 76%	6 51E-07	21 94%	1 20E-06	20 20%	4 17E-08	21 13%	2 58E-07	22 41%
70648269	1-4,7,8HxCDF	1 15E-07	1 52%	7 70E-08	2 60%	1 11E-07	1 87%	3 85E-09	1 95%	2 87E-08	2 49%
57117449	1-3,6-8HxCDF	9 38E-08	1 24%	5 92E-08	2 00%	9 05E-08	1 52%	3 14E-09	1 59%	2 24E-08	1 94%
60851345	2-4,6-8HxCDF	9 14E-08	1 21%	5 76E-08	1 94%	8 74E-08	1 47%	3 03E-09	1 54%	2 16E-08	1 88%
72918219	1-3,7-9HxCDF	1 91E-08	0 25%	1 63E-08	0 55%	1 90E-08	0 32%	6 59E-10	0 33%	5 81E-09	0 50%
67562394	1-4,6-8HpCDF	1 81E-09	0 02%	1 37E-09	0 05%	1 76E-09	0 03%	6 09E-11	0 03%	4 97E-10	0 04%
55673897	1-4,7-9HpCDF	1 64E-10	0 00%	1 31E-10	0 00%	1 59E-10	0 00%	5 51E-12	0 00%	4 68E-11	0 00%
39001020	1-8OctaCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7783064	H2S	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7647010	HCl	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7782505	Chlorine	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.2 Cancer Risk By Emission Source / Process

PMI		MEIR		Sensitive		MEIW		Kaiser Permanente Baldwin Park Medical Center	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3662	Receptor No.	3662	Receptor No.	7780
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768885	408949	3768885	409029	3769675
Cancer Risk	7 56E-06	Cancer Risk	2 97E-06	Cancer Risk	5 95E-06	Cancer Risk	1 97E-07	Cancer Risk	1 15E-06

Emission Source / Process	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)	Cancer Risk	Contribution (%)
FAAS	7 08E-07	9 37%	8 27E-07	27 89%	7 23E-07	12 16%	2 21E-08	11 21%	2 79E-07	24 29%
FANG	1 41E-08	0 19%	1 64E-08	0 55%	1 44E-08	0 24%	8 67E-10	0 44%	5 55E-09	0 48%
FBAS	1 13E-06	14 98%	1 32E-06	44 62%	1 16E-06	19 45%	3 53E-08	17 93%	4 47E-07	38 85%
FBNG	2 11E-08	0 28%	2 46E-08	0 83%	2 15E-08	0 36%	1 35E-09	0 68%	8 31E-09	0 72%
FCNG	1 53E-09	0 02%	1 79E-09	0 06%	1 57E-09	0 03%	4 92E-11	0 02%	6 05E-10	0 05%
D1NG	1 22E-09	0 02%	3 36E-10	0 01%	1 26E-09	0 02%	3 95E-11	0 02%	1 84E-10	0 02%
D1AS	1 37E-06	18 12%	3 76E-07	12 68%	1 41E-06	23 66%	3 96E-08	20 11%	2 06E-07	17 93%
D2NG	5 42E-09	0 07%	8 24E-10	0 03%	4 46E-09	0 08%	1 40E-10	0 07%	4 59E-10	0 04%
D2AS	2 17E-06	28 71%	3 30E-07	11 14%	1 79E-06	30 08%	4 92E-08	24 95%	1 84E-07	15 90%
MISCNG	1 25E-07	1 66%	3 39E-09	0 11%	4 74E-08	0 80%	1 49E-09	0 76%	8 63E-10	0 08%
WELD	8 42E-07	11 13%	2 28E-08	0 77%	3 19E-07	5 36%	2 65E-08	13 43%	5 80E-09	0 50%
AB1	7 83E-09	0 10%	2 15E-09	0 07%	8 05E-09	0 14%	2 52E-10	0 13%	1 18E-09	0 10%
AB2	2 80E-08	0 37%	4 26E-09	0 14%	2 31E-08	0 39%	7 24E-10	0 37%	2 37E-09	0 21%
CRSHR	1 13E-06	14 97%	3 06E-08	1 03%	4 29E-07	7 21%	1 94E-08	9 86%	7 80E-09	0 68%
DROSS	1 30E-09	0 02%	1 65E-09	0 06%	1 35E-09	0 02%	6 14E-11	0 03%	7 73E-10	0 07%

Abbreviation	Emission Source	Combustion / Process
FAAS	Furnace A	Process
FANG	Furnace A	Combustion
FBAS	Furnace B	Process
FBNG	Furnace B	Combustion
FCNG	Furnace C	Combustion
D1NG	Dryer 1	Combustion
D1AS	Dryer 1	Process
D2NG	Dryer 2	Combustion
D2AS	Dryer 2	Process
MISCNG	Misc NG Comb	Combustion
WELD	Propane-Fueled Weld	Combustion + Process
AB1	Afterburner 1	Combustion
AB2	Afterburner 2	Combustion
CRSHR	Crusher	Process
DROSS	Dross Handling	Process

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.3 Non-Cancer Chronic Risk By TAC

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3661	Receptor No.	2937
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768875	408839	3768825
HIC	2 21E-01	HIC	5 00E-02	HIC	1 05E-01	HIC	1 26E-01
Target Organ	CNS	Target Organ	RESP	Target Organ	CNS	Target Organ	CNS

Pollutant	Pollutant Name	HIC	Contribution (%)	HIC	Contribution (%)	HIC	Contribution (%)	HIC	Contribution (%)
50000	Formaldehyde	0 00E+00	0 00%	2 96E-04	0 59%	0 00E+00	0 00%	0 00E+00	0 00%
1151	PAHs-w/o	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91203	Naphthalene	0 00E+00	0 00%	3 32E-07	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
71432	Benzene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75070	Acetaldehyde	0 00E+00	0 00%	6 56E-06	0 01%	0 00E+00	0 00%	0 00E+00	0 00%
107028	Acrolein	0 00E+00	0 00%	3 71E-04	0 74%	0 00E+00	0 00%	0 00E+00	0 00%
7664417	NH3	0 00E+00	0 00%	6 85E-05	0 14%	0 00E+00	0 00%	0 00E+00	0 00%
100414	Ethyl Benzene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
110543	Hexane	1 58E-07	0 00%	0 00E+00	0 00%	6 47E-08	0 00%	1 22E-07	0 00%
108883	Toluene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
1330207	Xylenes	1 22E-06	0 00%	1 45E-07	0 00%	6 24E-07	0 00%	8 39E-07	0 00%
7440382	Arsenic	9 70E-02	43 00%	3 19E-02	63 84%	5 40E-02	51 27%	2 67E-02	21 26%
7439921	Lead	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440020	Nickel	0 00E+00	0 00%	9 47E-04	1 89%	0 00E+00	0 00%	0 00E+00	0 00%
7440417	Beryllium	0 00E+00	0 00%	1 31E-05	0 03%	0 00E+00	0 00%	0 00E+00	0 00%
7440508	Copper	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439976	Mercury	2 91E-04	0 13%	0 00E+00	0 00%	1 19E-04	0 11%	1 24E-04	0 10%
7782492	Selenium	2 75E-04	0 12%	0 00E+00	0 00%	1 13E-04	0 11%	2 60E-05	0 02%
7440439	Cadmium	0 00E+00	0 00%	2 33E-05	0 05%	0 00E+00	0 00%	0 00E+00	0 00%
107062	EDC	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75092	Methylene Chlor	4 25E-08	0 00%	0 00E+00	0 00%	1 65E-08	0 00%	3 35E-08	0 00%
129000	Pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
191242	B[g,h,i]perylen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
192972	B[e]pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
205992	B[b]fluoranthen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
206440	Fluoranthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
208968	Acenaphthylene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
218019	Chrysene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
83329	Acenaphthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
85018	Phenanthrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
86737	Fluorene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91576	2MeNaphthalene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75014	Vinyl Chloride	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
79345	TetraClEthane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
79005	1,1,2TriClEthan	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
95636	1,2,4TriMeBenze	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
78875	1,2-DiClPropane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
542756	1,3-DiClPropene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67663	Chloroform	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
106990	1,3-Butadiene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67561	Methanol	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
56235	CCl4	7 80E-07	0 00%	0 00E+00	0 00%	3 02E-07	0 00%	6 15E-07	0 00%
100425	Styrene	2 23E-08	0 00%	0 00E+00	0 00%	8 64E-09	0 00%	1 76E-08	0 00%
106934	EDB	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439965	Manganese	1 23E-01	55 84%	0 00E+00	0 00%	5 11E-02	48 51%	9 89E-02	78 61%

Table F.3 Non-Cancer Chronic Risk By TAC

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3661	Receptor No.	2937
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768875	408839	3768825
HIC	2 21E-01	HIC	5 00E-02	HIC	1 05E-01	HIC	1 26E-01
Target Organ	CNS	Target Organ	RESP	Target Organ	CNS	Target Organ	CNS

Pollutant	Pollutant Name	HIC	Contribution (%)	HIC	Contribution (%)	HIC	Contribution (%)	HIC	Contribution (%)
1746016	2,3,7,8-TCDD	0 00E+00	0 00%	1 01E-03	2 01%	0 00E+00	0 00%	0 00E+00	0 00%
40321764	1-3,7,8PeCDD	0 00E+00	0 00%	4 10E-03	8 20%	0 00E+00	0 00%	0 00E+00	0 00%
39227286	1-4,7,8HxCDD	0 00E+00	0 00%	3 80E-05	0 08%	0 00E+00	0 00%	0 00E+00	0 00%
57653857	1-3,6-8HxCDD	0 00E+00	0 00%	6 92E-05	0 14%	0 00E+00	0 00%	0 00E+00	0 00%
19408743	1-3,7-9HxCDD	0 00E+00	0 00%	4 55E-05	0 09%	0 00E+00	0 00%	0 00E+00	0 00%
35822469	1-4,6-8HpCDD	0 00E+00	0 00%	1 91E-06	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
3268879	1-8OctaCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
51207319	2,3,7,8-TCDF	0 00E+00	0 00%	7 79E-05	0 16%	0 00E+00	0 00%	0 00E+00	0 00%
57117416	1-3,7,8PeCDF	0 00E+00	0 00%	8 63E-06	0 02%	0 00E+00	0 00%	0 00E+00	0 00%
57117314	2-4,7,8PeCDF	0 00E+00	0 00%	1 59E-03	3 18%	0 00E+00	0 00%	0 00E+00	0 00%
70648269	1-4,7,8HxCDF	0 00E+00	0 00%	1 87E-04	0 37%	0 00E+00	0 00%	0 00E+00	0 00%
57117449	1-3,6-8HxCDF	0 00E+00	0 00%	1 43E-04	0 29%	0 00E+00	0 00%	0 00E+00	0 00%
60851345	2-4,6-8HxCDF	0 00E+00	0 00%	1 39E-04	0 28%	0 00E+00	0 00%	0 00E+00	0 00%
72918219	1-3,7-9HxCDF	0 00E+00	0 00%	3 94E-05	0 08%	0 00E+00	0 00%	0 00E+00	0 00%
67562394	1-4,6-8HpCDF	0 00E+00	0 00%	3 33E-06	0 01%	0 00E+00	0 00%	0 00E+00	0 00%
55673897	1-4,7-9HpCDF	0 00E+00	0 00%	3 18E-07	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
39001020	1-8OctaCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7783064	H2S	0 00E+00	0 00%	1 87E-03	3 75%	0 00E+00	0 00%	0 00E+00	0 00%
7647010	HCl	0 00E+00	0 00%	6 24E-03	12 49%	0 00E+00	0 00%	0 00E+00	0 00%
7782505	Chlorine	0 00E+00	0 00%	7 81E-04	1 56%	0 00E+00	0 00%	0 00E+00	0 00%

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.4 Non-Cancer Chronic Risk By Emission Source / Process

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3661	Receptor No.	2937
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768875	408839	3768825
HIC	2 21E-01	HIC	5 00E-02	HIC	1 05E-01	HIC	1 26E-01
Target Organ	CNS	Target Organ	RESP	Target Organ	CNS	Target Organ	CNS

Emission Source / Process	HIC	Contribution (%)	HIC	Contribution (%)	HIC	Contribution (%)	HIC	Contribution (%)
FAAS	1 18E-02	5 34%	1 79E-02	35 82%	1 18E-02	11 24%	5 60E-03	4 46%
FANG	2 55E-08	0 00%	8 74E-05	0 17%	2 56E-08	0 00%	2 75E-08	0 00%
FBAS	1 89E-02	8 54%	2 67E-02	53 49%	1 89E-02	17 98%	8 97E-03	7 13%
FBNG	3 45E-08	0 00%	1 34E-04	0 27%	3 46E-08	0 00%	3 72E-08	0 00%
FCNG	8 73E-09	0 00%	6 59E-06	0 01%	8 76E-09	0 00%	9 42E-09	0 00%
D1NG	6 96E-09	0 00%	1 24E-06	0 00%	6 65E-09	0 00%	2 52E-09	0 00%
D1AS	5 65E-04	0 26%	1 30E-03	2 61%	5 39E-04	0 51%	6 59E-05	0 05%
D2NG	3 08E-08	0 00%	3 03E-06	0 01%	2 53E-08	0 00%	3 92E-09	0 00%
D2AS	1 03E-03	0 46%	1 19E-03	2 37%	8 43E-04	0 80%	4 21E-05	0 03%
MISCNG	7 12E-07	0 00%	1 25E-05	0 02%	2 76E-07	0 00%	5 62E-07	0 00%
WELD	1 18E-01	53 43%	5 15E-04	1 03%	4 58E-02	43 44%	9 31E-02	74 04%
AB1	4 45E-08	0 00%	7 91E-06	0 02%	4 25E-08	0 00%	1 61E-08	0 00%
AB2	1 59E-07	0 00%	1 57E-05	0 03%	1 31E-07	0 00%	2 02E-08	0 00%
CRSHR	7 06E-02	31 93%	1 96E-03	3 93%	2 74E-02	25 96%	1 79E-02	14 27%
DROSS	8 09E-05	0 04%	1 06E-04	0 21%	7 79E-05	0 07%	2 25E-05	0 02%

Abbreviation	Emission Source	Combustion / Process
FAAS	Furnace A	Process
FANG	Furnace A	Combustion
FBAS	Furnace B	Process
FBNG	Furnace B	Combustion
FCNG	Furnace C	Combustion
D1NG	Dryer 1	Combustion
D1AS	Dryer 1	Process
D2NG	Dryer 2	Combustion
D2AS	Dryer 2	Process
MISCNG	Misc NG Comb	Combustion
WELD	Propane-Fueled Weld	Combustion + Process
AB1	Afterburner 1	Combustion
AB2	Afterburner 2	Combustion
CRSHR	Crusher	Process
DROSS	Dross Handling	Process

Table F.5 8-Hour Non-Cancer Chronic Risk By TAC

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3661	Receptor No.	2937
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768875	408839	3768825
HIC-8	6 65E-02	HIC-8	5 35E-03	HIC-8	2 77E-02	HIC-8	5 33E-02
Target Organ	CNS	Target Organ	CNS	Target Organ	CNS	Target Organ	CNS

Pollutant	Pollutant Name	HIC-8	Contribution (%)	HIC-8	Contribution (%)	HIC-8	Contribution (%)	HIC-8	Contribution (%)
50000	Formaldehyde	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
1151	PAHs-w/o	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91203	Naphthalene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
71432	Benzene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75070	Acetaldehyde	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
107028	Acrolein	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7664417	NH3	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
100414	Ethyl Benzene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
110543	Hexane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
108883	Toluene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
1330207	Xylenes	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440382	Arsenic	1 10E-03	1 66%	3 62E-04	0 77%	6 14E-04	2 22%	9 43E-04	1 77%
7439921	Lead	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440020	Nickel	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440417	Beryllium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440508	Copper	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439976	Mercury	3 77E-05	0 06%	2 02E-06	0 04%	1 54E-05	0 06%	2 94E-05	0 06%
7782492	Selenium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440439	Cadmium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
107062	EDC	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75092	Methylene Chlor	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
129000	Pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
191242	B[g,h,i]perylen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
192972	B[e]pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
205992	B[b]fluoranthen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
206440	Fluoranthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
208968	Acenaphthylene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
218019	Chrysene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
83329	Acenaphthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
85018	Phenanthrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
86737	Fluorene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91576	2MeNaphthalene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75014	Vinyl Chloride	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
79345	TetraClEthane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
79005	1,1,2TriClEthan	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
95636	1,2,4TriMeBenze	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
78875	1,2-DiClPropane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
542756	1,3-DiClPropene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67663	Chloroform	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
106990	1,3-Butadiene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67561	Methanol	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
56235	CCl4	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
100425	Styrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
106934	EDB	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439965	Manganese	6 54E-02	98 29%	4 99E-03	93 19%	2 71E-02	97 73%	5 23E-02	98 18%

Table F.5 8-Hour Non-Cancer Chronic Risk By TAC

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3661	Receptor No.	2937
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768875	408839	3768825
HIC-8	6 65E-02	HIC-8	5 35E-03	HIC-8	2 77E-02	HIC-8	5 33E-02
Target Organ	CNS	Target Organ	CNS	Target Organ	CNS	Target Organ	CNS

Pollutant	Pollutant Name	HIC-8	Contribution (%)	HIC-8	Contribution (%)	HIC-8	Contribution (%)	HIC-8	Contribution (%)
1746016	2,3,7,8-TCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
40321764	1-3,7,8PeCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
39227286	1-4,7,8HxCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57653857	1-3,6-8HxCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
19408743	1-3,7-9HxCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
35822469	1-4,6-8HpCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
3268879	1-8OctaCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
51207319	2,3,7,8-TCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57117416	1-3,7,8PeCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57117314	2-4,7,8PeCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
70648269	1-4,7,8HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57117449	1-3,6-8HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
60851345	2-4,6-8HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
72918219	1-3,7-9HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67562394	1-4,6-8HpCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
55673897	1-4,7-9HpCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
39001020	1-8OctaCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7783064	H2S	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7647010	HCl	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7782505	Chlorine	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.6 8-Hour Non-Cancer Chronic Risk By Emission Source / Process

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9956	Receptor No.	4715	Receptor No.	3661	Receptor No.	2937
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408916	3768864	409079	3769185	408949	3768875	408839	3768825
HIC-8	6 65E-02	HIC-8	5 35E-03	HIC-8	2 77E-02	HIC-8	5 33E-02
Target Organ	CNS	Target Organ	CNS	Target Organ	CNS	Target Organ	CNS

Emission Source / Process	HIC-8	Contribution (%)	HIC-8	Contribution (%)	HIC-8	Contribution (%)	HIC-8	Contribution (%)
FAAS	1 20E-03	1 80%	1 40E-03	26 11%	1 20E-03	4 33%	1 29E-03	2 42%
FANG	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
FBAS	1 91E-03	2 88%	2 23E-03	41 77%	1 92E-03	6 93%	2 06E-03	3 87%
FBNG	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
FCNG	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
D1NG	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
D1AS	6 65E-06	0 01%	1 83E-06	0 03%	6 35E-06	0 02%	2 41E-06	0 00%
D2NG	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
D2AS	1 21E-05	0 02%	1 84E-06	0 03%	9 94E-06	0 04%	1 54E-06	0 00%
MISCNG	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
WELD	6 25E-02	94 04%	1 69E-03	31 61%	2 42E-02	87 50%	4 93E-02	92 47%
AB1	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
AB2	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
CRSHR	8 32E-04	1 25%	2 25E-05	0 42%	3 22E-04	1 16%	6 56E-04	1 23%
DROSS	9 53E-07	0 00%	1 21E-06	0 02%	9 18E-07	0 00%	8 22E-07	0 00%

Abbreviation	Emission Source	Combustion / Process
FAAS	Furnace A	Process
FANG	Furnace A	Combustion
FBAS	Furnace B	Process
FBNG	Furnace B	Combustion
FCNG	Furnace C	Combustion
D1NG	Dryer 1	Combustion
D1AS	Dryer 1	Process
D2NG	Dryer 2	Combustion
D2AS	Dryer 2	Process
MISCNG	Misc NG Comb	Combustion
WELD	Propane-Fueled Weld	Combustion + Process
AB1	Afterburner 1	Combustion
AB2	Afterburner 2	Combustion
CRSHR	Crusher	Process
DROSS	Dross Handling	Process

