

**AI SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT**
21865 Copley Dr.
Diamond Bar, CA 91765-4178

**ALL AMERICAN ASPHALT
IRVINE HOT MIX ASPHALT PLANT
FACILITY ID #82207
HEALTH RISK ASSESSMENT REPORT
REPORTING YEAR 2016**

Prepared For:

All American Asphalt
1776 All American Way
Corona, California, 92879

Project No.: ALAMR-18-2445
Contact: Scott Taylor
Date: April 25, 2022



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FORM A	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AB 2588 Program, 21865 COPLEY DR., DIAMOND BAR CA 91765-0949	INVENTORY YEAR 20 <u>16</u>
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AB 2588 AIR TOXICS DOCUMENT CERTIFICATION & SUBMITTAL FORM

Please check the appropriate boxes for purpose of submittal:

<input type="checkbox"/> INITIAL INFORMATION for ATIR	<input type="checkbox"/> EARLY ACTION REDUCTION PLAN (EARP)	<input type="checkbox"/> INITIAL
<input type="checkbox"/> AIR TOXICS INVENTORY REPORT (ATIR)	<input type="checkbox"/> VOLUNTARY RISK REDUCTION PLAN (VRRP)	<input type="checkbox"/> REVISION
<input checked="" type="checkbox"/> HEALTH RISK ASSESSMENT (HRA)	<input type="checkbox"/> IMPLEMENTATION PROGRESS REPORT for VRRP/RRP	<input checked="" type="checkbox"/> FINAL
<input type="checkbox"/> RISK REDUCTION PLAN (RRP)	<input type="checkbox"/> OTHER: _____	

Does your facility participate or wish to participate in VRRP program pursuant to Rule 1402(h)? YES NO

Please provide the following information:

Facility name	South Coast AQMD ID	Facility SIC/NAICS CODE
<input type="text" value="All American Asphalt, Irvine Facility"/>	<input type="text" value="082207"/>	<input type="text" value="324121"/>
Facility Location Address	Mailing Address	
<input type="text" value="10671 Jeffrey Road"/>	<input type="text" value="1776 All American Way"/>	
<input type="text" value="Irvine, CA 92602"/>	<input type="text" value="Corona CA 92879"/>	

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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



Name Of Responsible Company Official

John Gardner

Date

4/25/2022

Title

Plant Manager



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List of Abbreviations / Acronyms

AB	Assembly Bill
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APR	Application Policy Review
BLL	Blood Lead level
CARB	California Air Resources Board
CAS	Chemical Abstracts Service
DEM	Digital Elevation Models
GEP	Good Engineering Practice
HRA	Health Risk Assessment
HARP	Hot Spots Analysis and Reporting Program
HI	Hazard Index
MEIR	Maximum Exposed Individual Resident
MEIW	Maximum Exposed Individual Worker
MET	Meteorological
OEHHA	Office of Environmental Health Hazard Assessment
PM	Particulate Matter
PMI	Point of Maximum Impact
RAP	Recycled Asphalt Pavement
REL	Reference Exposure Limit
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
TEIR	Toxic Emissions Inventory Report
US EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compounds

List of Key Definitions

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

Acute Health Impacts - An effect caused by initial exposure of a hazardous chemical on the body. The effects are generally severe but are often reversible after exposure stops.

Cancer Burden - Cancer burden is the estimated number of theoretical cancer cases in a defined population resulting from lifetime exposure to pollutants emitted from a facility.

Chronic Health Impacts - An effect caused by prolonged or repeated exposures over time. Symptoms may not be apparent immediately but develop over time and are often irreversible.

Cancer Health Impacts - An exposure to a carcinogenic substance that causes an increase in the likelihood for cancer in the exposed individual.

Dose-Response Assessment - The process of characterizing the relationship between the exposure to an agent and the incidence of an adverse health effect in exposed populations.

Maximum Exposed Individual (MEI) - The receptor location having the highest cancer, 8-hour chronic, chronic, or acute health impact.

Multipathway Substances - A substance or chemical that once airborne from an emission source can, under environmental conditions, be taken into a human receptor by inhalation and by other non-inhalation exposure routes, such as deposition on skin or ingestion of soil contaminated by the emission.