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.7 Non-Cancer Acute Risk By TAC

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9965	Receptor No.	4999	Receptor No.	9956	Receptor No.	9956
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408827	3768899	409119	3768785	408916	3768864	408916	3768864
HIA	2 67E-01	HIA	1 55E-02	HIA	2 04E-01	HIA	2 04E-01
Target Organ	IMMUN	Target Organ	IMMUN	Target Organ	IMMUN	Target Organ	IMMUN

Pollutant	Pollutant Name	HIA	Contribution (%)	HIA	Contribution (%)	HIA	Contribution (%)	HIA	Contribution (%)
50000	Formaldehyde	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
1151	PAHs-w/o	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91203	Naphthalene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
71432	Benzene	5 01E-04	0 19%	4 36E-05	0 28%	4 04E-04	0 20%	4 04E-04	0 20%
75070	Acetaldehyde	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
107028	Acrolein	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7664417	NH3	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
100414	Ethyl Benzene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
110543	Hexane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
108883	Toluene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
1330207	Xylenes	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440382	Arsenic	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439921	Lead	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440020	Nickel	2 66E-01	99 81%	1 55E-02	99 72%	2 04E-01	99 80%	2 04E-01	99 80%
7440417	Beryllium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440508	Copper	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439976	Mercury	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7782492	Selenium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7440439	Cadmium	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
107062	EDC	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75092	Methylene Chlor	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
129000	Pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
191242	B[g,h,i]perylen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
192972	B[e]pyrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
205992	B[b]fluoranthen	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
206440	Fluoranthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
208968	Acenaphthylene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
218019	Chrysene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
83329	Acenaphthene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
85018	Phenanthrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
86737	Fluorene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
91576	2MeNaphthalene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
75014	Vinyl Chloride	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
79345	TetraClEthane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
79005	1,1,2TriClEthan	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
95636	1,2,4TriMeBenze	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
78875	1,2-DiClPropane	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
542756	1,3-DiClPropene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67663	Chloroform	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
106990	1,3-Butadiene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67561	Methanol	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
56235	CCl4	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
100425	Styrene	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
106934	EDB	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7439965	Manganese	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%

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Appendix F Risk Characterization

Table F.7 Non-Cancer Acute Risk By TAC

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9965	Receptor No.	4999	Receptor No.	9956	Receptor No.	9956
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408827	3768899	409119	3768785	408916	3768864	408916	3768864
HIA	2 67E-01	HIA	1 55E-02	HIA	2 04E-01	HIA	2 04E-01
Target Organ	IMMUN	Target Organ	IMMUN	Target Organ	IMMUN	Target Organ	IMMUN

Pollutant	Pollutant Name	HIA	Contribution (%)	HIA	Contribution (%)	HIA	Contribution (%)	HIA	Contribution (%)
1746016	2,3,7,8-TCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
40321764	1-3,7,8PeCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
39227286	1-4,7,8HxCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57653857	1-3,6-8HxCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
19408743	1-3,7-9HxCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
35822469	1-4,6-8HpCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
3268879	1-8OctaCDD	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
51207319	2,3,7,8-TCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57117416	1-3,7,8PeCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57117314	2-4,7,8PeCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
70648269	1-4,7,8HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
57117449	1-3,6-8HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
60851345	2-4,6-8HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
72918219	1-3,7-9HxCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
67562394	1-4,6-8HpCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
55673897	1-4,7-9HpCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
39001020	1-8OctaCDF	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7783064	H2S	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7647010	HCl	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%
7782505	Chlorine	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%	0 00E+00	0 00%

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Appendix F Risk Characterization

Table F.8 Non-Cancer Acute Risk By Emission Source / Process

PMI		MEIR		Sensitive		MEIW	
Receptor No.	9965	Receptor No.	4999	Receptor No.	9956	Receptor No.	9956
UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)	UTM E (m)	UTM N (m)
408827	3768899	409119	3768785	408916	3768864	408916	3768864
HIA	2 67E-01	HIA	1 55E-02	HIA	2 04E-01	HIA	2 04E-01
Target Organ	IMMUN	Target Organ	IMMUN	Target Organ	IMMUN	Target Organ	IMMUN

Emission Source / Process	HIA	Contribution (%)	HIA	Contribution (%)	HIA	Contribution (%)	HIA	Contribution (%)
FAAS	8 92E-04	0 33%	4 93E-04	3 17%	8 73E-04	0 43%	8 73E-04	0 43%
FANG	5 34E-06	0 00%	2 95E-06	0 02%	5 22E-06	0 00%	5 22E-06	0 00%
FBAS	1 52E-03	0 57%	8 37E-04	5 39%	1 48E-03	0 73%	1 48E-03	0 73%
FBNG	8 54E-06	0 00%	4 72E-06	0 03%	8 35E-06	0 00%	8 35E-06	0 00%
FCNG	3 68E-06	0 00%	2 03E-06	0 01%	3 60E-06	0 00%	3 60E-06	0 00%
D1NG	1 57E-06	0 00%	6 16E-07	0 00%	1 53E-06	0 00%	1 53E-06	0 00%
D1AS	3 83E-05	0 01%	1 50E-05	0 10%	3 72E-05	0 02%	3 72E-05	0 02%
D2NG	2 15E-06	0 00%	7 74E-07	0 00%	4 12E-06	0 00%	4 12E-06	0 00%
D2AS	2 19E-05	0 01%	7 86E-06	0 05%	4 19E-05	0 02%	4 19E-05	0 02%
MISCNG	3 53E-05	0 01%	1 89E-06	0 01%	2 70E-05	0 01%	2 70E-05	0 01%
WELD	2 63E-01	98 52%	1 41E-02	90 60%	2 01E-01	98 26%	2 01E-01	98 26%
AB1	1 00E-05	0 00%	3 94E-06	0 03%	9 76E-06	0 00%	9 76E-06	0 00%
AB2	1 11E-05	0 00%	4 00E-06	0 03%	2 13E-05	0 01%	2 13E-05	0 01%
CRSHR	1 33E-03	0 50%	7 10E-05	0 46%	1 01E-03	0 50%	1 01E-03	0 50%
DROSS	9 07E-05	0 03%	1 55E-05	0 10%	2 29E-05	0 01%	2 29E-05	0 01%

Abbreviation	Emission Source	Combustion / Process
FAAS	Furnace A	Process
FANG	Furnace A	Combustion
FBAS	Furnace B	Process
FBNG	Furnace B	Combustion
FCNG	Furnace C	Combustion
D1NG	Dryer 1	Combustion
D1AS	Dryer 1	Process
D2NG	Dryer 2	Combustion
D2AS	Dryer 2	Process
MISCNG	Misc NG Comb	Combustion
WELD	Propane-Fueled Weld	Combustion + Process
AB1	Afterburner 1	Combustion
AB2	Afterburner 2	Combustion
CRSHR	Crusher	Process
DROSS	Dross Handling	Process

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1	404600	2154	408071	3772480	0	2 66E-07	0.00E+00
2	404600	2155	407912	3771928	0	2 90E-07	0.00E+00
3	404600	2156	407891	3771317	0	3 38E-07	0.00E+00
4	404600	2157	408410	3772698	0	2 81E-07	0.00E+00
5	404600	2158	407986	3771810	0	3 05E-07	0.00E+00
6	404600	2159	407948	3771323	0	3 47E-07	0.00E+00
7	404600	2164	408706	3772015	1	3 72E-07	0.00E+00
8	404600	2165	409050	3771553	0	4 76E-07	0.00E+00
9	404600	2166	408215	3771419	0	3 76E-07	0.00E+00
10	404600	2167	408631	3771432	0	4 39E-07	0.00E+00
11	404600	2168	409227	3771600	0	4 83E-07	0.00E+00
12	404600	2169	408888	3771502	0	4 68E-07	0.00E+00
13	404600	2170	408456	3772662	0	2 86E-07	0.00E+00
14	404600	2171	408633	3772802	0	2 78E-07	0.00E+00
15	404701	1000	408558	3771384	0	4 33E-07	0.00E+00
16	404701	1001	408521	3770902	945	5 16E-07	0.00E+00
17	404701	1002	408330	3770931	60	4 59E-07	0.00E+00
18	404701	1003	408482	3771081	77	4 71E-07	0.00E+00
19	404701	1004	408355	3771001	39	4 54E-07	0.00E+00
20	404701	1005	408672	3771053	329	5 21E-07	0.00E+00
21	404701	1006	408307	3770855	69	4 67E-07	0.00E+00
22	404701	1007	408425	3771162	639	4 46E-07	0.00E+00
23	404701	1008	408875	3771258	33	5 17E-07	0.00E+00
24	404701	1009	408824	3771185	64	5 25E-07	0.00E+00
25	404701	1010	408730	3770955	205	5 58E-07	0.00E+00
26	404701	1011	408376	3771253	21	4 22E-07	0.00E+00
27	404701	1012	408439	3771298	0	4 27E-07	0.00E+00
28	404701	1013	408410	3771186	0	4 39E-07	0.00E+00
29	404701	2000	408062	3771252	0	3 64E-07	0.00E+00
30	404701	2001	407982	3771230	0	3 45E-07	0.00E+00
31	404701	2002	407945	3771220	0	3 43E-07	0.00E+00
32	404701	2003	407913	3771211	0	3 45E-07	0.00E+00
33	404701	2004	407875	3771201	0	3 27E-07	0.00E+00
34	404701	2005	408093	3771233	0	3 71E-07	0.00E+00
35	404701	2006	407775	3770049	321	3 45E-07	0.00E+00
36	404701	2007	407855	3770348	193	3 70E-07	0.00E+00
37	404701	2008	407921	3771020	0	3 65E-07	0.00E+00
38	404701	2009	407940	3770014	457	3 95E-07	0.00E+00
39	404701	2010	407922	3771093	0	3 60E-07	0.00E+00
40	404701	2011	407832	3769890	0	3 58E-07	0.00E+00
41	404701	2012	407771	3769896	0	3 51E-07	0.00E+00
42	404701	2013	407713	3770070	0	3 27E-07	0.00E+00
43	404701	2014	407788	3770598	0	3 55E-07	0.00E+00
44	404701	2015	407741	3770519	0	3 45E-07	0.00E+00
45	404701	2016	407886	3771052	0	3 53E-07	0.00E+00
46	404701	2017	407864	3771096	0	3 39E-07	0.00E+00
47	404701	2018	407802	3771096	2	3 36E-07	0.00E+00
48	404701	2019	407794	3771181	0	3 16E-07	0.00E+00
49	404701	2020	407698	3771111	0	3 10E-07	0.00E+00
50	404701	2021	407610	3771112	0	2 93E-07	0.00E+00
51	404701	2022	407445	3770483	0	2 82E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
52	404701	2023	407411	3770129	0	2 70E-07	0.00E+00
53	404701	2024	407607	3770781	0	3 07E-07	0.00E+00
54	404701	2025	407615	3770371	0	3 12E-07	0.00E+00
55	404701	2026	407580	3769854	0	3 10E-07	0.00E+00
56	404701	2027	407646	3770063	0	3 16E-07	0.00E+00
57	404701	2028	407501	3769793	0	3 02E-07	0.00E+00
58	404701	2029	407673	3769819	0	3 26E-07	0.00E+00
59	404701	2030	407673	3769891	0	3 07E-07	0.00E+00
60	404701	2031	407687	3769988	0	3 18E-07	0.00E+00
61	404701	2032	407706	3769823	0	3 32E-07	0.00E+00
62	404701	2033	408013	3769866	0	4 05E-07	0.00E+00
63	404701	2034	407241	3769753	5	2 53E-07	0.00E+00
64	404701	2035	408099	3770171	339	4 53E-07	0.00E+00
65	404701	3000	408116	3770770	89	4 30E-07	0.00E+00
66	404701	3001	408095	3770684	92	4 32E-07	0.00E+00
67	404701	3002	408073	3770602	83	4 32E-07	0.00E+00
68	404701	3003	408289	3770414	503	5 21E-07	0.00E+00
69	404701	3004	408477	3770416	181	5 94E-07	0.00E+00
70	404701	3005	408054	3770483	178	4 32E-07	0.00E+00
71	404701	4000	408244	3771302	0	3 95E-07	0.00E+00
72	404701	4001	408243	3771270	26	3 99E-07	0.00E+00
73	404701	4002	408238	3771221	66	4 04E-07	0.00E+00
74	404701	4003	408279	3771181	20	4 18E-07	0.00E+00
75	404701	4004	408206	3771125	105	4 09E-07	0.00E+00
76	404701	4005	408025	3771012	216	3 86E-07	0.00E+00
77	404701	4006	408184	3771035	108	4 15E-07	0.00E+00
78	404701	4007	408161	3770946	97	4 20E-07	0.00E+00
79	404701	4008	408138	3770858	107	4 26E-07	0.00E+00
80	404701	4009	407938	3770672	204	3 89E-07	0.00E+00
81	404702	1000	409088	3770987	492	6 13E-07	0.00E+00
82	404702	1001	408836	3770881	377	5 98E-07	0.00E+00
83	404702	1002	408733	3770561	234	6 59E-07	0.00E+00
84	404702	1003	408856	3770465	357	7 21E-07	0.00E+00
85	404702	1004	408962	3770721	299	6 71E-07	0.00E+00
86	404702	1005	409087	3770754	158	6 85E-07	0.00E+00
87	404702	1006	408639	3770191	435	7 13E-07	0.00E+00
88	404702	1007	408525	3770279	387	6 37E-07	0.00E+00
89	404702	2000	409149	3770536	0	7 74E-07	0.00E+00
90	404702	2001	409351	3770414	336	8 28E-07	0.00E+00
91	404702	2002	409248	3770415	100	8 40E-07	0.00E+00
92	404702	2003	409218	3770365	23	8 63E-07	0.00E+00
93	404702	2004	409333	3770297	54	8 83E-07	0.00E+00
94	404702	2005	409194	3770194	185	9 43E-07	0.00E+00
95	404702	2006	409469	3770222	70	9 01E-07	0.00E+00
96	404702	2007	408870	3770141	423	8 45E-07	0.00E+00
97	404702	2008	408741	3770046	0	7 95E-07	0.00E+00
98	404702	2009	409410	3770128	0	9 47E-07	0.00E+00
99	404702	2010	409444	3770295	74	8 71E-07	0.00E+00
100	404702	2011	408960	3770283	299	8 37E-07	0.00E+00
101	404702	2012	409056	3770384	242	8 25E-07	0.00E+00
102	404702	2013	408526	3769973	0	6 58E-07	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
103	404702	2014	408387	3770039	39	5 84E-07	0.00E+00
104	404702	2015	408832	3769993	0	8 71E-07	0.00E+00
105	404702	3000	409324	3770712	374	7 24E-07	0.00E+00
106	404702	3001	409491	3770556	762	7 60E-07	0.00E+00
107	404702	3002	409656	3770579	31	7 32E-07	0.00E+00
108	404702	3003	409633	3770554	35	7 43E-07	0.00E+00
109	404702	3004	409610	3770528	52	7 56E-07	0.00E+00
110	404702	3005	409642	3770435	44	7 80E-07	0.00E+00
111	404702	3006	409777	3770250	0	8 17E-07	0.00E+00
112	404702	3007	409746	3770346	0	8 01E-07	0.00E+00
113	404702	3008	409930	3770156	0	7 69E-07	0.00E+00
114	404702	3009	409988	3770215	0	7 74E-07	0.00E+00
115	404702	3010	409597	3770145	0	8 84E-07	0.00E+00
116	404702	3011	409558	3770242	0	8 71E-07	0.00E+00
117	404702	3012	409509	3770155	0	9 20E-07	0.00E+00
118	404702	3013	409583	3770106	0	9 05E-07	0.00E+00
119	404703	1000	409838	3769976	2	8 95E-07	0.00E+00
120	404703	1001	409637	3770025	208	9 48E-07	0.00E+00
121	404703	1002	409515	3770072	0	9 49E-07	0.00E+00
122	404703	1003	409391	3769979	0	1 04E-06	0.00E+00
123	**404703**	**1004**	**409505**	**3769876**	**22**	**1.05E-06**	**2.32E-05**
124	404703	1005	409270	3769716	0	1 22E-06	0.00E+00
125	404703	1006	409817	3769832	92	9 46E-07	0.00E+00
126	404703	1007	409914	3769756	0	9 09E-07	0.00E+00
127	404703	1008	410213	3770001	133	7 30E-07	0.00E+00
128	404703	1009	410274	3769955	0	7 28E-07	0.00E+00
129	404703	1010	410095	3769825	0	8 21E-07	0.00E+00
130	404703	1011	410064	3769863	58	8 07E-07	0.00E+00
131	404703	1012	410129	3769925	48	7 72E-07	0.00E+00
132	404703	1013	408983	3769552	0	1 40E-06	0.00E+00
133	404703	1014	409028	3769567	0	1 41E-06	0.00E+00
134	404703	1015	409039	3769544	0	1 40E-06	0.00E+00
135	404703	1016	409226	3769566	0	1 36E-06	0.00E+00
136	404703	1017	409628	3769644	0	1 12E-06	0.00E+00
137	404703	1018	409908	3769740	0	9 48E-07	0.00E+00
138	404703	1019	408980	3769539	0	1 35E-06	0.00E+00
139	404703	2000	409364	3770064	0	9 86E-07	0.00E+00
140	404703	2001	409121	3770012	0	1 02E-06	0.00E+00
141	404703	2002	409001	3769871	0	1 05E-06	0.00E+00
142	404703	2003	408711	3769910	34	8 03E-07	0.00E+00
143	404703	2004	408607	3769895	35	7 19E-07	0.00E+00
144	404703	2005	408600	3769835	194	7 20E-07	0.00E+00
145	404703	2006	408614	3769714	542	7 47E-07	0.00E+00
146	404703	2007	408454	3769708	0	6 01E-07	0.00E+00
147	404703	2008	408561	3769620	0	7 01E-07	0.00E+00
148	404703	2009	408392	3769847	77	5 62E-07	0.00E+00
149	404703	2010	408057	3769642	404	3 90E-07	0.00E+00
150	404703	2011	407879	3769581	179	3 42E-07	0.00E+00
151	404703	2012	408088	3769760	714	4 18E-07	0.00E+00
152	404703	2013	407827	3769776	0	3 50E-07	0.00E+00
153	404703	2014	408400	3769660	152	5 53E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
154	404703	2015	408891	3769731	0	1 07E-06	0.00E+00
155	**404703**	**2016**	**408858**	**3769640**	**139**	**1.11E-06**	**1.54E-04**
156	404703	2017	409038	3769696	0	1 22E-06	0.00E+00
157	404703	2018	408301	3769567	84	4 83E-07	0.00E+00
158	404703	2019	408512	3769579	61	6 45E-07	0.00E+00
159	404703	2020	408618	3769551	0	7 75E-07	0.00E+00
160	404703	2021	407709	3769625	0	3 05E-07	0.00E+00
161	404703	2022	407778	3769766	0	3 47E-07	0.00E+00
162	404703	2023	407686	3769602	0	3 07E-07	0.00E+00
163	404703	2024	407674	3769676	0	3 25E-07	0.00E+00
164	404703	2025	407656	3769803	0	3 12E-07	0.00E+00
165	404703	2026	408794	3769552	0	1 07E-06	0.00E+00
166	404703	2027	408109	3769486	0	3 80E-07	0.00E+00
167	404703	2028	407634	3769534	0	3 13E-07	0.00E+00
168	404703	2029	407575	3769563	0	3 00E-07	0.00E+00
169	404703	2030	407637	3769735	0	3 12E-07	0.00E+00
170	404703	2031	407414	3769565	0	2 77E-07	0.00E+00
171	404703	2032	407491	3769454	0	2 91E-07	0.00E+00
172	404703	2033	407227	3769508	0	2 45E-07	0.00E+00
173	404703	2034	407138	3769452	0	2 47E-07	0.00E+00
174	404801	1000	410614	3771735	312	3 90E-07	0.00E+00
175	404801	1001	410547	3771747	120	3 92E-07	0.00E+00
176	404801	1002	410389	3771765	363	4 05E-07	0.00E+00
177	404801	1003	410225	3771797	0	4 14E-07	0.00E+00
178	404801	1004	410128	3771772	35	4 25E-07	0.00E+00
179	404801	1005	410154	3771678	99	4 36E-07	0.00E+00
180	404801	1006	410250	3771704	103	4 25E-07	0.00E+00
181	404801	1007	410680	3771506	0	4 13E-07	0.00E+00
182	404801	1008	410556	3771370	5	4 43E-07	0.00E+00
183	404801	1009	410465	3771506	534	4 29E-07	0.00E+00
184	404801	1010	410422	3771644	114	4 17E-07	0.00E+00
185	404801	1011	410615	3771515	65	4 17E-07	0.00E+00
186	404801	1012	410509	3771371	0	4 47E-07	0.00E+00
187	404801	2000	410028	3771564	467	4 65E-07	0.00E+00
188	404801	2001	409833	3771510	508	4 89E-07	0.00E+00
189	404801	2002	409838	3771636	16	4 66E-07	0.00E+00
190	404801	2003	409613	3771560	237	4 93E-07	0.00E+00
191	404801	2004	409660	3771361	299	5 29E-07	0.00E+00
192	404801	2005	410198	3771510	77	4 56E-07	0.00E+00
193	404801	2006	410270	3771528	51	4 47E-07	0.00E+00
194	404801	2007	410318	3771541	63	4 40E-07	0.00E+00
195	404801	3000	410342	3771343	165	4 67E-07	0.00E+00
196	404801	3001	410207	3771255	180	4 96E-07	0.00E+00
197	404801	3002	409942	3771158	708	5 45E-07	0.00E+00
198	404801	3003	410460	3771318	5	4 60E-07	0.00E+00
199	404801	3004	410457	3771260	0	4 69E-07	0.00E+00
200	404801	3005	410344	3771135	0	5 02E-07	0.00E+00
201	404801	3006	410238	3771017	0	5 36E-07	0.00E+00
202	404801	3007	410116	3770883	102	5 80E-07	0.00E+00
203	404801	3008	410028	3771000	161	5 65E-07	0.00E+00
204	404801	3009	409689	3770850	511	6 50E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
205	404801	3010	409861	3770599	0	6 90E-07	0.00E+00
206	404801	3011	410040	3770873	0	5 92E-07	0.00E+00
207	404801	3012	409791	3770520	0	7 27E-07	0.00E+00
208	404801	3013	409976	3770728	0	6 38E-07	0.00E+00
209	404801	4000	409326	3771475	526	5 12E-07	0.00E+00
210	404801	4001	409197	3771554	0	4 91E-07	0.00E+00
211	404801	4002	409008	3771503	0	4 84E-07	0.00E+00
212	404801	4003	408846	3771460	0	4 70E-07	0.00E+00
213	404801	4004	408871	3771423	208	4 81E-07	0.00E+00
214	404801	4005	409022	3771464	8	4 94E-07	0.00E+00
215	404801	4006	409148	3771336	221	5 33E-07	0.00E+00
216	404801	4007	409055	3771282	112	5 37E-07	0.00E+00
217	404801	4008	408994	3771243	96	5 37E-07	0.00E+00
218	404801	4009	409253	3771080	206	6 03E-07	0.00E+00
219	404801	4010	409373	3771096	294	6 01E-07	0.00E+00
220	404801	4011	409476	3771276	334	5 57E-07	0.00E+00
221	404802	1000	410629	3770794	675	5 24E-07	0.00E+00
222	404802	1001	410508	3770592	125	5 73E-07	0.00E+00
223	404802	1002	410564	3770397	155	5 84E-07	0.00E+00
224	404802	1003	410832	3770574	1150	5 10E-07	0.00E+00
225	404802	1004	410605	3770692	194	5 38E-07	0.00E+00
226	404802	1005	410506	3770331	149	6 06E-07	0.00E+00
227	404802	1006	411121	3770483	0	4 35E-07	0.00E+00
228	404802	1007	411359	3770441	0	3 76E-07	0.00E+00
229	404802	1008	411466	3770411	0	3 47E-07	0.00E+00
230	404802	1009	411515	3770430	0	3 39E-07	0.00E+00
231	404802	1010	411488	3770384	0	3 40E-07	0.00E+00
232	404802	1011	411268	3770353	0	3 87E-07	0.00E+00
233	404802	1012	411003	3770316	0	4 54E-07	0.00E+00
234	404802	1013	410579	3770255	0	5 77E-07	0.00E+00
235	404802	1014	410597	3770283	0	5 76E-07	0.00E+00
236	404802	1015	410448	3770253	0	6 21E-07	0.00E+00
237	404802	2000	410336	3771014	497	5 25E-07	0.00E+00
238	404802	2001	410383	3770883	85	5 43E-07	0.00E+00
239	404802	2002	410346	3770761	622	5 74E-07	0.00E+00
240	404802	2003	409965	3770601	274	6 69E-07	0.00E+00
241	404802	2004	409998	3770455	166	7 02E-07	0.00E+00
242	404802	2005	410274	3770426	239	6 53E-07	0.00E+00
243	404802	2006	410191	3770356	4	6 86E-07	0.00E+00
244	404802	2007	410203	3770268	0	7 03E-07	0.00E+00
245	404802	2008	410262	3770206	0	6 81E-07	0.00E+00
246	404803	1000	411507	3770351	0	3 33E-07	0.00E+00
247	404803	1001	411355	3770342	0	3 66E-07	0.00E+00
248	404803	1002	411172	3770328	0	4 10E-07	0.00E+00
249	404803	1003	411025	3770271	0	4 44E-07	0.00E+00
250	404803	1004	411247	3770279	0	3 85E-07	0.00E+00
251	404803	1005	411449	3770253	82	3 33E-07	0.00E+00
252	404803	1006	411333	3770205	0	3 54E-07	0.00E+00
253	404803	1007	411297	3770258	0	3 70E-07	0.00E+00
254	404803	1008	410471	3770216	0	6 15E-07	0.00E+00
255	404803	1009	410481	3770139	94	6 23E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
256	404803	1010	410884	3770166	211	4 77E-07	0.00E+00
257	404803	1011	410943	3770039	0	4 35E-07	0.00E+00
258	404803	1012	410965	3770064	0	4 33E-07	0.00E+00
259	404803	1013	411020	3770124	23	4 27E-07	0.00E+00
260	404803	1014	411091	3770203	0	4 17E-07	0.00E+00
261	404803	1015	411095	3770187	0	4 13E-07	0.00E+00
262	404803	1016	411104	3770121	7	4 00E-07	0.00E+00
263	404803	1017	411052	3770077	23	4 09E-07	0.00E+00
264	404803	1018	410862	3770027	0	4 59E-07	0.00E+00
265	404803	1019	410722	3770068	264	5 19E-07	0.00E+00
266	404803	1020	410814	3770001	38	4 70E-07	0.00E+00
267	404803	1021	410709	3769989	0	5 20E-07	0.00E+00
268	404803	1022	410380	3770059	0	6 73E-07	0.00E+00
269	404803	1023	410355	3770015	0	6 86E-07	0.00E+00
270	404803	1024	410444	3769996	127	6 26E-07	0.00E+00
271	404803	1025	410612	3769915	213	5 33E-07	0.00E+00
272	404803	1026	410664	3769916	91	5 12E-07	0.00E+00
273	404803	1027	410737	3769809	7	4 51E-07	0.00E+00
274	404803	1028	410806	3769773	161	4 16E-07	0.00E+00
275	404803	1029	410948	3769885	0	4 06E-07	0.00E+00
276	404803	1030	411001	3769945	179	3 94E-07	0.00E+00
277	404803	1031	411139	3769993	87	3 65E-07	0.00E+00
278	404803	1032	411186	3770046	11	3 63E-07	0.00E+00
279	404803	1033	411223	3769948	31	3 35E-07	0.00E+00
280	404803	1034	411144	3769875	32	3 38E-07	0.00E+00
281	404803	1035	411124	3769838	0	3 39E-07	0.00E+00
282	404803	1036	410237	3770138	16	7 12E-07	0.00E+00
283	404803	1037	410628	3769794	44	4 91E-07	0.00E+00
284	404803	1038	410768	3769607	0	3 76E-07	0.00E+00
285	404803	1039	410889	3769979	0	4 39E-07	0.00E+00
286	404902	1000	409922	3772679	160	3 28E-07	0.00E+00
287	404902	1001	409704	3772594	405	3 40E-07	0.00E+00
288	404902	1002	409577	3772592	232	3 41E-07	0.00E+00
289	404902	1003	409476	3772602	209	3 39E-07	0.00E+00
290	404902	1004	409399	3772590	124	3 39E-07	0.00E+00
291	404902	1005	409434	3772355	59	3 69E-07	0.00E+00
292	404902	1006	409424	3772019	396	4 14E-07	0.00E+00
293	404902	1007	409451	3771811	105	4 49E-07	0.00E+00
294	404902	1008	409412	3771615	0	4 85E-07	0.00E+00
295	404902	1009	409831	3772680	122	3 30E-07	0.00E+00
296	404902	1010	409873	3772483	149	3 50E-07	0.00E+00
297	404902	2000	409880	3772094	732	3 96E-07	0.00E+00
298	404902	2001	409708	3772311	290	3 74E-07	0.00E+00
299	404902	2002	409547	3772082	215	4 06E-07	0.00E+00
300	404902	2003	409669	3772045	367	4 11E-07	0.00E+00
301	404902	2004	409632	3771804	65	4 48E-07	0.00E+00
302	404902	2005	409726	3771816	63	4 44E-07	0.00E+00
303	404902	2006	409742	3771735	228	4 55E-07	0.00E+00
304	404902	2007	409785	3771710	0	4 59E-07	0.00E+00
305	404902	2008	409935	3771751	0	4 43E-07	0.00E+00
306	404902	2009	409539	3771792	52	4 53E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
307	404902	2010	409588	3771660	0	4.75E-07	0.00E+00
308	404903	1005	410239	3772571	170	3.26E-07	0.00E+00
309	404903	1006	410087	3772597	481	3.30E-07	0.00E+00
310	404903	2000	410542	3772249	149	3.39E-07	0.00E+00
311	404903	2001	410441	3772248	131	3.46E-07	0.00E+00
312	404903	2002	410307	3772161	304	3.63E-07	0.00E+00
313	404903	2003	410241	3772294	122	3.53E-07	0.00E+00
314	404903	2004	410080	3772298	204	3.62E-07	0.00E+00
315	404903	2005	410092	3772028	346	3.93E-07	0.00E+00
316	404903	2006	410114	3771831	88	4.17E-07	0.00E+00
317	404903	2007	410434	3771916	160	3.82E-07	0.00E+00
318	404903	2008	410410	3771998	289	3.75E-07	0.00E+00
319	404903	2009	410556	3771915	0	3.74E-07	0.00E+00
320	404903	2010	410360	3771863	0	3.95E-07	0.00E+00
321	404903	2011	410162	3771811	0	4.17E-07	0.00E+00
322	404903	2012	410033	3771778	0	4.31E-07	0.00E+00
323	405102	2005	410635	3772292	107	3.29E-07	0.00E+00
324	405102	2006	410721	3772243	420	3.28E-07	0.00E+00
325	405102	2009	410689	3772064	194	3.48E-07	0.00E+00
326	405102	2010	410721	3771994	0	3.53E-07	0.00E+00
327	405102	2011	410745	3771967	0	3.55E-07	0.00E+00
328	405202	1002	411180	3772074	0	3.18E-07	0.00E+00
329	405202	1004	411091	3771857	490	3.43E-07	0.00E+00
330	405202	1005	411079	3772022	0	3.28E-07	0.00E+00
331	405202	1006	411079	3772082	0	3.23E-07	0.00E+00
332	405202	1007	410876	3772041	0	3.39E-07	0.00E+00
333	405202	1008	410905	3772032	0	3.38E-07	0.00E+00
334	405202	1009	410932	3771929	73	3.46E-07	0.00E+00
335	405202	1010	411000	3771991	0	3.36E-07	0.00E+00
336	405202	1011	411010	3771925	0	3.42E-07	0.00E+00
337	405202	1012	410786	3771818	446	3.68E-07	0.00E+00
338	405202	1013	410825	3771667	0	3.82E-07	0.00E+00
339	405202	1014	410755	3771478	536	4.10E-07	0.00E+00
340	405202	2000	411295	3771825	406	3.34E-07	0.00E+00
341	405202	2001	411155	3771746	254	3.50E-07	0.00E+00
342	405202	2002	410929	3771494	146	3.94E-07	0.00E+00
343	405202	2003	411007	3771465	92	3.90E-07	0.00E+00
344	405202	2004	410916	3771214	378	4.29E-07	0.00E+00
345	405202	2005	410948	3771052	322	4.44E-07	0.00E+00
346	405202	2006	411116	3771364	77	3.93E-07	0.00E+00
347	405202	2007	411167	3771421	76	3.82E-07	0.00E+00
348	405202	2008	411305	3771624	0	3.52E-07	0.00E+00
349	405202	2009	411012	3771251	68	4.14E-07	0.00E+00
350	405202	2010	411065	3771307	71	4.03E-07	0.00E+00
351	405202	2011	411431	3771794	129	3.28E-07	0.00E+00
352	405202	2012	411464	3771714	188	3.32E-07	0.00E+00
353	405202	2013	411518	3771629	310	3.34E-07	0.00E+00
354	405202	2014	411169	3771053	628	4.14E-07	0.00E+00
355	405202	2015	411412	3771353	250	3.64E-07	0.00E+00
356	405202	2016	410776	3771280	285	4.35E-07	0.00E+00
357	405203	1000	411748	3771469	228	3.23E-07	0.00E+00

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
358	405203	1001	411376	3771059	569	3 85E-07	0.00E+00
359	405203	1002	411771	3771318	195	3 26E-07	0.00E+00
360	405203	1003	411911	3771276	575	3 10E-07	0.00E+00
361	405203	1005	412059	3771059	122	2 88E-07	0.00E+00
362	405203	1006	411965	3770970	268	2 98E-07	0.00E+00
363	405203	1007	411792	3770940	22	3 23E-07	0.00E+00
364	405203	1008	411522	3770796	580	3 63E-07	0.00E+00
365	405203	1009	411604	3770992	173	3 52E-07	0.00E+00
366	405203	1010	411427	3770934	360	3 80E-07	0.00E+00
367	405203	1011	411900	3770843	109	3 03E-07	0.00E+00
368	405203	1012	412045	3770854	23	2 82E-07	0.00E+00
369	405203	1013	411589	3770557	1	3 37E-07	0.00E+00
370	405302	3008	412211	3770828	64	2 57E-07	0.00E+00
371	405302	4003	412461	3770524	0	2 00E-07	0.00E+00
372	405302	4004	412297	3770539	0	2 22E-07	0.00E+00
373	405302	4011	412409	3770491	0	2 02E-07	0.00E+00
374	405302	4012	411886	3770431	0	2 69E-07	0.00E+00
375	405302	4013	411906	3770455	0	2 69E-07	0.00E+00
376	405302	4014	411841	3770556	135	2 91E-07	0.00E+00
377	405302	4015	411995	3770609	76	2 71E-07	0.00E+00
378	405302	4016	411908	3770568	50	2 81E-07	0.00E+00
379	405302	4017	411655	3770788	11	3 40E-07	0.00E+00
380	405302	4018	411722	3770862	18	3 31E-07	0.00E+00
381	405302	4019	411830	3770765	89	3 10E-07	0.00E+00
382	405302	4020	411764	3770692	78	3 16E-07	0.00E+00
383	405302	4021	412127	3770699	258	2 59E-07	0.00E+00
384	406701	1000	412642	3769198	162	9 45E-08	0.00E+00
385	406701	1001	412763	3769069	184	8 66E-08	0.00E+00
386	406701	1002	412564	3769028	43	9 15E-08	0.00E+00
387	406701	1003	412628	3768795	170	8 40E-08	0.00E+00
388	406701	1004	412362	3768996	0	9 81E-08	0.00E+00
389	406701	1005	412431	3768825	126	9 06E-08	0.00E+00
390	406701	1006	412263	3768731	221	9 43E-08	0.00E+00
391	406701	1007	412130	3768741	29	9 94E-08	0.00E+00
392	406701	1008	412329	3768616	109	8 96E-08	0.00E+00
393	406701	1009	412088	3768536	0	9 59E-08	0.00E+00
394	406701	1010	412027	3768527	267	9 83E-08	0.00E+00
395	406701	1011	412147	3768453	0	9 25E-08	0.00E+00
396	406701	1012	412196	3768403	254	9 04E-08	0.00E+00
397	406701	2001	412709	3768318	284	7 52E-08	0.00E+00
398	406701	2002	412703	3768419	77	7 61E-08	0.00E+00
399	406701	2003	412596	3768456	101	7 93E-08	0.00E+00
400	406701	2004	412465	3768481	159	8 34E-08	0.00E+00
401	406701	2005	412456	3768583	118	8 50E-08	0.00E+00
402	406701	2006	412373	3768301	88	8 42E-08	0.00E+00
403	406701	2007	412293	3768260	40	8 59E-08	0.00E+00
404	406701	3000	412906	3768915	287	7 88E-08	0.00E+00
405	406702	1015	412575	3769970	62	1 42E-07	0.00E+00
406	406702	1016	412656	3770031	82	1 40E-07	0.00E+00
407	406702	1017	412705	3769923	0	1 30E-07	0.00E+00
408	406702	1022	412725	3769730	6	1 16E-07	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
409	406702	1027	412833	3769521	0	9 99E-08	0.00E+00
410	406702	3008	412870	3769435	178	9 48E-08	0.00E+00
411	406800	1003	411864	3770405	0	2 71E-07	0.00E+00
412	406800	1004	411939	3770358	41	2 54E-07	0.00E+00
413	406800	1005	412023	3770254	183	2 30E-07	0.00E+00
414	406800	1006	412268	3770404	8	2 11E-07	0.00E+00
415	406800	1007	412278	3770311	131	2 01E-07	0.00E+00
416	406800	1008	412488	3770286	287	1 76E-07	0.00E+00
417	406800	1009	412077	3770099	125	2 04E-07	0.00E+00
418	406800	1010	412180	3770011	93	1 81E-07	0.00E+00
419	406800	1011	412385	3770011	54	1 61E-07	0.00E+00
420	406800	1012	412508	3770148	95	1 62E-07	0.00E+00
421	406800	1013	411780	3770286	83	2 72E-07	0.00E+00
422	406800	1014	412270	3769902	132	1 61E-07	0.00E+00
423	406800	1015	412262	3769792	0	1 54E-07	0.00E+00
424	406800	1016	412259	3769771	0	1 51E-07	0.00E+00
425	406800	2000	412265	3769482	0	1 27E-07	0.00E+00
426	406800	2001	412568	3769351	36	1 03E-07	0.00E+00
427	406800	2002	412461	3769258	65	1 04E-07	0.00E+00
428	406800	2003	412367	3769156	107	1 04E-07	0.00E+00
429	406800	2004	412307	3769264	0	1 12E-07	0.00E+00
430	406800	2005	412151	3769181	218	1 15E-07	0.00E+00
431	406800	2006	412278	3769024	55	1 02E-07	0.00E+00
432	406800	2007	412253	3769112	42	1 07E-07	0.00E+00
433	406800	2008	411978	3769250	64	1 29E-07	0.00E+00
434	406800	2009	411699	3769318	141	1 55E-07	0.00E+00
435	406800	2010	411853	3769119	65	1 27E-07	0.00E+00
436	406800	2011	412268	3768934	19	9 92E-08	0.00E+00
437	406800	2012	412198	3768975	195	1 04E-07	0.00E+00
438	406800	2013	412202	3769053	61	1 06E-07	0.00E+00
439	406800	2014	411661	3769082	145	1 37E-07	0.00E+00
440	406800	2015	411715	3768966	27	1 26E-07	0.00E+00
441	406800	2016	412130	3768924	79	1 05E-07	0.00E+00
442	406800	2017	411870	3768886	114	1 15E-07	0.00E+00
443	406800	2018	412083	3768866	175	1 05E-07	0.00E+00
444	406800	2019	411954	3768777	111	1 08E-07	0.00E+00
445	406800	2020	411636	3768877	89	1 26E-07	0.00E+00
446	406800	3000	411374	3770077	115	3 22E-07	0.00E+00
447	406800	3001	411641	3770138	559	2 76E-07	0.00E+00
448	406800	3002	411280	3769849	103	2 99E-07	0.00E+00
449	406800	3003	411483	3769953	65	2 77E-07	0.00E+00
450	406800	3004	411399	3769983	90	3 00E-07	0.00E+00
451	406800	3005	411346	3769807	0	2 84E-07	0.00E+00
452	406800	3006	412047	3769741	0	1 69E-07	0.00E+00
453	406800	3007	411731	3769940	167	2 31E-07	0.00E+00
454	406800	3008	411903	3769915	72	2 03E-07	0.00E+00
455	406800	3009	411966	3769810	95	1 82E-07	0.00E+00
456	406800	3010	411957	3769653	115	1 64E-07	0.00E+00
457	406800	3011	411620	3769697	153	2 10E-07	0.00E+00
458	406800	3012	411263	3770127	68	3 58E-07	0.00E+00
459	406800	3013	411192	3770180	45	3 86E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
460	406800	3014	411117	3770176	0	4 06E-07	0.00E+00
461	406800	3015	411883	3769524	147	1 58E-07	0.00E+00
462	406800	3016	411791	3769422	66	1 56E-07	0.00E+00
463	406901	1000	411245	3769705	253	2 77E-07	0.00E+00
464	406901	1001	411226	3769816	0	3 15E-07	0.00E+00
465	406901	1002	411036	3769849	0	3 75E-07	0.00E+00
466	406901	1003	411007	3769796	105	3 57E-07	0.00E+00
467	406901	1004	410899	3769666	107	3 53E-07	0.00E+00
468	406901	1005	411111	3769599	95	2 80E-07	0.00E+00
469	406901	1006	411054	3769535	106	2 77E-07	0.00E+00
470	406901	1007	410991	3769466	140	2 72E-07	0.00E+00
471	406901	2000	410711	3769556	322	3 77E-07	0.00E+00
472	406901	2001	410744	3769385	583	3 10E-07	0.00E+00
473	406901	2002	410658	3769286	104	3 00E-07	0.00E+00
474	406901	2003	410382	3769274	315	3 80E-07	0.00E+00
475	406901	2004	410823	3769219	126	2 46E-07	0.00E+00
476	406901	2005	410764	3769153	118	2 41E-07	0.00E+00
477	406901	2006	410349	3769047	247	2 93E-07	0.00E+00
478	406901	2007	410186	3769037	358	3 31E-07	0.00E+00
479	406901	3000	410682	3769095	191	2 43E-07	0.00E+00
480	406901	3001	410687	3769006	104	2 21E-07	0.00E+00
481	406901	3002	410495	3769098	115	2 77E-07	0.00E+00
482	406901	3003	410324	3768889	103	2 53E-07	0.00E+00
483	406901	3004	410386	3768837	120	2 34E-07	0.00E+00
484	406901	3005	410447	3768789	99	2 19E-07	0.00E+00
485	406901	3006	410609	3768916	107	2 18E-07	0.00E+00
486	406901	3007	410505	3768738	98	2 05E-07	0.00E+00
487	406901	3008	410221	3768784	167	2 48E-07	0.00E+00
488	406901	3009	410136	3768659	504	2 41E-07	0.00E+00
489	406901	3010	409982	3768927	0	3 30E-07	0.00E+00
490	406901	3011	409906	3768833	0	3 08E-07	0.00E+00
491	406901	3012	409789	3768689	0	2 93E-07	0.00E+00
492	406901	3013	409897	3768622	114	2 64E-07	0.00E+00
493	406901	3014	409969	3768693	0	2 61E-07	0.00E+00
494	406902	1000	411101	3769214	0	2 02E-07	0.00E+00
495	406902	1001	411314	3769067	460	1 62E-07	0.00E+00
496	406902	1002	410998	3769040	79	1 89E-07	0.00E+00
497	406902	1003	411058	3768981	91	1 75E-07	0.00E+00
498	406902	1004	411185	3768809	92	1 52E-07	0.00E+00
499	406902	1005	411121	3768927	71	1 64E-07	0.00E+00
500	406902	1006	410938	3768724	90	1 64E-07	0.00E+00
501	406902	1007	411384	3768818	98	1 39E-07	0.00E+00
502	406902	1008	410779	3768374	197	1 62E-07	0.00E+00
503	406902	1009	410859	3768302	312	1 53E-07	0.00E+00
504	406902	2000	410495	3768484	334	1 88E-07	0.00E+00
505	406902	2001	410695	3768539	165	1 72E-07	0.00E+00
506	406902	2002	410721	3768427	202	1 68E-07	0.00E+00
507	406902	2003	410600	3768195	126	1 69E-07	0.00E+00
508	406902	2004	410549	3768141	68	1 72E-07	0.00E+00
509	406902	2005	410712	3768101	47	1 58E-07	0.00E+00
510	406902	2006	410662	3768045	0	1 60E-07	0.00E+00