Risk Reduction Measure - A control measure which will reduce or eliminate the health risk associated with emissions of toxic air contaminants, is real, permanent, quantifiable, and enforceable through District permit conditions if applicable. Risk reduction measures may include but are not limited to feedstock modification; product reformulations; production system modifications; system enclosure, emissions control, capture or conversion; operational standards or practices modifications; emissions collection and exhaust; source control; or alternative technologies.

Part I EXECUTIVE SUMMARY

On behalf of All American Asphalt, Taylor Environmental Services has prepared a Health Risk Assessment in accordance with AB2588 for All American Asphalt's facility (ID 82207) located at 10671 Jeffrey Rd, Irvine, California. All American Asphalt has prepared this Health Risk Assessment (HRA) in accordance with SCAQMD letter dated December 16, 2021, and addressed subsequent comments made in the February 23, 2022 rejection letter.

A. Project overview

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588 or the "Act") was enacted in September 1987. Under the Act, stationary sources are required to report the types and quantities of certain toxic substances their facilities routinely release into the air. AB 2588 is designed to provide information to state and local agencies and to the general public on the extent of airborne emissions from stationary sources and the potential public health impacts of those emissions. The South Coast Air Quality Management District is mandated by the State to implement AB 2588.

On March 6, 2015, The State Office of Environmental Health Hazard Assessment (OEHHA) adopted changes to the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments. These revisions were designed to incorporate three technical support documents and to provide enhanced protection of children as required under state law (SB 25, Escutia, 1999). Due to these recent changes, and the corresponding potential increases in calculated health risk, the district notified All American Asphalt that a Health Risk Assessment (HRA) is required under AB 2588. The Health Risk Assessment was completed based on 2016 reporting year.

Pursuant to the Air Toxics "Hot Spots" Information and Assessment Act of 1987, we have prepared a Health Risk Assessment (HRA) Report following OEHHA "Air Toxic Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessment", February 2015. In addition, the approved modeling protocol was followed for the preparation of the HRA.

All American Asphalt's Hot Mix Asphalt facility produces State of California Standard Specification asphalt concrete mixes, which typically consist of $\frac{3}{4}$ ", $\frac{1}{2}$ ", $\frac{3}{8}$ " asphalt concrete mix. The emissions from this facility are from asphaltic concrete drum mix plant, aggregate handling, aggregate stockpiles, asphalt silo storage and loadout, recycled asphalt product handling and stockpiles, oil heater, asphalt oil tanks and crumb rubber processing facility.

On December 7, 2021, All American Asphalt submitted an Air Toxics Inventory Report (ATIR) which was reviewed by SCAQMD and accepted with minor corrections.

This health risk was prepared in accordance with the approved December 7, 2021, ATIR including the suggested minor corrections proposed by SCAQMD.

On February 23, 2022 SCAQMD issued a Rejection letter of the HRA for the Irvine facility. Included were comments and corrections to the HRA.

B. Summary results

The California Air Resources Board Health Risk Assessment model (HARP2) was used to run an air dispersion model to determine ground level concentrations from the facility. The HARP2 model processed the data to complete the results for the various required Health Risk Assessments. The HRA evaluated worker and residential receptor impacts from the site.

The listed substances predominantly driving the risk for the MEIR and MEIW are Cobalt, PAHs, Hexavalent Chromium, and Arsenic. The main sources of these substances are the blue smoke control, haul roads, storage pile, and dryer.

Table 1 below summarizes the results of Maximum Individual Cancer Risk for Resident (MICR) and Worker (MICW), non-cancer chronic, and the SCAQMD requested acute hazard indices.

The previous HRA submittal evaluated the water tower as the as the Acute HI. Additional evaluation of potential exposure scenarios were evaluated to address SCAQMD's comments. As a result, the front access gate has been added to the evaluation to address SCAQMD's comments and concerns. The water tower and the front gate are very conservative locations to evaluate acute risk given the limited access which is controlled by All American. As a result, the evaluation focuses on these two locations for the HRA. Please see the Source and Emission Inventory section for a more detailed discussion regarding the acute HI receptors.