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Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
511	406902	3000	411486	3769516	123	2 00E-07	0.00E+00
512	406902	3001	411208	3769348	90	2 12E-07	0.00E+00
513	406902	3002	411281	3769360	65	2 03E-07	0.00E+00
514	406902	3003	411343	3769304	88	1 86E-07	0.00E+00
515	406902	3004	411466	3769157	278	1 57E-07	0.00E+00
516	406902	3005	411625	3769126	73	1 43E-07	0.00E+00
517	407001	1000	409177	3769546	0	1 41E-06	0.00E+00
518	407001	1001	409590	3769596	0	1 14E-06	0.00E+00
519	407001	1002	409046	3769511	0	1 54E-06	0.00E+00
520	407001	1003	409064	3769393	0	1 89E-06	0.00E+00
521	407001	1004	408964	3769499	0	1 49E-06	0.00E+00
522	**407001**	**1005**	**409664**	**3769557**	**304**	**1.08E-06**	**3.28E-04**
523	**407001**	**1006**	**409414**	**3769236**	**325**	**1.36E-06**	**4.43E-04**
524	**407001**	**1007**	**409275**	**3769315**	**272**	**1.74E-06**	**4.74E-04**
525	**407001**	**1008**	**409376**	**3769308**	**310**	**1.50E-06**	**4.64E-04**
526	407001	1009	409040	3769526	0	1 45E-06	0.00E+00
527	407001	1010	408971	3769520	0	1 37E-06	0.00E+00
528	407001	2000	410316	3769970	0	7 07E-07	0.00E+00
529	407001	2001	410343	3769948	19	6 62E-07	0.00E+00
530	407001	2002	410380	3769912	13	6 41E-07	0.00E+00
531	407001	2003	410345	3769918	3	6 59E-07	0.00E+00
532	407001	2004	410319	3769893	18	6 70E-07	0.00E+00
533	407001	2005	410190	3769777	67	7 20E-07	0.00E+00
534	407001	2006	410283	3769944	0	7 21E-07	0.00E+00
535	407001	2007	409902	3769721	0	9 31E-07	0.00E+00
536	407001	2008	409828	3769578	230	9 37E-07	0.00E+00
537	407001	2009	410167	3769658	77	6 97E-07	0.00E+00
538	407001	2010	410337	3769773	33	6 31E-07	0.00E+00
539	407001	2011	410453	3769844	34	5 90E-07	0.00E+00
540	407001	2012	410404	3769889	51	6 24E-07	0.00E+00
541	407001	2013	409860	3769506	209	8 76E-07	0.00E+00
542	407001	2014	409996	3769548	148	7 76E-07	0.00E+00
543	407001	2015	410107	3769524	179	6 75E-07	0.00E+00
544	407001	2016	410349	3769699	139	5 97E-07	0.00E+00
545	407001	2017	410479	3769736	34	5 41E-07	0.00E+00
546	407001	2018	410500	3769795	0	5 53E-07	0.00E+00
547	407001	2019	410533	3769778	13	5 30E-07	0.00E+00
548	407001	2020	410406	3769584	198	5 17E-07	0.00E+00
549	407001	2021	410531	3769663	378	4 90E-07	0.00E+00
550	407001	2022	410590	3769723	0	4 84E-07	0.00E+00
551	407001	2023	410592	3769647	0	4 56E-07	0.00E+00
552	407001	2024	410472	3769515	0	4 55E-07	0.00E+00
553	407001	2025	410310	3769329	0	4 36E-07	0.00E+00
554	407001	2026	410239	3769388	313	5 06E-07	0.00E+00
555	407001	2027	410119	3769439	124	6 12E-07	0.00E+00
556	407001	2028	410506	3769710	0	5 20E-07	0.00E+00
557	407001	3000	409910	3769275	118	6 36E-07	0.00E+00
558	407001	3001	409666	3769143	261	7 13E-07	0.00E+00
559	407001	3002	409604	3769194	292	8 81E-07	0.00E+00
560	**407001**	**3003**	**409542**	**3769248**	**284**	**1.07E-06**	**3.04E-04**
561	407001	3004	409453	3768945	284	6 34E-07	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
562	407001	3005	409731	3769093	253	5 80E-07	0.00E+00
563	407001	3006	409728	3768960	83	4 35E-07	0.00E+00
564	407001	3007	409759	3768826	425	3 36E-07	0.00E+00
565	407001	3008	409923	3769001	89	3 85E-07	0.00E+00
566	407001	3009	410045	3769151	325	4 46E-07	0.00E+00
567	407001	3010	410104	3769079	0	3 74E-07	0.00E+00
568	407002	1000	408944	3768486	56	5 04E-07	0.00E+00
569	407002	1001	408962	3768315	361	3 26E-07	0.00E+00
570	407002	1002	409183	3768155	471	2 66E-07	0.00E+00
571	407002	1003	409278	3768068	0	2 54E-07	0.00E+00
572	407002	1004	409107	3767859	7	2 23E-07	0.00E+00
573	407002	1005	409008	3767942	378	2 36E-07	0.00E+00
574	407002	1006	408882	3768043	132	2 64E-07	0.00E+00
575	407002	1007	408821	3768095	146	2 93E-07	0.00E+00
576	407002	1008	408754	3768146	144	3 41E-07	0.00E+00
577	407002	1009	408689	3768203	134	4 14E-07	0.00E+00
578	407002	1010	408547	3767990	0	4 61E-07	0.00E+00
579	407002	1011	408559	3767880	0	4 11E-07	0.00E+00
580	407002	1012	408700	3767828	0	3 02E-07	0.00E+00
581	407002	1013	408838	3767718	0	2 35E-07	0.00E+00
582	407002	1014	408801	3767561	0	2 26E-07	0.00E+00
583	407002	2000	408734	3769525	0	9 12E-07	0.00E+00
584	407002	2001	408424	3769497	0	5 06E-07	0.00E+00
585	407002	2002	407983	3769446	0	3 31E-07	0.00E+00
586	407002	2003	407685	3769424	0	3 01E-07	0.00E+00
587	407002	2004	408186	3769410	0	3 77E-07	0.00E+00
588	407002	2005	408578	3769459	0	6 62E-07	0.00E+00
589	407002	2006	407669	3769407	0	2 94E-07	0.00E+00
590	407002	2007	407666	3769415	0	2 96E-07	0.00E+00
591	407002	2008	407639	3769406	0	2 92E-07	0.00E+00
592	407002	2009	407557	3769386	0	2 83E-07	0.00E+00
593	407002	2010	407495	3769361	0	2 77E-07	0.00E+00
594	407002	2011	407567	3769339	0	2 83E-07	0.00E+00
595	407002	2012	407623	3769354	0	2 86E-07	0.00E+00
596	407002	2013	407646	3769359	0	2 88E-07	0.00E+00
597	407002	2014	407862	3769380	0	3 10E-07	0.00E+00
598	407002	2015	407691	3769219	0	3 11E-07	0.00E+00
599	407002	2016	408636	3769395	0	8 37E-07	0.00E+00
600	407002	2017	408652	3769315	0	9 06E-07	0.00E+00
601	407002	2018	408764	3769066	0	2 30E-06	0.00E+00
602	407002	2019	409039	3768943	0	4 05E-06	0.00E+00
603	407002	2020	409331	3768816	485	5 78E-07	0.00E+00
604	**407002**	**2021**	**408885**	**3768721**	**5**	**2.18E-06**	**1.09E-05**
605	407002	2022	408515	3768762	0	7 83E-07	0.00E+00
606	407002	2023	408020	3768764	0	4 07E-07	0.00E+00
607	407002	2024	407714	3768812	0	3 46E-07	0.00E+00
608	407002	2025	408247	3769133	0	4 17E-07	0.00E+00
609	407002	2026	409524	3768533	519	3 13E-07	0.00E+00
610	407002	2027	409363	3768502	236	3 44E-07	0.00E+00
611	407002	2028	409284	3768539	199	3 91E-07	0.00E+00
612	407002	2029	409131	3768616	412	6 04E-07	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
613	407002	2030	407516	3768675	0	3 40E-07	0.00E+00
614	407002	2031	407443	3768753	0	3 18E-07	0.00E+00
615	407002	2032	407521	3769009	0	3 17E-07	0.00E+00
616	407002	2033	409300	3768321	40	3 02E-07	0.00E+00
617	407002	2034	409379	3768266	78	2 85E-07	0.00E+00
618	407002	2035	409416	3768237	0	2 77E-07	0.00E+00
619	407002	2036	409595	3768454	0	2 90E-07	0.00E+00
620	407002	2037	407497	3769023	0	3 12E-07	0.00E+00
621	407002	2038	407468	3769037	0	2 97E-07	0.00E+00
622	407002	2039	407399	3769041	0	2 87E-07	0.00E+00
623	407002	2040	407370	3768778	0	3 19E-07	0.00E+00
624	407002	2041	407492	3769314	0	2 76E-07	0.00E+00
625	407002	2042	407231	3769204	0	2 53E-07	0.00E+00
626	407002	2043	407045	3769140	0	2 48E-07	0.00E+00
627	407002	2044	407368	3768740	0	3 11E-07	0.00E+00
628	407002	2045	407406	3768777	0	3 15E-07	0.00E+00
629	407002	2046	407379	3768710	0	3 19E-07	0.00E+00
630	407002	2047	407360	3768723	0	3 14E-07	0.00E+00
631	407002	2048	407355	3768738	0	3 13E-07	0.00E+00
632	407002	2049	407195	3768828	0	2 77E-07	0.00E+00
633	407002	2050	407278	3769056	0	2 73E-07	0.00E+00
634	407002	2051	407124	3768992	0	2 53E-07	0.00E+00
635	407002	2052	407061	3768914	0	2 50E-07	0.00E+00
636	407002	2053	408203	3768442	0	6 15E-07	0.00E+00
637	407002	2054	408579	3768372	0	6 32E-07	0.00E+00
638	407002	2055	408247	3768062	0	7 08E-07	0.00E+00
639	407002	2056	407465	3768630	0	3 43E-07	0.00E+00
640	407002	2057	407426	3768614	1	3 48E-07	0.00E+00
641	407002	2058	407341	3768684	0	3 24E-07	0.00E+00
642	407002	2059	407327	3768694	0	3 16E-07	0.00E+00
643	407002	2060	407261	3768743	0	2 92E-07	0.00E+00
644	407002	2061	407313	3768689	0	3 06E-07	0.00E+00
645	407002	2062	407499	3768535	0	3 72E-07	0.00E+00
646	407101	1000	410060	3768342	308	2 29E-07	0.00E+00
647	407101	1001	409710	3768319	100	2 54E-07	0.00E+00
648	407101	1002	409838	3768079	354	2 35E-07	0.00E+00
649	407101	1003	410039	3768100	31	2 16E-07	0.00E+00
650	407101	1004	410166	3768242	121	2 10E-07	0.00E+00
651	407101	1005	409909	3767957	145	2 19E-07	0.00E+00
652	407101	2000	410363	3768254	27	1 94E-07	0.00E+00
653	407101	2001	410219	3768180	115	2 03E-07	0.00E+00
654	407101	2002	410299	3768131	102	1 94E-07	0.00E+00
655	407101	2003	410098	3768046	26	2 07E-07	0.00E+00
656	407101	2004	410156	3767992	43	1 99E-07	0.00E+00
657	407101	2005	410194	3767954	15	1 95E-07	0.00E+00
658	407101	2006	410303	3768062	45	1 91E-07	0.00E+00
659	407101	2007	410305	3768012	36	1 88E-07	0.00E+00
660	407101	2008	410113	3767822	167	1 94E-07	0.00E+00
661	407101	2009	410032	3767855	143	2 02E-07	0.00E+00
662	407101	2010	409974	3767909	147	2 09E-07	0.00E+00
663	407101	2011	409929	3767743	0	2 03E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
664	407101	3000	410505	3767981	167	1 72E-07	0.00E+00
665	407101	3001	410402	3768027	178	1 80E-07	0.00E+00
666	407101	3002	410180	3767774	193	1 87E-07	0.00E+00
667	407101	3003	410246	3767717	205	1 79E-07	0.00E+00
668	407101	3004	410258	3767654	102	1 77E-07	0.00E+00
669	407101	3005	410500	3767868	108	1 67E-07	0.00E+00
670	407101	3006	410326	3767640	91	1 71E-07	0.00E+00
671	407101	4000	410658	3767803	173	1 53E-07	0.00E+00
672	407101	4001	410786	3767830	243	1 47E-07	0.00E+00
673	407101	4002	410786	3767457	884	1 36E-07	0.00E+00
674	407101	4003	410634	3767675	119	1 51E-07	0.00E+00
675	407101	4004	410386	3767415	330	1 56E-07	0.00E+00
676	407101	4005	410447	3767593	47	1 61E-07	0.00E+00
677	407101	4006	410519	3767264	69	1 45E-07	0.00E+00
678	407102	1000	409282	3767931	531	2 37E-07	0.00E+00
679	407102	1001	409582	3768027	0	2 42E-07	0.00E+00
680	407102	1002	409364	3767829	263	2 26E-07	0.00E+00
681	407102	1003	409439	3767785	258	2 22E-07	0.00E+00
682	407102	1004	409645	3767848	200	2 23E-07	0.00E+00
683	407102	1005	409466	3767636	217	2 07E-07	0.00E+00
684	407102	2000	409845	3767704	294	2 04E-07	0.00E+00
685	407102	2001	409636	3767479	186	1 89E-07	0.00E+00
686	407102	2002	409792	3767589	126	1 96E-07	0.00E+00
687	407102	2003	409935	3767296	749	1 68E-07	0.00E+00
688	407102	2004	410058	3767508	231	1 79E-07	0.00E+00
689	407102	2005	410193	3767354	270	1 64E-07	0.00E+00
690	407102	2006	410306	3767262	315	1 53E-07	0.00E+00
691	407102	2007	409812	3767302	305	1 71E-07	0.00E+00
692	407102	3000	410468	3767089	285	1 39E-07	0.00E+00
693	407102	3001	410191	3766966	310	1 41E-07	0.00E+00
694	407102	3002	410130	3767201	369	1 57E-07	0.00E+00
695	407102	3003	410330	3766816	136	1 31E-07	0.00E+00
696	407102	3004	410287	3766914	161	1 37E-07	0.00E+00
697	407102	3005	410074	3767012	116	1 47E-07	0.00E+00
698	407102	3006	410014	3767067	123	1 51E-07	0.00E+00
699	407200	1000	410961	3766790	0	1 10E-07	0.00E+00
700	407200	1001	410944	3766631	147	1 07E-07	0.00E+00
701	407200	1002	410868	3766688	97	1 11E-07	0.00E+00
702	407200	1003	410690	3766490	125	1 10E-07	0.00E+00
703	407200	1004	410760	3766426	166	1 07E-07	0.00E+00
704	407200	1005	411097	3766313	530	9 56E-08	0.00E+00
705	407200	1006	411082	3766430	126	9 82E-08	0.00E+00
706	407200	1007	411134	3766541	291	1 01E-07	0.00E+00
707	407200	1008	410757	3766322	0	1 03E-07	0.00E+00
708	407200	1009	411141	3766093	490	8 79E-08	0.00E+00
709	407200	2000	410580	3766971	232	1 30E-07	0.00E+00
710	407200	2001	410706	3766836	143	1 21E-07	0.00E+00
711	407200	2002	410762	3766785	111	1 17E-07	0.00E+00
712	407200	2003	410647	3766887	116	1 25E-07	0.00E+00
713	407200	2004	410429	3766794	98	1 28E-07	0.00E+00
714	407200	2005	410452	3766676	51	1 22E-07	0.00E+00

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Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
715	407200	2006	410515	3766748	61	1 24E-07	0.00E+00
716	407200	2007	410636	3766539	121	1 13E-07	0.00E+00
717	407200	2008	410580	3766590	172	1 16E-07	0.00E+00
718	407200	2009	410552	3766629	310	1 17E-07	0.00E+00
719	407200	2010	410365	3766685	142	1 24E-07	0.00E+00
720	407200	3000	411498	3766161	265	8 16E-08	0.00E+00
721	407200	3001	411590	3766076	115	7 78E-08	0.00E+00
722	407200	3002	411649	3766025	120	7 56E-08	0.00E+00
723	407200	3003	411300	3765974	617	8 26E-08	0.00E+00
724	407200	3005	411315	3765804	64	7 82E-08	0.00E+00
725	407200	3006	411487	3765797	224	7 45E-08	0.00E+00
726	407200	5000	411990	3766451	814	7 67E-08	0.00E+00
727	407200	5001	411737	3766242	68	7 82E-08	0.00E+00
728	407200	5003	411822	3766516	262	8 08E-08	0.00E+00
729	407200	5004	411802	3766214	106	7 64E-08	0.00E+00
730	407301	1000	411077	3768286	216	1 39E-07	0.00E+00
731	407301	1001	411154	3768102	65	1 31E-07	0.00E+00
732	407301	1002	411061	3768180	145	1 37E-07	0.00E+00
733	407301	1003	410996	3767929	113	1 36E-07	0.00E+00
734	407301	1004	410936	3767982	140	1 41E-07	0.00E+00
735	407301	1005	410850	3768056	275	1 48E-07	0.00E+00
736	407301	1006	411113	3767936	188	1 30E-07	0.00E+00
737	407301	1007	410916	3767784	0	1 39E-07	0.00E+00
738	407301	1008	410721	3767994	0	1 54E-07	0.00E+00
739	407301	2000	411311	3767966	259	1 21E-07	0.00E+00
740	407301	2001	411170	3767881	229	1 26E-07	0.00E+00
741	407301	2002	411113	3767698	46	1 26E-07	0.00E+00
742	407301	2003	411288	3767547	260	1 15E-07	0.00E+00
743	407301	2004	411347	3767748	282	1 15E-07	0.00E+00
744	407301	2005	411427	3767748	144	1 11E-07	0.00E+00
745	407301	3000	411693	3767562	352	9 93E-08	0.00E+00
746	407301	3001	411547	3767641	157	1 05E-07	0.00E+00
747	407301	3002	411488	3767696	136	1 08E-07	0.00E+00
748	407301	3003	411506	3767351	239	1 02E-07	0.00E+00
749	407301	3004	411798	3767356	266	9 34E-08	0.00E+00
750	407301	3005	412083	3767397	143	8 59E-08	0.00E+00
751	407301	4000	412127	3767249	130	8 27E-08	0.00E+00
752	407301	4001	412014	3767321	87	8 65E-08	0.00E+00
753	407301	4002	411960	3767261	111	8 74E-08	0.00E+00
754	407301	4003	411917	3767153	245	8 80E-08	0.00E+00
755	407301	4004	412158	3767136	278	8 04E-08	0.00E+00
756	407301	4005	412019	3766940	125	8 21E-08	0.00E+00
757	407301	4006	412121	3767031	23	8 05E-08	0.00E+00
758	407301	4007	411891	3766953	0	8 56E-08	0.00E+00
759	407301	4008	411819	3767055	174	8 92E-08	0.00E+00
760	407302	1000	411183	3767414	437	1 18E-07	0.00E+00
761	407302	1001	411064	3767280	172	1 19E-07	0.00E+00
762	407302	1002	411117	3767340	144	1 18E-07	0.00E+00
763	407302	1003	411001	3767215	145	1 20E-07	0.00E+00
764	407302	1004	410938	3767151	148	1 21E-07	0.00E+00
765	407302	1005	410887	3767093	149	1 21E-07	0.00E+00

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Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
766	407302	2000	411385	3767179	332	1 05E-07	0.00E+00
767	407302	2001	411257	3767133	196	1 08E-07	0.00E+00
768	407302	2002	411101	3766908	87	1 09E-07	0.00E+00
769	407302	2003	411224	3766792	177	1 02E-07	0.00E+00
770	407302	2004	411465	3767057	165	9 96E-08	0.00E+00
771	407302	2005	411510	3766992	155	9 73E-08	0.00E+00
772	407302	2006	411292	3766749	171	9 87E-08	0.00E+00
773	407302	3000	411717	3767034	0	9 20E-08	0.00E+00
774	407302	3001	411633	3766881	153	9 21E-08	0.00E+00
775	407302	3002	411570	3766936	151	9 48E-08	0.00E+00
776	407302	3003	411353	3766695	154	9 61E-08	0.00E+00
777	407302	3004	411499	3766549	104	8 97E-08	0.00E+00
778	407302	3005	411695	3766826	169	8 90E-08	0.00E+00
779	407302	3006	411821	3766739	148	8 44E-08	0.00E+00
780	407302	3007	411903	3766891	11	8 46E-08	0.00E+00
781	407302	3008	411872	3766919	0	8 59E-08	0.00E+00
782	407302	3009	411754	3766774	133	8 65E-08	0.00E+00
783	407302	3010	411942	3766836	0	8 28E-08	0.00E+00
784	407400	1000	411431	3768766	116	1 33E-07	0.00E+00
785	407400	1001	411510	3768704	116	1 26E-07	0.00E+00
786	407400	1002	411576	3768632	110	1 20E-07	0.00E+00
787	407400	1003	411663	3768558	124	1 14E-07	0.00E+00
788	407400	1004	411763	3768467	169	1 07E-07	0.00E+00
789	407400	1005	411826	3768425	20	1 04E-07	0.00E+00
790	407400	1006	411824	3768403	0	1 04E-07	0.00E+00
791	407400	1007	411905	3768493	0	1 03E-07	0.00E+00
792	407400	1008	412016	3768394	0	9 65E-08	0.00E+00
793	407400	1009	411926	3768250	104	9 78E-08	0.00E+00
794	407400	1010	411847	3768259	134	1 00E-07	0.00E+00
795	407400	1011	411732	3768129	31	1 03E-07	0.00E+00
796	407400	1012	411747	3768318	0	1 06E-07	0.00E+00
797	407400	1013	411597	3768148	0	1 10E-07	0.00E+00
798	407400	1014	411376	3768194	336	1 19E-07	0.00E+00
799	407400	1015	411512	3768259	74	1 14E-07	0.00E+00
800	407400	1016	411615	3768208	15	1 09E-07	0.00E+00
801	407400	1017	411550	3768303	79	1 13E-07	0.00E+00
802	407400	1018	411345	3768443	181	1 28E-07	0.00E+00
803	407400	1019	411172	3768475	91	1 37E-07	0.00E+00
804	407400	1020	411244	3768409	76	1 31E-07	0.00E+00
805	407400	1021	411483	3768091	43	1 13E-07	0.00E+00
806	407400	1022	411428	3768131	9	1 16E-07	0.00E+00
807	407400	1023	411622	3768009	218	1 06E-07	0.00E+00
808	407400	1024	411668	3767938	51	1 03E-07	0.00E+00
809	407400	1025	411745	3767906	36	1 00E-07	0.00E+00
810	407501	1000	412763	3768201	0	7 22E-08	0.00E+00
811	407501	1001	412732	3768049	0	7 24E-08	0.00E+00
812	407501	1002	412659	3767971	0	7 37E-08	0.00E+00
813	407501	1003	412390	3767883	580	7 94E-08	0.00E+00
814	407501	1004	412259	3768088	156	8 57E-08	0.00E+00
815	407501	1005	412320	3768021	123	8 30E-08	0.00E+00
816	407501	1006	412111	3768237	65	9 18E-08	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
817	407501	1007	411975	3768116	0	9 48E-08	0.00E+00
818	407501	1008	412130	3768180	106	9 02E-08	0.00E+00
819	407501	1009	412190	3768124	93	8 81E-08	0.00E+00
820	407501	1010	412026	3767942	144	9 17E-08	0.00E+00
821	407501	1011	411964	3767996	137	9 40E-08	0.00E+00
822	407501	1012	411942	3768045	53	9 56E-08	0.00E+00
823	407501	1013	411869	3767819	81	9 57E-08	0.00E+00
824	407501	1014	411776	3767887	6	9 95E-08	0.00E+00
825	407501	1015	411752	3767837	0	9 96E-08	0.00E+00
826	407501	1016	411788	3767820	0	9 82E-08	0.00E+00
827	407501	1017	411988	3767781	164	9 13E-08	0.00E+00
828	407501	1018	412140	3767944	37	8 81E-08	0.00E+00
829	407501	1019	412384	3767467	0	7 73E-08	0.00E+00
830	407501	1020	412279	3767491	129	7 92E-08	0.00E+00
831	407501	1021	412179	3767575	50	8 45E-08	0.00E+00
832	407501	1022	412023	3767605	79	8 85E-08	0.00E+00
833	407501	1023	412134	3767722	305	8 67E-08	0.00E+00
834	407501	2001	412749	3767905	178	7 08E-08	0.00E+00
835	407501	2005	412681	3767662	263	7 10E-08	0.00E+00
836	407501	3004	412619	3767418	287	7 14E-08	0.00E+00
837	407501	3005	412463	3767418	157	7 49E-08	0.00E+00
838	407501	3006	412431	3767625	0	7 71E-08	0.00E+00
839	407501	3007	412486	3767606	0	7 52E-08	0.00E+00
840	407601	2001	412427	3767151	30	7 40E-08	0.00E+00
841	407601	2002	412210	3766907	586	7 72E-08	0.00E+00
842	407601	2003	412079	3766742	0	7 81E-08	0.00E+00
843	407601	2004	412342	3767022	0	7 52E-08	0.00E+00
844	407601	2005	412373	3766957	11	7 36E-08	0.00E+00
845	407601	2006	412438	3766952	69	7 23E-08	0.00E+00
846	407601	2008	412212	3766696	0	7 49E-08	0.00E+00
847	407601	2009	412234	3766636	0	7 36E-08	0.00E+00
848	407601	2011	412003	3766792	0	8 06E-08	0.00E+00
849	408202	1000	409055	3767717	0	2 10E-07	0.00E+00
850	408202	1001	409049	3767519	0	1 93E-07	0.00E+00
851	408202	1002	409344	3767281	0	1 70E-07	0.00E+00
852	408202	1003	409140	3767203	0	1 64E-07	0.00E+00
853	408202	1004	408967	3767073	81	1 60E-07	0.00E+00
854	408202	1005	409017	3766981	3	1 49E-07	0.00E+00
855	408202	1006	409152	3767100	0	1 57E-07	0.00E+00
856	408202	1007	409253	3767023	0	1 49E-07	0.00E+00
857	408202	1008	409304	3767074	0	1 54E-07	0.00E+00
858	408202	1009	409607	3767044	0	1 53E-07	0.00E+00
859	408202	1010	409071	3766888	0	1 44E-07	0.00E+00
860	408202	1011	409165	3766831	64	1 37E-07	0.00E+00
861	408202	1012	409395	3766695	58	1 29E-07	0.00E+00
862	408202	1013	409550	3766795	0	1 36E-07	0.00E+00
863	408202	1014	409459	3766934	0	1 45E-07	0.00E+00
864	408202	1015	409521	3766896	0	1 43E-07	0.00E+00
865	408202	1016	409829	3766642	0	1 29E-07	0.00E+00
866	408202	1017	409890	3766807	0	1 37E-07	0.00E+00
867	408202	1018	410112	3766616	0	1 25E-07	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
868	408202	1019	409210	3766351	3	1 11E-07	0.00E+00
869	408202	1020	409078	3766555	78	1 23E-07	0.00E+00
870	408202	1021	408808	3766686	361	1 44E-07	0.00E+00
871	408202	1022	408832	3766475	48	1 29E-07	0.00E+00
872	408202	1023	409036	3766315	0	1 12E-07	0.00E+00
873	408202	1024	408943	3766394	42	1 18E-07	0.00E+00
874	408202	1025	408862	3766057	98	1 05E-07	0.00E+00
875	408202	1026	408532	3766381	241	1 32E-07	0.00E+00
876	408202	1027	408659	3766406	9	1 37E-07	0.00E+00
877	408202	1028	408595	3766143	66	1 25E-07	0.00E+00
878	408202	1029	408499	3766217	84	1 42E-07	0.00E+00
879	408202	1030	409602	3766487	0	1 19E-07	0.00E+00
880	408202	1031	409941	3766401	67	1 15E-07	0.00E+00
881	408202	1032	409835	3766618	0	1 26E-07	0.00E+00
882	408202	1033	409738	3766346	0	1 12E-07	0.00E+00
883	408202	1034	409591	3766140	0	1 03E-07	0.00E+00
884	408202	1035	409363	3766167	0	1 03E-07	0.00E+00
885	408202	1036	409468	3765953	0	9 48E-08	0.00E+00
886	408202	2000	410388	3766375	0	1 11E-07	0.00E+00
887	408202	2001	410287	3766255	0	1 08E-07	0.00E+00
888	408202	2002	410302	3766164	0	1 04E-07	0.00E+00
889	408202	2003	410174	3766274	0	1 09E-07	0.00E+00
890	408202	2004	410270	3766253	0	1 08E-07	0.00E+00
891	408202	2005	410119	3766380	0	1 14E-07	0.00E+00
892	408202	2006	410040	3766154	75	1 05E-07	0.00E+00
893	408202	2007	410741	3765856	0	9 04E-08	0.00E+00
894	408202	2008	410925	3765855	0	8 74E-08	0.00E+00
895	408202	2009	411292	3765622	0	7 72E-08	0.00E+00
896	408202	2013	410730	3765847	0	9 02E-08	0.00E+00
897	408202	2014	410671	3765769	113	8 87E-08	0.00E+00
898	408202	2015	410422	3766124	0	1 02E-07	0.00E+00
899	408202	2016	410314	3765959	33	9 69E-08	0.00E+00
900	408202	2025	410865	3765586	0	8 25E-08	0.00E+00
901	408202	2026	410653	3765562	1	8 34E-08	0.00E+00
902	408202	2027	410445	3765788	24	9 05E-08	0.00E+00
903	408202	2028	410374	3765849	0	9 11E-08	0.00E+00
904	408202	2029	410014	3765637	0	8 52E-08	0.00E+00
905	408202	2030	409895	3765880	0	9 44E-08	0.00E+00
906	408202	2031	409638	3765825	0	9 12E-08	0.00E+00
907	408202	2032	409959	3765518	0	8 29E-08	0.00E+00
908	408202	2033	410169	3765519	0	8 35E-08	0.00E+00
909	408202	2034	410420	3765296	0	7 78E-08	0.00E+00
910	408202	2035	410186	3765058	0	7 20E-08	0.00E+00
911	408202	2036	410193	3765162	0	7 45E-08	0.00E+00
912	408202	2037	409997	3765299	0	7 73E-08	0.00E+00
913	408202	2038	409773	3765394	0	7 90E-08	0.00E+00
914	408202	2039	409534	3765388	0	7 68E-08	0.00E+00
915	408202	2040	409521	3765589	0	8 36E-08	0.00E+00
916	408202	2041	409259	3765723	0	8 75E-08	0.00E+00
917	408202	2042	409132	3765886	0	9 38E-08	0.00E+00
918	408202	2043	408944	3765722	0	9 10E-08	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
919	408202	2044	408740	3765805	0	9 94E-08	0.00E+00
920	408202	2045	408584	3765843	0	1 08E-07	0.00E+00
921	408202	2046	408554	3765922	5	1 15E-07	0.00E+00
922	408202	2047	408264	3766006	391	1 50E-07	0.00E+00
923	408202	2048	408030	3765866	0	1 60E-07	0.00E+00
924	408202	2049	407984	3765853	0	1 71E-07	0.00E+00
925	408202	2050	408722	3765572	0	9 20E-08	0.00E+00
926	408202	2051	408388	3765775	0	1 15E-07	0.00E+00
927	408202	2052	409431	3765279	0	7 57E-08	0.00E+00
928	408202	2053	409539	3765151	0	7 28E-08	0.00E+00
929	408202	2054	409210	3765491	0	8 20E-08	0.00E+00
930	408202	2055	409227	3765511	0	8 01E-08	0.00E+00
931	408202	2056	408927	3765640	0	8 63E-08	0.00E+00
932	408202	2057	409815	3765670	0	8 70E-08	0.00E+00
933	408202	2058	409919	3765193	0	7 33E-08	0.00E+00
934	408202	2059	409906	3765269	0	7 64E-08	0.00E+00
935	408202	2060	408820	3765331	0	8 35E-08	0.00E+00
936	408202	2061	409196	3765142	3	7 02E-08	0.00E+00
937	408202	2062	409284	3765186	0	7 48E-08	0.00E+00
938	408202	2063	409714	3764967	0	6 96E-08	0.00E+00
939	408202	2064	409816	3765079	0	7 18E-08	0.00E+00
940	408202	2117	409654	3764913	0	6 67E-08	0.00E+00
941	408301	1000	407898	3768259	0	6 11E-07	0.00E+00
942	408301	1001	407866	3768251	0	6 00E-07	0.00E+00
943	408301	1002	408140	3767980	4	7 14E-07	0.00E+00
944	408301	1003	407625	3768150	232	5 45E-07	0.00E+00
945	408301	1004	407669	3767994	247	6 13E-07	0.00E+00
946	408301	1005	407600	3767788	873	6 13E-07	0.00E+00
947	408301	1006	407966	3767958	164	7 13E-07	0.00E+00
948	408301	1007	408084	3767700	662	6 36E-07	0.00E+00
949	408301	1008	408408	3767816	0	5 06E-07	0.00E+00
950	408301	1009	408408	3767608	17	4 23E-07	0.00E+00
951	408301	1010	408373	3767732	0	4 95E-07	0.00E+00
952	408301	1011	408395	3767779	0	4 99E-07	0.00E+00
953	408301	1012	408270	3767477	43	4 50E-07	0.00E+00
954	408301	1013	408111	3767297	219	4 64E-07	0.00E+00
955	408301	1014	408410	3767371	0	3 45E-07	0.00E+00
956	408301	1015	408446	3767428	0	3 37E-07	0.00E+00
957	408301	1016	408550	3767417	0	2 89E-07	0.00E+00
958	408301	1017	408548	3767540	172	3 17E-07	0.00E+00
959	408301	1018	408497	3767509	42	3 36E-07	0.00E+00
960	408301	1019	408617	3767642	0	3 06E-07	0.00E+00
961	408301	1020	408571	3767692	0	3 45E-07	0.00E+00
962	408301	1021	408493	3767325	2	2 97E-07	0.00E+00
963	408301	1022	408758	3767241	536	1 99E-07	0.00E+00
964	408301	1023	408910	3767397	0	1 92E-07	0.00E+00
965	408301	1024	408747	3767535	0	2 39E-07	0.00E+00
966	408301	1025	408676	3767530	0	2 60E-07	0.00E+00
967	408301	1026	408714	3767515	0	2 44E-07	0.00E+00
968	408301	1027	408676	3767470	0	2 49E-07	0.00E+00
969	408301	1028	408929	3767398	0	1 91E-07	0.00E+00