Table 1 - Risk Summary Results

Risk Assessment ¹	Results	Coordinates		Receptor
		X (m)	Y (m)	Number
Total Cancer Risk- Resident (in a million)	4.5085	431751	3733062	1939
Total Cancer Risk- Worker (in a million)	0.079975		3731700	1940
Non-Cancer Chronic Hazard Index (Resident) ¹	7.2048E-02	431751	3733062	1939
Non-Cancer Chronic Hazard Index (Worker)	2.3826e-03	433030	3731700	1940
Acute PMI (Property Boundary) ²	2.4145	432611.1	3732931	2012
Acute PMI (Water Tank) ²	0.58	432531	3732967	1941
Acute PMI (Front Gate) ²	0.61	432879	3732893	2038

1. Residential cancer risk is based on 30-year exposure. Worker cancer risk is based on 25-year exposure.
2. SCAQMD requested the addition of the Acute PMI. The Water Tank and Front Gate were used for the evaluation of risk.

As you will find the resulting Impacts are below South Coast AQMD Rule 1402: Established Action Risk Levels of ≥ 25 in a million and hazard index ≥ 3.0 and cancer burden ≥ 0.5 . The HRA determined the facility to be below the action levels, therefore no further action is required.

Part II Project Description

A. Business Background

- | | | |
|----|----------------------|---|
| 1. | Name | All American Asphalt |
| 2. | Owner | All American Asphalt
1776 All American Way
Corona, CA 92879 |
| 3. | Contact | John Gardner
(951) 736-3844 |
| 4. | Entitlement | Equipment is owned and operated by
All American Asphalt |
| 5. | Business Description | Hot Mix Asphalt Facility |

- B. Type of Project Health Risk Assessment Report
(Reporting Year 2016)

C. Description of Facility

The facility is located at 10671 Jeffrey Road, Irvine, CA 92602 (Facility ID 82207). Refer to Figure 1 for a vicinity map detailing the location of the site.

D. Description of Process

1. Hot Mix Plant

This facility produces hot mix asphalt which is comprised of aggregate and asphalt oil. The facility receives aggregate at the plant by truck. The aggregate is received through a drive over hopper and conveyed to one of eight silos for storage. The silos utilize individual feed conveyors which meter the amount of aggregate from each silo on to the collecting conveyor. The collecting conveyor feeds material through a reject screen to ensure no foreign or oversized material is feed to the drum dryer. Once through the screen material is fed to the Dryer where the aggregate is dried by a 125 MMBTU/hr. burner fired on natural gas and prepared to be mixed with asphalt oil that is supplied through one of three asphalt storage tanks to the external drum on the dryer. Emissions from the dryer are vented to the baghouse that is equipped with a knockout box. Once the oil and aggregate are mixed the asphaltic concrete is fed to one of five silos through a bucket elevator and drag slat conveyors located on the top of the silos. Once in the silos,

the asphaltic concrete is stored until it is ready to be loaded into asphalt trucks and delivered to the project site.

2. Recycle Crushing and RAP Feed System

The facility also can receive and process Recycled Asphalt Pavement (RAP) through one of two crushing systems. The Lipman crushing system is fed using an end loader and the material is processed by a horizontal shaft impactor where material is crushed and fed via conveyor to a screen where the material is either fed back to the crusher or fed to the aggregate receiving system for the asphalt plant where the processed material is conveyed to the dedicated recycle silo for storage. Once the plant requires RAP, the material is fed via conveyor to the dryer and blended with the aggregate and asphalt oil. The facility also has a TelSmith crushing system which also is fed using an end loader and uses a horizontal shaft impactor to size material. The processed material is fed directly to the asphalt drum once sized. Note, when RAP is added, the virgin aggregate is reduced by a like amount.