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
970	408301	1029	408489	3766922	516	2 08E-07	0.00E+00
971	408301	1030	408228	3767141	439	3 66E-07	0.00E+00
972	408301	1031	407947	3767257	0	5 17E-07	0.00E+00
973	408301	1032	407857	3767384	284	5 82E-07	0.00E+00
974	408301	1033	407687	3767512	132	6 28E-07	0.00E+00
975	408301	2000	406906	3768517	0	2 61E-07	0.00E+00
976	408301	2001	406958	3768485	0	2 71E-07	0.00E+00
977	408301	2002	407028	3768530	0	2 81E-07	0.00E+00
978	408301	2003	407008	3768329	0	3 02E-07	0.00E+00
979	408301	2004	407122	3768739	0	2 73E-07	0.00E+00
980	408301	2005	407144	3768785	0	2 71E-07	0.00E+00
981	408301	2006	407219	3768728	0	3 00E-07	0.00E+00
982	408301	2007	407204	3768724	0	3 01E-07	0.00E+00
983	408301	2008	407300	3768659	0	3 19E-07	0.00E+00
984	408301	2009	407259	3768682	0	3 12E-07	0.00E+00
985	408301	2010	407239	3768638	0	3 08E-07	0.00E+00
986	408301	2011	407221	3768542	0	3 29E-07	0.00E+00
987	408301	2012	407178	3768641	0	3 04E-07	0.00E+00
988	408301	2013	407132	3768481	0	3 03E-07	0.00E+00
989	408301	2014	407073	3768522	0	2 89E-07	0.00E+00
990	408301	2015	406901	3768166	0	3 07E-07	0.00E+00
991	408301	2016	406942	3768177	0	3 14E-07	0.00E+00
992	408301	2017	406985	3768176	0	3 22E-07	0.00E+00
993	408301	2018	407053	3768321	0	3 12E-07	0.00E+00
994	408301	2019	407319	3768638	0	3 24E-07	0.00E+00
995	408301	2020	407324	3768650	0	3 22E-07	0.00E+00
996	408301	2021	407419	3768577	0	3 50E-07	0.00E+00
997	408301	2022	407347	3768554	0	3 32E-07	0.00E+00
998	408301	2023	407356	3768492	0	3 55E-07	0.00E+00
999	408301	2024	407158	3768301	0	3 48E-07	0.00E+00
1000	408301	2025	407565	3768379	38	4 35E-07	0.00E+00
1001	408301	2026	407394	3768304	107	4 11E-07	0.00E+00
1002	408301	2027	407345	3768373	71	3 79E-07	0.00E+00
1003	408301	2028	407283	3768253	45	3 92E-07	0.00E+00
1004	408301	2029	407220	3768093	42	4 14E-07	0.00E+00
1005	408301	2030	407201	3768007	204	4 28E-07	0.00E+00
1006	408301	2031	407451	3768190	109	4 62E-07	0.00E+00
1007	408301	2032	407274	3767860	227	4 88E-07	0.00E+00
1008	408301	2033	407038	3768153	0	3 39E-07	0.00E+00
1009	408301	2034	406856	3768155	0	2 95E-07	0.00E+00
1010	408302	1000	406388	3767667	0	2 77E-07	0.00E+00
1011	408302	1001	406811	3768063	0	3 01E-07	0.00E+00
1012	408302	1002	406830	3768027	0	3 15E-07	0.00E+00
1013	408302	1003	406879	3768041	0	3 25E-07	0.00E+00
1014	408302	1004	406821	3767956	0	3 28E-07	0.00E+00
1015	408302	1005	406702	3767753	0	3 35E-07	0.00E+00
1016	408302	1006	406767	3767844	0	3 35E-07	0.00E+00
1017	408302	1007	406847	3767793	0	3 63E-07	0.00E+00
1018	408302	1008	406879	3767941	0	3 44E-07	0.00E+00
1019	408302	1009	406854	3767980	0	3 30E-07	0.00E+00
1020	408302	1010	406833	3767915	0	3 37E-07	0.00E+00

Light Metals Inc. (SCAQMD Facility ID 83102) - AB2588 Health Risk Assessment for Calendar Year 2017
Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1021	408302	1011	406821	3767924	0	3 33E-07	0.00E+00
1022	408302	1012	406879	3767721	0	3 89E-07	0.00E+00
1023	408302	1013	406943	3767853	0	3 78E-07	0.00E+00
1024	408302	1014	406918	3767900	0	3 59E-07	0.00E+00
1025	408302	1015	406797	3767535	0	4 02E-07	0.00E+00
1026	408302	1016	406906	3767635	9	4 07E-07	0.00E+00
1027	408302	1017	407148	3767638	499	4 84E-07	0.00E+00
1028	408302	1018	407246	3767434	185	5 41E-07	0.00E+00
1029	408302	1019	407061	3767400	155	4 85E-07	0.00E+00
1030	408302	1020	406981	3767474	0	4 49E-07	0.00E+00
1031	408302	1021	406977	3767529	0	4 37E-07	0.00E+00
1032	408302	1022	406916	3767300	0	4 44E-07	0.00E+00
1033	408302	1023	406473	3767184	0	3 52E-07	0.00E+00
1034	408302	1024	406695	3767070	0	4 19E-07	0.00E+00
1035	408302	1025	407305	3767320	12	5 61E-07	0.00E+00
1036	408302	1026	407448	3767276	141	5 87E-07	0.00E+00
1037	408302	1027	407569	3767326	123	6 00E-07	0.00E+00
1038	408302	1028	407744	3767183	84	5 56E-07	0.00E+00
1039	408302	1029	407827	3767111	0	5 12E-07	0.00E+00
1040	408302	1030	407764	3767048	0	4 91E-07	0.00E+00
1041	408302	1031	407687	3767115	65	5 32E-07	0.00E+00
1042	408302	1032	407611	3767047	64	5 03E-07	0.00E+00
1043	408302	1033	407334	3767056	413	5 24E-07	0.00E+00
1044	408302	1034	407355	3767218	100	5 73E-07	0.00E+00
1045	408302	1035	407063	3767197	98	5 07E-07	0.00E+00
1046	408302	1036	406999	3767251	109	4 90E-07	0.00E+00
1047	408302	1037	406567	3766898	100	4 18E-07	0.00E+00
1048	408302	1038	407050	3767105	137	5 15E-07	0.00E+00
1049	408302	1039	406914	3766972	69	4 76E-07	0.00E+00
1050	408302	1040	406769	3766791	272	4 42E-07	0.00E+00
1051	408302	1041	407064	3766792	57	4 62E-07	0.00E+00
1052	408302	1042	407255	3766853	41	4 70E-07	0.00E+00
1053	408302	1043	407372	3766871	0	4 69E-07	0.00E+00
1054	408302	1044	407648	3766981	0	4 79E-07	0.00E+00
1055	408302	1045	406650	3766608	77	4 18E-07	0.00E+00
1056	408302	1046	406814	3766642	0	4 33E-07	0.00E+00
1057	408302	1047	407053	3766741	0	4 54E-07	0.00E+00
1058	408302	1048	406581	3766545	0	4 10E-07	0.00E+00
1059	408302	1049	406358	3766464	2	3 71E-07	0.00E+00
1060	408302	1050	406095	3766581	216	3 34E-07	0.00E+00
1061	408302	1051	406315	3766562	76	3 72E-07	0.00E+00
1062	408302	1052	406227	3766527	63	3 58E-07	0.00E+00
1063	408302	1053	406104	3766862	0	3 12E-07	0.00E+00
1064	408302	1054	405646	3766706	0	2 53E-07	0.00E+00
1065	408302	1055	405572	3766758	0	2 42E-07	0.00E+00
1066	408302	1056	405448	3766845	0	2 22E-07	0.00E+00
1067	408302	1057	406205	3767261	0	2 97E-07	0.00E+00
1068	408302	1058	406093	3767341	0	2 65E-07	0.00E+00
1069	408302	1059	405883	3766487	0	2 83E-07	0.00E+00
1070	408302	1060	405607	3766689	0	2 44E-07	0.00E+00
1071	408302	1061	405545	3766733	0	2 35E-07	0.00E+00

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Appendix F Risk Characterization

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1072	408302	1097	405584	3766672	0	2 45E-07	0.00E+00
1073	408302	1098	405878	3766398	14	3 04E-07	0.00E+00
1074	408302	1099	405646	3766598	0	2 60E-07	0.00E+00
1075	408302	1114	405839	3767309	0	2 34E-07	0.00E+00
1076	408303	1000	407844	3766930	376	4 12E-07	0.00E+00
1077	408303	1001	407822	3766860	0	3 85E-07	0.00E+00
1078	408303	1002	407696	3766799	41	3 96E-07	0.00E+00
1079	408303	1003	407723	3766870	117	4 13E-07	0.00E+00
1080	408303	1004	407094	3766333	528	3 90E-07	0.00E+00
1081	408303	1005	406572	3766499	58	4 05E-07	0.00E+00
1082	408303	1006	407192	3766396	100	3 85E-07	0.00E+00
1083	408303	1007	406918	3766365	95	4 06E-07	0.00E+00
1084	408303	1008	406370	3766447	0	3 72E-07	0.00E+00
1085	408303	1009	406613	3766347	135	3 91E-07	0.00E+00
1086	408303	1010	407396	3766534	274	3 70E-07	0.00E+00
1087	408303	1011	407526	3766685	242	3 99E-07	0.00E+00
1088	408303	1012	407374	3766758	120	4 46E-07	0.00E+00
1089	408303	1013	406979	3766676	69	4 45E-07	0.00E+00
1090	408303	1014	407002	3766613	148	4 39E-07	0.00E+00
1091	408303	1015	407069	3766512	273	4 21E-07	0.00E+00
1092	408303	1016	406670	3766461	96	4 11E-07	0.00E+00
1093	408303	1017	407845	3766455	0	2 47E-07	0.00E+00
1094	408303	1018	407918	3766248	275	2 18E-07	0.00E+00
1095	408303	1019	407769	3766048	4	2 35E-07	0.00E+00
1096	408303	1020	408117	3766684	96	2 36E-07	0.00E+00
1097	408303	1021	408002	3766781	126	3 10E-07	0.00E+00
1098	408303	1022	407797	3766584	69	3 02E-07	0.00E+00
1099	408303	1023	407741	3766012	0	2 20E-07	0.00E+00
1100	408303	1024	406776	3766212	0	3 46E-07	0.00E+00
1101	408303	1025	406307	3766132	214	3 42E-07	0.00E+00
1102	408303	1026	405997	3766230	0	3 19E-07	0.00E+00
1103	408303	1027	406023	3766175	0	3 18E-07	0.00E+00
1104	408303	1028	405979	3766272	0	3 17E-07	0.00E+00
1105	408303	1034	406629	3766102	0	3 48E-07	0.00E+00
1106	408303	1035	406137	3766110	112	3 24E-07	0.00E+00
1107	408303	1036	407536	3766048	0	2 72E-07	0.00E+00
1108	408303	1037	407575	3766058	0	2 62E-07	0.00E+00
1109	408303	1046	408123	3766522	11	1 87E-07	0.00E+00
1110	408303	1047	408307	3766560	63	1 65E-07	0.00E+00
1111	408401	2000	409452	3765004	0	6 76E-08	0.00E+00
1112	408401	2001	409293	3764852	168	6 06E-08	0.00E+00
1113	408401	2002	408942	3764947	183	6 06E-08	0.00E+00
1114	408401	2003	408783	3765043	321	6 46E-08	0.00E+00
1115	408401	2004	408723	3765198	115	7 30E-08	0.00E+00
1116	408401	2005	408596	3765210	109	7 32E-08	0.00E+00
1117	408401	2006	408633	3764930	0	5 72E-08	0.00E+00
1118	408401	2007	408709	3764871	0	5 44E-08	0.00E+00
1119	408401	2008	408792	3764828	0	5 68E-08	0.00E+00
1120	408401	2011	409153	3764841	135	5 85E-08	0.00E+00
1121	408401	2012	409083	3764875	120	5 88E-08	0.00E+00
1122	408401	2013	409013	3764911	140	5 93E-08	0.00E+00

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Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1123	408402	3000	408391	3765583	0	1 06E-07	0.00E+00
1124	408402	3001	407230	3766093	0	3 24E-07	0.00E+00
1125	408402	3002	406938	3766084	0	3 47E-07	0.00E+00
1126	408402	3003	407182	3765995	44	3 19E-07	0.00E+00
1127	408402	3004	406805	3766082	0	3 48E-07	0.00E+00
1128	408402	3005	406631	3766063	0	3 45E-07	0.00E+00
1129	408402	3006	406314	3765895	0	3 15E-07	0.00E+00
1130	408402	3007	406257	3765966	0	3 22E-07	0.00E+00
1131	408402	3008	406437	3765906	0	3 19E-07	0.00E+00
1132	408402	3009	406592	3765951	0	3 41E-07	0.00E+00
1133	408402	3010	406747	3765958	0	3 36E-07	0.00E+00
1134	408402	3011	406870	3765889	0	3 25E-07	0.00E+00
1135	408402	3012	406912	3765883	0	3 27E-07	0.00E+00
1136	408402	3013	407009	3765877	0	3 13E-07	0.00E+00
1137	408402	3014	407061	3765898	0	3 17E-07	0.00E+00
1138	408402	3015	407130	3765895	4	3 05E-07	0.00E+00
1139	408402	3016	407710	3765765	267	2 00E-07	0.00E+00
1140	408402	3017	407552	3765922	61	2 54E-07	0.00E+00
1141	408402	3018	407322	3765937	40	2 85E-07	0.00E+00
1142	408402	3019	407375	3765922	55	2 71E-07	0.00E+00
1143	408402	3020	407792	3765805	96	1 93E-07	0.00E+00
1144	408402	3021	407333	3766025	86	3 09E-07	0.00E+00
1145	408402	3022	407267	3765950	54	2 99E-07	0.00E+00
1146	408402	3023	407210	3765959	42	3 14E-07	0.00E+00
1147	408402	3024	406644	3765842	0	3 25E-07	0.00E+00
1148	408402	3025	406510	3765843	0	3 19E-07	0.00E+00
1149	408402	3026	406255	3765856	0	3 12E-07	0.00E+00
1150	408402	3043	406533	3765683	0	2 91E-07	0.00E+00
1151	408402	3046	406601	3765786	0	3 25E-07	0.00E+00
1152	408402	3048	406479	3765731	0	3 20E-07	0.00E+00
1153	408402	3049	406764	3765809	0	3 22E-07	0.00E+00
1154	408402	3050	407006	3765842	0	3 07E-07	0.00E+00
1155	408402	3051	407033	3765863	0	3 07E-07	0.00E+00
1156	408402	3052	407159	3765855	0	2 86E-07	0.00E+00
1157	408402	3053	407621	3765755	0	1 90E-07	0.00E+00
1158	408402	3054	407332	3765767	0	2 25E-07	0.00E+00
1159	408402	3055	406883	3765840	0	3 22E-07	0.00E+00
1160	408402	3056	406819	3765843	0	3 28E-07	0.00E+00
1161	408402	3057	406768	3765824	0	3 24E-07	0.00E+00
1162	408402	3058	406555	3765802	0	3 21E-07	0.00E+00
1163	408402	3059	406474	3765800	0	3 29E-07	0.00E+00
1164	408402	3060	406358	3765818	0	3 13E-07	0.00E+00
1165	408402	3061	407213	3765568	0	1 96E-07	0.00E+00
1166	408402	3062	407013	3765367	0	1 30E-07	0.00E+00
1167	408402	3066	406451	3765745	0	3 23E-07	0.00E+00
1168	408402	3070	407369	3765169	0	8 06E-08	0.00E+00
1169	408402	3071	407871	3765011	0	5 72E-08	0.00E+00
1170	408402	3096	408294	3765401	133	8 12E-08	0.00E+00
1171	408402	3097	408399	3765465	46	9 04E-08	0.00E+00
1172	408402	3098	408289	3765554	73	9 66E-08	0.00E+00
1173	408402	3099	408288	3765489	65	8 94E-08	0.00E+00

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Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1174	408402	3101	408546	3765283	19	7 85E-08	0.00E+00
1175	408402	3102	408590	3765376	0	8 82E-08	0.00E+00
1176	408402	3103	408533	3765495	55	9 69E-08	0.00E+00
1177	408402	3104	408564	3765439	18	9 29E-08	0.00E+00
1178	408402	3105	408447	3765436	71	8 94E-08	0.00E+00
1179	408402	3106	408480	3765382	55	8 57E-08	0.00E+00
1180	408402	3107	408558	3765394	0	8 95E-08	0.00E+00
1181	408402	3108	408510	3765320	67	8 16E-08	0.00E+00
1182	408402	3111	407843	3765856	0	1 89E-07	0.00E+00
1183	432500	1011	407844	3772456	5	2 47E-07	0.00E+00
1184	432500	1014	407333	3772396	226	2 05E-07	0.00E+00
1185	432500	1015	407223	3772332	0	2 00E-07	0.00E+00
1186	432601	1000	406375	3771022	370	1 69E-07	0.00E+00
1187	432601	1001	406254	3771092	3	1 60E-07	0.00E+00
1188	432601	1002	406150	3771124	137	1 54E-07	0.00E+00
1189	432601	1003	405959	3771244	125	1 43E-07	0.00E+00
1190	432601	1004	405889	3771116	183	1 41E-07	0.00E+00
1191	432601	1005	406043	3770971	249	1 50E-07	0.00E+00
1192	432601	1006	405764	3770937	3	1 36E-07	0.00E+00
1193	432601	1007	405685	3770852	0	1 33E-07	0.00E+00
1194	432601	2000	406628	3771365	106	1 78E-07	0.00E+00
1195	432601	2001	406514	3771449	100	1 70E-07	0.00E+00
1196	432601	2002	406283	3771397	325	1 58E-07	0.00E+00
1197	432601	2003	406393	3771357	15	1 64E-07	0.00E+00
1198	432601	2004	406377	3771306	12	1 65E-07	0.00E+00
1199	432601	2005	406196	3771416	9	1 53E-07	0.00E+00
1200	432601	2006	406378	3771281	0	1 65E-07	0.00E+00
1201	432601	2007	406061	3771485	1083	1 45E-07	0.00E+00
1202	432601	2008	406390	3771196	150	1 68E-07	0.00E+00
1203	432601	2009	406540	3771206	288	1 77E-07	0.00E+00
1204	432601	3000	406924	3772014	111	1 86E-07	0.00E+00
1205	432601	3001	406724	3771779	297	1 77E-07	0.00E+00
1206	432601	3002	406468	3771775	399	1 61E-07	0.00E+00
1207	432601	3003	406389	3771623	9	1 59E-07	0.00E+00
1208	432601	3006	406797	3771668	39	1 84E-07	0.00E+00
1209	432601	3007	406655	3771578	235	1 76E-07	0.00E+00
1210	432601	4006	406734	3771942	86	1 73E-07	0.00E+00
1211	432601	4007	406811	3772130	165	1 75E-07	0.00E+00
1212	432602	1000	407270	3772206	282	2 07E-07	0.00E+00
1213	432602	1001	407223	3772006	367	2 10E-07	0.00E+00
1214	432602	1002	407137	3771813	394	2 08E-07	0.00E+00
1215	432602	1003	406953	3771844	0	1 92E-07	0.00E+00
1216	432602	1004	407373	3771426	692	2 46E-07	0.00E+00
1217	432602	2000	407057	3771629	329	2 06E-07	0.00E+00
1218	432602	2001	406979	3771442	385	2 04E-07	0.00E+00
1219	432602	2002	406978	3771177	319	2 11E-07	0.00E+00
1220	432602	2003	406792	3771254	275	1 94E-07	0.00E+00
1221	432602	2004	406723	3771049	222	1 93E-07	0.00E+00
1222	432602	3000	407573	3771777	482	2 57E-07	0.00E+00
1223	432602	3001	407655	3772064	228	2 52E-07	0.00E+00
1224	432602	3002	407515	3772142	277	2 34E-07	0.00E+00

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Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1225	432602	3003	407238	3771134	302	2 38E-07	0.00E+00
1226	432700	1010	405554	3770834	0	1 28E-07	0.00E+00
1227	432700	1011	405667	3770942	0	1 32E-07	0.00E+00
1228	432700	1012	405758	3771152	1	1 34E-07	0.00E+00
1229	432700	1013	405822	3771303	0	1 36E-07	0.00E+00
1230	433200	1000	405598	3770791	0	1 30E-07	0.00E+00
1231	433200	1001	405430	3770747	67	1 24E-07	0.00E+00
1232	433200	1002	405518	3770700	0	1 27E-07	0.00E+00
1233	433200	1017	405310	3770475	1	1 18E-07	0.00E+00
1234	433200	1018	405423	3770604	0	1 24E-07	0.00E+00
1235	433302	1000	406935	3769665	0	2 32E-07	0.00E+00
1236	433302	1001	406806	3769703	0	2 09E-07	0.00E+00
1237	433302	1002	406675	3769708	0	2 06E-07	0.00E+00
1238	433302	1003	406535	3769725	188	1 94E-07	0.00E+00
1239	433302	1004	406353	3769744	19	1 80E-07	0.00E+00
1240	433302	1005	406407	3769764	85	1 84E-07	0.00E+00
1241	433302	1006	405934	3769998	6	1 54E-07	0.00E+00
1242	433302	1007	405769	3770090	0	1 45E-07	0.00E+00
1243	433302	1008	405633	3769985	615	1 38E-07	0.00E+00
1244	433302	1009	405784	3769897	91	1 46E-07	0.00E+00
1245	433302	1010	405966	3769844	121	1 56E-07	0.00E+00
1246	433302	1011	406008	3769904	0	1 58E-07	0.00E+00
1247	433302	1012	406138	3769795	47	1 66E-07	0.00E+00
1248	433302	1013	406100	3769677	119	1 66E-07	0.00E+00
1249	433302	1014	405922	3769712	67	1 55E-07	0.00E+00
1250	433302	1015	406203	3769522	15	1 73E-07	0.00E+00
1251	433302	1016	406494	3769567	80	1 93E-07	0.00E+00
1252	433302	1017	406637	3769613	0	2 03E-07	0.00E+00
1253	433302	1018	406734	3769581	0	2 12E-07	0.00E+00
1254	433302	1019	406907	3769575	0	2 29E-07	0.00E+00
1255	433302	1020	406810	3769405	0	2 24E-07	0.00E+00
1256	433302	1021	406957	3769324	0	2 34E-07	0.00E+00
1257	433302	1022	407013	3769488	0	2 41E-07	0.00E+00
1258	433302	1023	406677	3769419	0	2 11E-07	0.00E+00
1259	433302	1024	406659	3769559	0	2 06E-07	0.00E+00
1260	433302	1025	406459	3769681	0	1 89E-07	0.00E+00
1261	433302	1026	406266	3769703	62	1 75E-07	0.00E+00
1262	433302	1027	406327	3769676	42	1 80E-07	0.00E+00
1263	433302	1028	406345	3769695	38	1 81E-07	0.00E+00
1264	433302	1029	406874	3769115	0	2 31E-07	0.00E+00
1265	433302	1030	406892	3769154	0	2 34E-07	0.00E+00
1266	433302	1031	406557	3769394	0	1 93E-07	0.00E+00
1267	433302	1032	406427	3769389	0	1 92E-07	0.00E+00
1268	433302	1033	406738	3769152	0	2 23E-07	0.00E+00
1269	433304	1000	406382	3770880	282	1 71E-07	0.00E+00
1270	433304	1001	405974	3770796	402	1 48E-07	0.00E+00
1271	433304	1002	406314	3770762	411	1 68E-07	0.00E+00
1272	433304	1003	406267	3770579	538	1 67E-07	0.00E+00
1273	433304	1004	406344	3770565	51	1 72E-07	0.00E+00
1274	433304	1005	406118	3770665	259	1 57E-07	0.00E+00
1275	433304	2000	405809	3770667	1084	1 40E-07	0.00E+00

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1276	433304	2001	405675	3770447	0	1 37E-07	0.00E+00
1277	433304	2002	405423	3770447	0	1 25E-07	0.00E+00
1278	433304	2003	405494	3770344	0	1 29E-07	0.00E+00
1279	433304	2004	405394	3770326	0	1 25E-07	0.00E+00
1280	433304	2005	405269	3770328	0	1 20E-07	0.00E+00
1281	433304	2006	405289	3770234	0	1 21E-07	0.00E+00
1282	433304	2007	405386	3770211	0	1 29E-07	0.00E+00
1283	433304	2008	405453	3770176	0	1 32E-07	0.00E+00
1284	433304	2009	405751	3770130	0	1 39E-07	0.00E+00
1285	433304	2010	405795	3770135	0	1 43E-07	0.00E+00
1286	433304	2011	405889	3770089	0	1 48E-07	0.00E+00
1287	433304	2012	405973	3770218	644	1 53E-07	0.00E+00
1288	433304	2013	406046	3770476	225	1 55E-07	0.00E+00
1289	433304	2014	406127	3770491	71	1 59E-07	0.00E+00
1290	433304	2015	406150	3770244	759	1 63E-07	0.00E+00
1291	433304	2016	405969	3770026	0	1 53E-07	0.00E+00
1292	433305	1000	406633	3770374	677	1 95E-07	0.00E+00
1293	433305	1001	406481	3770539	266	1 82E-07	0.00E+00
1294	433305	1002	406425	3770398	527	1 80E-07	0.00E+00
1295	433305	1003	406380	3770098	1169	1 79E-07	0.00E+00
1296	433305	1004	406222	3770126	0	1 68E-07	0.00E+00
1297	433305	1005	406501	3770066	363	1 89E-07	0.00E+00
1298	433305	1006	406390	3769872	0	1 82E-07	0.00E+00
1299	433305	1007	406395	3769844	0	1 83E-07	0.00E+00
1300	433305	1008	406697	3769759	0	2 07E-07	0.00E+00
1301	433305	1009	406707	3769782	0	2 07E-07	0.00E+00
1302	433305	2000	406893	3770968	62	2 08E-07	0.00E+00
1303	433305	2001	406778	3770717	927	2 04E-07	0.00E+00
1304	433305	2002	406844	3770731	160	2 08E-07	0.00E+00
1305	433305	2003	406594	3770784	742	1 88E-07	0.00E+00
1306	433306	1000	406818	3770294	605	2 13E-07	0.00E+00
1307	433306	2000	407336	3770950	315	2 55E-07	0.00E+00
1308	433306	2001	407124	3770971	162	2 30E-07	0.00E+00
1309	433306	2002	406979	3770666	1135	2 23E-07	0.00E+00
1310	433306	2003	407166	3770587	367	2 44E-07	0.00E+00
1311	433306	3000	406733	3769973	134	2 09E-07	0.00E+00
1312	433306	3001	406637	3770004	615	2 00E-07	0.00E+00
1313	433307	1000	407579	3771114	0	2 84E-07	0.00E+00
1314	433307	1001	407514	3770966	123	2 88E-07	0.00E+00
1315	433307	1002	407444	3770844	72	2 81E-07	0.00E+00
1316	433307	1003	407384	3770682	96	2 74E-07	0.00E+00
1317	433307	1004	407313	3770377	195	2 65E-07	0.00E+00
1318	433307	1005	407177	3769838	73	2 53E-07	0.00E+00
1319	433307	1006	407101	3769922	87	2 44E-07	0.00E+00
1320	433307	1007	406975	3769842	14	2 33E-07	0.00E+00
1321	433307	1008	407160	3770007	243	2 49E-07	0.00E+00
1322	433307	1009	407063	3769876	82	2 41E-07	0.00E+00
1323	433307	1010	407260	3770001	21	2 60E-07	0.00E+00
1324	433307	1011	407274	3770162	61	2 62E-07	0.00E+00
1325	433307	1012	407254	3770277	153	2 58E-07	0.00E+00
1326	433307	1013	407221	3770142	30	2 54E-07	0.00E+00

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1327	433307	1014	407148	3770236	31	2 46E-07	0.00E+00
1328	433307	1015	407279	3770072	22	2 63E-07	0.00E+00
1329	433307	1016	407299	3770232	51	2 65E-07	0.00E+00
1330	433307	1017	407021	3769727	0	2 42E-07	0.00E+00
1331	433307	1018	406981	3769744	0	2 37E-07	0.00E+00
1332	433307	1019	407176	3770131	18	2 49E-07	0.00E+00
1333	433307	1020	407090	3770104	15	2 41E-07	0.00E+00
1334	433307	1021	407046	3770009	69	2 37E-07	0.00E+00
1335	433307	1022	407020	3769982	0	2 35E-07	0.00E+00
1336	433307	1023	407219	3770101	55	2 55E-07	0.00E+00
1337	433307	2000	406875	3769929	834	2 21E-07	0.00E+00
1338	433307	2001	406807	3769767	0	2 17E-07	0.00E+00
1339	433307	2002	406758	3769744	0	2 07E-07	0.00E+00
1340	433307	3000	407004	3770214	1076	2 33E-07	0.00E+00
1341	433403	1003	405315	3769965	352	1 24E-07	0.00E+00
1342	433403	1004	405203	3770121	0	1 19E-07	0.00E+00
1343	433403	1005	405146	3769939	13	1 18E-07	0.00E+00
1344	433403	1011	405171	3769835	76	1 20E-07	0.00E+00
1345	433403	1012	405235	3769763	106	1 23E-07	0.00E+00
1346	433403	1013	405310	3769694	155	1 27E-07	0.00E+00
1347	433403	1014	405575	3769682	75	1 39E-07	0.00E+00
1348	433403	1015	405520	3769796	140	1 35E-07	0.00E+00
1349	433403	1016	405105	3769818	27	1 18E-07	0.00E+00
1350	433403	1020	405170	3769649	9	1 22E-07	0.00E+00
1351	433403	2000	405214	3769507	186	1 26E-07	0.00E+00
1352	433403	2001	405083	3769509	184	1 21E-07	0.00E+00
1353	433403	2003	405083	3769273	1502	1 24E-07	0.00E+00
1354	433403	2004	405041	3769095	228	1 24E-07	0.00E+00
1355	433403	2005	405041	3769024	246	1 24E-07	0.00E+00
1356	433403	2006	404959	3768920	83	1 22E-07	0.00E+00
1357	433403	3000	405456	3769511	587	1 35E-07	0.00E+00
1358	433403	3001	405360	3769315	359	1 34E-07	0.00E+00
1359	433901	1000	405811	3769627	0	1 51E-07	0.00E+00
1360	433901	1001	405779	3769458	187	1 52E-07	0.00E+00
1361	433901	1002	405920	3769317	809	1 61E-07	0.00E+00
1362	433901	1003	406078	3769206	1146	1 72E-07	0.00E+00
1363	433901	1004	406230	3769083	844	1 86E-07	0.00E+00
1364	433901	1005	406472	3769201	0	2 00E-07	0.00E+00
1365	433901	2000	405727	3768922	602	1 57E-07	0.00E+00
1366	433901	2001	405889	3768754	634	1 71E-07	0.00E+00
1367	433901	3000	405536	3769256	394	1 42E-07	0.00E+00
1368	433901	3001	405390	3769116	374	1 37E-07	0.00E+00
1369	433901	3002	405589	3769068	603	1 48E-07	0.00E+00
1370	433902	1000	405532	3768690	421	1 50E-07	0.00E+00
1371	433902	1001	405695	3768568	144	1 62E-07	0.00E+00
1372	433902	1002	405600	3768475	136	1 58E-07	0.00E+00
1373	433902	1003	405422	3768514	105	1 48E-07	0.00E+00
1374	433902	1004	405351	3768586	110	1 43E-07	0.00E+00
1375	433902	1005	405502	3768382	104	1 55E-07	0.00E+00
1376	433902	2000	405051	3768528	167	1 30E-07	0.00E+00
1377	433902	2001	405201	3768485	236	1 37E-07	0.00E+00

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1378	433902	2002	405225	3768402	103	1 39E-07	0.00E+00
1379	433902	2003	405178	3768337	71	1 38E-07	0.00E+00
1380	433902	2004	405086	3768257	207	1 35E-07	0.00E+00
1381	433902	2005	405309	3768195	326	1 48E-07	0.00E+00
1382	433902	2006	405115	3768009	206	1 42E-07	0.00E+00
1383	433902	2007	405002	3768157	98	1 33E-07	0.00E+00
1384	433902	3000	405233	3769033	128	1 31E-07	0.00E+00
1385	433902	3001	405214	3768873	330	1 32E-07	0.00E+00
1386	433902	3002	405085	3768919	64	1 27E-07	0.00E+00
1387	433902	3003	405013	3768718	143	1 26E-07	0.00E+00
1388	433902	3004	405092	3768864	97	1 28E-07	0.00E+00
1389	433902	3005	405262	3768710	95	1 37E-07	0.00E+00
1390	433902	3006	405378	3768821	60	1 40E-07	0.00E+00
1391	433902	3007	404964	3768556	108	1 26E-07	0.00E+00
1392	433902	3008	404938	3768785	17	1 23E-07	0.00E+00
1393	433902	3010	405203	3768654	102	1 35E-07	0.00E+00
1394	434001	1000	406449	3768865	246	2 09E-07	0.00E+00
1395	434001	1001	406345	3768703	475	2 05E-07	0.00E+00
1396	434001	1002	406234	3768539	512	2 02E-07	0.00E+00
1397	434001	1003	405986	3768507	227	1 83E-07	0.00E+00
1398	434001	1004	406210	3768274	394	2 12E-07	0.00E+00
1399	434001	2000	406619	3768542	775	2 33E-07	0.00E+00
1400	434001	2001	406373	3767819	33	2 66E-07	0.00E+00
1401	434001	2002	406627	3768210	53	2 60E-07	0.00E+00
1402	434001	2003	406628	3768324	58	2 50E-07	0.00E+00
1403	434001	2004	406205	3767648	27	2 58E-07	0.00E+00
1404	434001	2005	406534	3768192	43	2 50E-07	0.00E+00
1405	434001	2006	406435	3768003	33	2 56E-07	0.00E+00
1406	434001	2007	406547	3768076	55	2 63E-07	0.00E+00
1407	434001	2008	406345	3767784	41	2 65E-07	0.00E+00
1408	434001	2009	406301	3767761	57	2 61E-07	0.00E+00
1409	434001	2010	406564	3768123	57	2 61E-07	0.00E+00
1410	434001	2011	406240	3767681	47	2 60E-07	0.00E+00
1411	434001	2012	406528	3768035	53	2 65E-07	0.00E+00
1412	434001	2013	406272	3767720	37	2 61E-07	0.00E+00
1413	434001	2014	406479	3767897	0	2 73E-07	0.00E+00
1414	434001	2015	406519	3767951	61	2 73E-07	0.00E+00
1415	434001	2016	406443	3767852	52	2 73E-07	0.00E+00
1416	434001	2017	406585	3768285	36	2 48E-07	0.00E+00
1417	434001	2018	406387	3767959	0	2 54E-07	0.00E+00
1418	434001	2019	406182	3767611	12	2 58E-07	0.00E+00
1419	434001	2020	406563	3768237	41	2 49E-07	0.00E+00
1420	434001	2021	406894	3768575	0	2 55E-07	0.00E+00
1421	434001	2022	406098	3767740	798	2 40E-07	0.00E+00
1422	434001	2023	406144	3767663	33	2 49E-07	0.00E+00
1423	434001	2024	406323	3767883	74	2 52E-07	0.00E+00
1424	434001	2025	406387	3767873	0	2 61E-07	0.00E+00
1425	434001	2026	406414	3767909	36	2 62E-07	0.00E+00
1426	434001	2027	406431	3767930	0	2 62E-07	0.00E+00
1427	434001	2028	406448	3767952	29	2 63E-07	0.00E+00
1428	434001	2029	406487	3767991	0	2 64E-07	0.00E+00

Table F.9 Cancer Burden

Exposed Population	Cancer Burden
1,661	2.20E-03

Receptor No.	Track No	Block No	X (m)	Y (m)	Population	Cancer Risk	Cancer Burden
1429	434003	1000	405426	3768073	152	1 58E-07	0.00E+00
1430	434003	1001	405234	3767880	94	1 53E-07	0.00E+00
1431	434003	1002	405591	3767903	1201	1 77E-07	0.00E+00
1432	434003	1003	405351	3767642	90	1 72E-07	0.00E+00
1433	434003	1004	405114	3767722	0	1 51E-07	0.00E+00
1434	434003	1005	405093	3767842	0	1 45E-07	0.00E+00
1435	434003	1006	405162	3767540	53	1 62E-07	0.00E+00
1436	434003	1007	405257	3767441	63	1 73E-07	0.00E+00
1437	434003	2000	405780	3767701	621	2 06E-07	0.00E+00
1438	434003	2001	405834	3767478	155	2 24E-07	0.00E+00
1439	434003	2002	405726	3767364	64	2 18E-07	0.00E+00
1440	434003	2003	405551	3767503	195	1 96E-07	0.00E+00
1441	434003	2004	405399	3767370	130	1 89E-07	0.00E+00
1442	434003	2005	405392	3767167	169	1 98E-07	0.00E+00
1443	434003	2006	405403	3767086	0	2 00E-07	0.00E+00
1444	434003	3000	405845	3768364	274	1 78E-07	0.00E+00
1445	434003	3001	405700	3768223	172	1 72E-07	0.00E+00
1446	434003	3002	405875	3768046	308	1 94E-07	0.00E+00
1447	434003	3003	406020	3768182	230	2 00E-07	0.00E+00
1448	434003	3004	406070	3767980	302	2 17E-07	0.00E+00

APPENDIX G – SCAQMD CORRESPONDENCE

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Via Certified Mail and return receipt

August 2, 2019

Nick Drakos
Light Metals Inc.
13191 Crossroad Parkway North
Suite 375
City of Industry, CA 91746

Subject: Notice to Prepare Air Toxics Inventory Report or Voluntary Risk Reduction Plan for **Light Metals Inc.** (South Coast AQMD ID# **83102**)

Dear Mr. Drakos:

In accordance with the State of California's Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and South Coast AQMD Rule 1402, Light Metals Inc. (Light Metals) is required to prepare either an Air Toxics Inventory Report (ATIR) or a Voluntary Risk Reduction Plan (VRRP) for your facility. Either an ATIR or VRRP is required due to Light Metals' facility located at 13329 Ector Street in the City of Industry having a priority score greater than 10 (see attached) based on its most recent AB 2588 quadrennial emissions report from 2017. Please review your 2017 reported emissions for accuracy and provide us with any modifications by **September 1, 2019**.

There have been changes to Rule 1402 that affect implementation of AB 2588 in South Coast AQMD. First, in March 2015, the Office of Environmental Health Hazard Assessment (OEHHA) approved new Health Risk Assessment (HRA) Guidelines that yield higher cancer risks to children. This change results in an approximate three-fold increase in residential cancer risk, even at the same emissions level. Following OEHHA's update, Rule 1402 was amended in June 2015 to incorporate the Revised OEHHA Guidelines for estimating health risk. In addition, in October 2016, Rule 1402 was amended to include a new Voluntary Risk Reduction Program, amongst other changes.[1] This program is available to facilities that are not determined to be a Potentially High Risk Level facility as defined under Rule 1402. Eligible facilities must also have a previously approved AB 2588 HRA. Because your facility meets both requirements, you are eligible to participate in the Voluntary Risk Reduction Program if you choose to do so. In order to ensure that

[1] Rule 1402 can be viewed here:
http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1402.pdf

the most up-to-date inventory is used, and to comply with the most current amendments of Rule 1402, your facility has two options to comply with Rule 1402 as outlined below.

Option 1: Prepare an ATIR

In accordance with AB 2588 and Rule 1402, under this option Light Metals is required to prepare a detailed ATIR for your facility based on the most current quadrennial emission inventory submitted in 2017.

Guidelines for Preparing the ATIR

Pursuant to the most recent amendments to Rule 1402(d)(1), under this option Light Metals is required to submit the **Initial Information** for an ATIR to South Coast AQMD within thirty (30) days of the date of this letter, or September 1, 2019. The Initial Information should include a list of device(s) or process(es) to be included in the detailed ATIR and their corresponding toxic pollutants and Reference Sources for each emission factor.[2]

Your facility is required to submit a **detailed 2017 ATIR** to South Coast AQMD within one hundred fifty (150) days of the date of this letter, or **December 31, 2019**. In your detailed ATIR, you must include all TAC emissions from your facility that are listed in Appendix A of the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (March 2015)*. This document can be obtained at the following link:
http://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

Be aware that diesel exhaust particulate is a carcinogen so any particulate emissions from emergency, portable, and prime compression ignition internal combustion engines must be included in the ATIR. Please also include a signed copy of the AB 2588 Air Toxics Document Certification & Application Form (see attachment) along with your ATIR submittal.

The California Air Resources Board (CARB) has developed the "Hot Spots" Analysis and Reporting Program (HARP) which includes the emissions inventory and risk assessment requirements of the "Hot Spots" Program into a set of program modules. Your ATIR must include an electronic file in the Emission Inventory Module (EIM) format. You may obtain a free copy of the HARP software from the following link:
http://www.arb.ca.gov/toxics/harp/harp.htm.

CARB has provided source testing requirements in Appendix D of their Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program. Any source test that must be conducted as part of this ATIR may be submitted after the **December 31, 2019** due date pursuant to Rule 1402(d)(2)(B). You may obtain a copy of CARB's document from the following link:
https://www.arb.ca.gov/ab2588/2588guid.htm

You are required to submit your detailed ATIR using the HARP software and in accordance with the South Coast AQMD's *Supplemental Guidelines for Preparing Risk Assessments for the Air*

[2] Template: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/template-for-emission-factors-reference-sources-table.xlsx

Toxics "Hot Spots" Information and Assessment Act. This document can be obtained at the following link:

http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines-201809.pdf

You are not being asked to prepare an HRA at this time. After approving the ATIR, South Coast AQMD staff will notify you if you need to prepare an HRA. You would then have 90 days after the notification date to prepare and submit an HRA pursuant to Rule 1402(e)(1). You should be aware that the HRA must be based upon the approved ATIR. Data from new or yet to be completed source tests or use of other emissions information affecting emission factors, control efficiencies, etc. will not be approved for use in the preparation of the required HRA if an ATIR has already been approved.

Option 2: Voluntary Risk Reduction Program

Pursuant to Rule 1402(h), Light Metals may elect to participate in the Voluntary Risk Reduction Program. Under this program, you must submit a VRRP to reduce your facility-wide health risk below the Voluntary Risk Reduction Thresholds of either a maximum individual cancer risk (MICR) of ten in one million (10×10^{-6}), a total acute or chronic hazard index (HI) of one (1.0) for any target organ system at any receptor location, or the more stringent of either the National Ambient Air Quality Standard (NAAQS) for lead or applicable ambient lead concentration limit in a South Coast AQMD rule. Facilities participating in the Voluntary Risk Reduction Program would be included in a modified public notification where no public meetings or written letters are required. You may read about the Voluntary Risk Reduction Program and Public Notification Procedures at the following links, respectively:

http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-vrrp-guidelines-201809.pdf

http://www.aqmd.gov/docs/default-source/planning/risk-assessment/public-notification-procedures.pdf

If you choose to participate in the Voluntary Risk Reduction Program, you must do the following:

1) Notify the South Coast AQMD of your intention to participate in the Voluntary Risk Reduction Program in writing within 30 days of this letter, or by **September 1, 2019**;
2) Submit a **Voluntary Risk Reduction Plan** within 150 days of this letter including all emission inventory calculations required for facility risk characterization, or by **December 31, 2019**.
3) Complete Risk Reduction within two and a half years from the date that the Voluntary Risk Reduction Plan is approved; and
4) Submit an **Annual Progress Report** until risk reduction is achieved.

Process for Reviewing and Approving the ATIR or VRRP

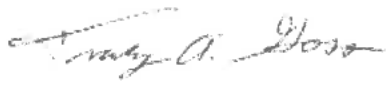
If your facility elects to provide an ATIR, within 30 days of receipt of the ATIR, the Executive Officer will confirm receipt in writing and conduct an initial review of the ATIR. The Executive Officer will approve or reject the ATIR and notify the owner or operator after a complete review.

If your facility is required to prepare an HRA, you will have 90 days from the date of notification by South Coast AQMD staff to submit a HRA.

If your facility elects to participate in the VRRP, within 30 days of receipt, the Executive Officer will conduct an initial review of the VRRP and confirm receipt. The Executive Officer will approve or reject the VRRP based on whether the plan was prepared consistent with the most current version of "South Coast AQMD Guidelines for Participating in the Rule 1402 Voluntary Risk Reduction Program". All approved VRRPs are subject to South Coast AQMD Rule 221 – Plans.

Finally, in order to assist staff in understanding the emissions and operations of your facility, we may request access to your facility and staff will contact you to coordinate our visit with the facility, if necessary. If you have questions regarding your facility's classification under the AB 2588 Program, or if you need assistance in preparing your ATIR, please contact Alberto Jasso, Air Quality Specialist, at (909) 396-3581, or Victoria Moaveni, Program Supervisor at (909) 396-2455.

Sincerely,



Tracy A. Goss, P.E.
Planning & Rules Manager
Planning, Rule Development & Area Sources

TG:VM:FC

Attachment(s)

- AB 2588 Air Toxics Document Certification & Application Form
- AB 2588 Facility Priority Score for 2017

FORM A	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AB 2588 Program, 21865 COPLEY DR., DIAMOND BAR CA 91765-0949	INVENTORY YEAR 20_____

AB 2588 AIR TOXICS DOCUMENT CERTIFICATION & SUBMITTAL FORM

Please check the appropriate boxes for purpose of submittal:

☐ *INITIAL INFORMATION for ATIR*	☐ *EARLY ACTION REDUCTION PLAN (EARP)*	☐ *INITIAL*
☐ *AIR TOXICS INVENTORY REPORT (ATIR)*	☐ *VOLUNTARY RISK REDUCTION PLAN (VRRP)*	☐ *REVISION*
☐ *HEALTH RISK ASSESSMENT (HRA)*	☐ *IMPLEMENTATION PROGRESS REPORT for VRRP/RRP*	☐ *FINAL*
☐ *RISK REDUCTION PLAN (RRP)*	☐ *OTHER:* _____	

Does your facility participate or wish to participate in VRRP program pursuant to Rule 1402(h)? *YES* ☐ ☐

Please provide the following information:

Facility name

South Coast AQMD ID

Facility SIC/NAICS CODE

Facility Location Address

Mailing Address

Contact Person (Company Official)

Name: **Title:**

Telephone: **eMail:**

Preparer (if different from above)

Name: **Title:**

Company:

Telephone: **eMail:**

FAILURE TO SUBMIT REQUIRED INFORMATION OR KNOWINGLY SUPPLYING FALSE INFORMATION IS PUNISHABLE TO THE EXTENT DEFINED IN HEALTH AND SAFETY CODE SECTIONS 44381(a) AND 44381(b), WHICH INCLUDES MINIMUM FINES OF NOT LESS THAN FIVE HUNDRED DOLLARS.

Signature Of Responsible Company Official

Date

Name Of Responsible Company Official

Title

AB2588 Facility Priority Score for 2017

Facility Name LIGHT METALS INC

Score: 17.26 **Facility ID** 83102

Location 13329 ECTOR ST
Address CITY OF INDUSTRY, 91746-1506

Contact Nick Drakos
Phone Number 6263693641
eMail NickD@customingot.com

Met Station Selected Pico Rivera

Operation Schedule:
Hours per day 24
Days per week 7
Weeks per year 52

	Distance (ft)	Angle (degrees)
Closest Residential	600	130
Closest Worker	100	220
Residential by Wind Direction	1060	40
Worker by Wind Direction	670	
Closest Fenceline (PMI)	32	

CAS	Substance	Reported Emissions lbs	Nearest Regardless of Wind Direction						Nearest By Predominant Wind Direction						Acute
			Closest Residential			Closest Worker			Closest Residential			Closest Worker			
			Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	
Total Scores For Each Index:			**17.26**	**1.09**	**0.03**	**10.04**	**2.63**	**0.57**	**7.48**	**0.47**	**0.01**	**0.84**	**0.22**	**0.05**	**0.48**
78875	1,2-Dichloropropane (Propylene dichloride)	5.49E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1080	Polychlorinated Dibenzo-Furans (PCDF) (as 2,3,7,8-Eqiv)	2.25E-04	17.17	0.83	0.00	9.96	0.30	0.00	7.44	0.36	0.00	0.83	0.03	0.00	0.00
100425	Styrene (vinyl benzene)	4.82E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100414	Ethyl benzene	1.58E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95636	1,2,4-Trimethylbenzene	2.92E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91576	2-Methyl naphthalene (PAH, POM)	6.78E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91203	Naphthalene	7.58E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86737	Fluorene (PAH, POM)	1.16E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85018	Phenanthrene (PAH, POM)	2.12E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83329	Acenaphthene (PAH, POM)	2.55E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Report Version 1.1

If distance has not been provided or is less than 50 m, the 50 m proximity adjustment factor is used.
For distances greater than 1 km, the 1 km proximity factor is used.

AB2588 Facility Priority Score for 2017

Facility Name LIGHT METALS INC

Score: 17.26 **Facility ID** 83102

CAS	Substance	Reported Emissions lbs	Nearest Regardless of Wind Direction						Nearest By Predominant Wind Direction						Acute
			Closest Residential			Closest Worker			Closest Residential			Closest Worker			
			Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	
106990	Butadiene, 1,3-	5.45E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79005	Trichloroethane, 1,1,2-	6.49E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107028	Acrolein	1.60E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75092	Methylene chloride(Dichloromethane)	4.08E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75070	Acetaldehyde	2.42E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75014	Vinyl chloride (chloroethylene)	3.04E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71432	Benzene (including benzene from gasoline)	1.41E+00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67663	Chloroform(trichloromethane)	5.82E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67561	Methanol (methyl alcohol)	5.11E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56235	Carbon tetrachloride (Tetrachloromethane)	7.49E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50000	Formaldehyde	1.36E+01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02
1151	Polycyclic Aromatic Hydrocarbon (PAHs)	2.02E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79345	Tetrachloroethane 1,1,2,2-	8.17E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218019	Chrysene	1.42E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7664417	Ammonia	6.48E+02	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
7440508	Copper and copper compounds	1.55E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

If distance has not been provided or is less than 50 m, the 50 m proximity adjustment factor is used.
For distances greater than 1 km, the 1 km proximity factor is used.

AB2588 Facility Priority Score for 2017

Facility Name LIGHT METALS INC

Score: 17.26 **Facility ID** 83102

CAS	Substance	Reported Emissions lbs	Nearest Regardless of Wind Direction						Nearest By Predominant Wind Direction						Acute
			Closest Residential			Closest Worker			Closest Residential			Closest Worker			
			Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	
7440439	Cadmium and cadmium compounds	2.08E-02	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7440417	Beryllium (and beryllium compounds)	2.41E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7440382	Arsenic and arsenic compounds (inorganic)	1.75E-02	0.07	0.05	0.00	0.04	0.26	0.01	0.03	0.02	0.00	0.00	0.02	0.00	0.01
7440020	Nickel & nickel compounds (except nickel oxide):	3.76E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7439976	Mercury and mercury compounds (inorganic)	3.18E+00	0.00	0.19	0.03	0.00	1.78	0.42	0.00	0.08	0.01	0.00	0.15	0.04	0.43
7439965	Manganese and manganese compounds	2.56E+00	0.00	0.01	0.01	0.00	0.23	0.12	0.00	0.01	0.00	0.00	0.02	0.01	0.00
7439921	Lead and lead compounds	1.10E-01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106934	Ethylene dibromide(1,2-Dibromoethane)	9.05E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
542756	1,3-Dichloropropene	5.39E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7782492	Selenium and selenium compounds, other than hydrogen selenide	3.95E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208968	Acenaphthylene [PAH, POM]	1.13E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206440	Fluoranthene [PAH, POM]	2.27E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205992	Benzo[b]fluoranthene	3.39E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192972	Benzo[e]pyrene [PAH, POM]	8.47E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191242	Benzo[g,h,i]perylene [PAH, POM]	8.45E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129000	Pyrene [PAH, POM]	2.78E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

If distance has not been provided or is less than 50 m, the 50 m proximity adjustment factor is used.
For distances greater than 1 km, the 1 km proximity factor is used.

AB2588 Facility Priority Score for 2017

Facility Name LIGHT METALS INC

Score: 17.26 **Facility ID** 83102

CAS	Substance	Reported Emissions lbs	Nearest Regardless of Wind Direction						Nearest By Predominant Wind Direction						Acute
			Closest Residential			Closest Worker			Closest Residential			Closest Worker			
			Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	Cancer	Chronic	Chronic 8 Hr	
110543	Hexane (n-)	1.27E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108883	Toluene (methyl benzene)	6.14E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107062	Ethylene dichloride (or 1,2-dichloroethane)	4.82E-03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1330207	Xylenes (isomers and mixtures)	4.54E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

7/11/2019

Report Version 1.1

If distance has not been provided or is less than 50 m, the 50 m proximity adjustment factor is used.
For distances greater than 1 km, the 1 km proximity factor is used.

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Via Email and Certified Mail, return receipt requested

December 2, 2021

Nick Drakos
Light Metals Inc.
13191 Crossroads Parkway North
City of Industry, CA 91746

Subject: Approval of Air Toxics Inventory Report and Notice to Prepare a Health Risk Assessment for **Light Metals Inc.** (South Coast AQMD Facility ID No.: **83102**)

Dear Mr. Drakos:

In accordance with the State of California's Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and South Coast Air Quality Management District's (South Coast AQMD) Rule 1402, South Coast AQMD staff notified you by letter dated August 2, 2019 to prepare either an Air Toxics Inventory Report (ATIR) or a Voluntary Risk Reduction Report (VRRP) for your facility. You elected to prepare an ATIR for your facility, which was initially submitted on December 31, 2019. South Coast AQMD staff provided multiple sets of comments on subsequent ATIR revisions. You provided a final revised ATIR for your facility on October 22, 2021 for calendar year 2017. This ATIR submittal has been reviewed and approved.

Pursuant to Rule 1402 (e)(1), you are required to prepare and submit a Health Risk Assessment (HRA), based on the approved ATIR, for your facility within **90 days** from the date of this letter, no later than **March 2, 2022.**

The remainder of this letter informs you of the following:

- Guidelines and procedures for preparing the HRA;
- Process used to review and approve the HRA; and
- Availability of further assistance.

Guidelines and Procedures for Preparing the HRA

The State of California Air Resources Board (CARB) has developed a "Hot Spots" Analysis and Reporting Program (HARP)[1] which streamlines the emissions inventory and risk assessment

[1] http://www.arb.ca.gov/toxics/harp/harp.htm

requirements of the "Hot Spots" Program into a single integrated analysis tool. You are required to perform your HRA using the HARP software. The latest version of the software must be used.

The U.S. EPA AERMOD[2] air quality dispersion model is used by HARP to estimate the concentration of pollutants released by the facility. In addition, South Coast AQMD provides guidance on preparing an HRA, as well as air dispersion modeling.[3] Meteorological data sets for South Coast AQMD are also available for download.[4]

The HRA must be prepared in accordance with *The Air Toxics Hot Spots Program Risk Assessments Guidelines (February 2015)* developed by the State of California Office of Environmental Health Hazard Assessment (OEHHA).[5]

Diesel particulate matter emissions were identified as a toxic air contaminant by CARB in 1998 and were added to South Coast AQMD Rule 1401 list of compounds on March 7, 2008. Under the current *AB 2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines Regulation*, amended on August 27, 2007, you are required to include health risk impacts of any diesel exhaust particulate emissions from stationary emergency and prime compression ignition internal combustion engines, as well as portable diesel engines. **Please clearly identify emergency diesel internal combustion engines (DICE) and their corresponding emissions**. This is essential because, on January 5, 2007, the South Coast AQMD Board adopted separate public notification procedures for emergency DICE.

Air emissions of any substances listed in Appendix A-I of the OEHHA guidelines must be quantified and evaluated in the HRA. Please follow the detailed outline for the HRA report, which is contained in Appendix C of the South Coast AQMD supplemental guidelines mentioned above. Lastly, please also include a signed copy of the AB 2588 Air Toxics Document Certification & Submittal Form (Attachment B) along with your HRA submittal.

Process for Reviewing and Approving the HRA

The HRA will be reviewed by staff from both South Coast AQMD and OEHHA. You will be notified of the status of your HRA within a few weeks after it is returned to South Coast AQMD from OEHHA. An HRA that is not consistent with state and South Coast AQMD guidelines will be returned to the facility with a list of necessary corrections, prior to approval.

If the HRA shows that your facility, **excluding risks from emergency DICE**, poses a maximum individual lifetime cancer risk of ten in one million or greater, or the non-cancer health effects hazard index exceeds one, you will be required to provide public notice to all individuals exposed above notification levels. If the cancer risks from emergency DICEs exceed the above-mentioned public notice threshold, your facility is subject to a newspaper notification and information will be made available on the South Coast AQMD website. The determination of whether your facility is subject to notification will be made upon approval of the HRA. You will receive further information regarding the public notification process at that time.

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[2] https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[3] http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf
http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

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

In addition, if your facility, **excluding risks from emergency DICE**, poses a maximum individual lifetime cancer risk of 25 in a million or greater, cancer burden of 0.5 or greater, or non-cancer health effects hazard index of 3 or greater, you will be also subject to risk reduction provisions of Rule 1402 (f).

Further Assistance

If you have questions regarding the guidelines, the HARP software, or need any other assistance, please contact Alberto Jasso, Air Quality Engineer II at (909) 396-3581, or me at (909) 396-2455.

Sincerely,

Victoria Moaveni
Program Supervisor, AB 2588 Program
Planning, Rule Development & Area Sources

VM:FC

Attachment: AB2588 Air Toxics Document Certification & Submittal Form

FORM A	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AB 2588 Program, 21865 COPLEY DR., DIAMOND BAR CA 91765-0949	INVENTORY YEAR 2017

AB 2588 AIR TOXICS DOCUMENT CERTIFICATION & SUBMITTAL FORM

Please check the appropriate boxes for purpose of submittal:

☐ *INITIAL INFORMATION for ATIR*	☐ *EARLY ACTION REDUCTION PLAN (EARP)*	☑ *INITIAL*
☐ *AIR TOXICS INVENTORY REPORT (ATIR)*	☐ *VOLUNTARY RISK REDUCTION PLAN (VRRP)*	☐ *REVISION*
☑ *HEALTH RISK ASSESSMENT (HRA)*	☐ *IMPLEMENTATION PROGRESS REPORT for VRRP/RRP*	☐ *FINAL*
☐ *RISK REDUCTION PLAN (RRP)*	☐ *OTHER:*	

Does your facility participate or wish to participate in VRRP program pursuant to Rule 1402(h)? *YES* ☐ ☐

Please provide the following information:

Facility name: Light Metals Inc.

South Coast AQMD ID: 83102

Facility SIC/NAICS CODE: 331314

Facility Location Address: 13329 Ector Street, City of Industry, CA 91746

Mailing Address: 13191 Crossroads Parkway North, City of Industry, CA 91746

Contact Person (Company Official)

Name: Gia Espinoza — Title: Environmental Compl. Mgr.

Telephone: (626) 638-0408 — eMail: Gia.Espinoza@customalloysales.com

Preparer (if different from above)

Name: Sean Gildea — Title: Senior Engineer

Company: Yorke Engineering, LLC

Telephone: (949) 248-8490 — eMail: SGildea@YorkeEngr.com

FAILURE TO SUBMIT REQUIRED INFORMATION OR KNOWINGLY SUPPLYING FALSE INFORMATION IS PUNISHABLE TO THE EXTENT DEFINED IN HEALTH AND SAFETY CODE SECTIONS 44381(a) AND 44381(b), WHICH INCLUDES MINIMUM FINES OF NOT LESS THAN FIVE HUNDRED DOLLARS.

Signature Of Responsible Company Official: [signature]

Date: 3-2-2022

Name Of Responsible Company Official: Joe Wetzel

Title: Plant Manager

APPENDIX H – MODELING FILES

Provided Electronically