3. Production Data

The plant production for 2016 was as follows:

Sand and Aggregate Used (tons/yr)	
Hot Mix Asphalt Produced (tons/yr)	
Hot Mix Asphalt Gas Usage (mmCF)	
Hot Oil Tank Gas Usage (mmCF)	
Rubber Plant Gas Usage (mmCF)	
RAP (tons/yr)	
AC Oil (gal/yr)	
Diesel Storage (gal/yr)	
Stockpile Tons (tons/yr)	
Crumb Rubber (tons/yr)	
Crumb Rubber Binder (tons/yr)	
Welding Electrode E7018 (lbs/yr)	
Welding Electrode E6010 (lbs/yr)	
Welding Electrode ER316 (lbs/yr)	
Haul Roads Paved (vehicle miles traveled)	
Brake Cleaner (gal/yr)	





Figure 1 - Vicinity Map

Part III Risk Assessment Procedures

A. Hazard Identification

For air toxic source, hazard identification involves the pollutant(s) of concern emitted by a facility, and the types of adverse health effects associated with exposure to the chemical(s), including whether a pollutant is a potential human carcinogen or is associated with other types of adverse health effects.

Tables 2 and 3 below describe the permitted and non-permitted sources of the toxic emissions at the facility and the types of emissions from each source.

Table 2 - Permitted Toxic Emissions Source Summary

Equipment Description	Permit No.	Source Description	Source ID
Storage Tank Asphalt, ≤ 50,000 gallons	G42346	Oil Storage Tank 1	S0009
Storage Tank Asphalt, ≤ 50,000 gallons	G42347	Oil Storage Tank 2	S0010
Storage Tank Asphalt, ≤ 50,000 gallons	G42348	Oil Storage Tank 3	S0011
Asphalt Blending/Batching Equipment	G66231	TelSmith	S0001
		Dryer Baghouse	S0002
		Screen S-1	S0003
		Blue Smoke Control	S0012
		RAP and Cold Feed	S0033
Heater / Furnace Oil, 5-20 MMBTU/HR	G42345	Oil Tank Burner	S0008
Aggregate Production/Crushing, <5,000 TPD	G66227	Lipman	S0004
		RAP Lipman	S0015
Aggregate conveying	G28649	Aggregate Loading	S0013
		Aggregate Silo Loading	S0014
		Silo Feed Conveyors	S0032
Synthetic Rubber Blending	G66230	Mixing Tank 1, ≤ 30,000 gallons	S0005
		Mixing Tank 2, 400 gallons	S0006
Rubber Tank Heater (<5 MMBTU/HR)	G66222	Rubber Tank Heater	S0007

Table 3 - Non-Permitted Toxic Emissions Source Summary

Source Description	Source ID
Storage Pile	S0016
Brake Cleaner	S0017
Diesel Storage	S0018
Welding Rods	S0019
Welding Rods	S0020
Haul Road 1	S0021
Haul Road 2	S0022
Haul Road 3	S0023
Haul Road 4	S0024
Haul Road 5	S0025
Haul Road 6	S0026
Haul Road 7	S0027
Haul Road 8	S0028
Haul Road 9	S0029
Haul Road 10	S0030
Haul Road 11	S0031
Welding Rods	S0034

Attached you will find a table identifying all substances that were evaluated for cancer risk, noncancer acute, 8-hour and chronic health impacts. (Refer to Attachment "A", Table 1). In addition, you will find the toxic emissions table found in Attachment "A", Table 2 for the toxic emissions table summed by substance.

In Attachment "A" you will also find the tables of the estimated dose for each substance by each exposure pathway at the MEIR and MEIW (Tables A6 and A7). A table breakdown for the non-cancer chronic by substance and pathway for MEIR and MEIW can be found in Tables A8 and A9. 8-hour chronic HI by substance and pathway can be found in Table A10. A table breakdown for the non-cancer acute HI by substance and pathway for the water tank, front gate, and PMI can be found in Tables A3, A4, and A5. The Source and Emission Inventory section of this report includes a more detailed discussion regarding the Acute HI Receptors.

The multi-pathways pollutants evaluated are Arsenic, Beryllium, Cadmium, Hexavalent Chromium, Lead, Mercury, Nickel, B[a]anthracene, B[a]P, B[b]fluoranthene, B[k]fluoranthene, Chrysene, D[a,h]anthracene, In[1,2,3-cd]pyrene, Lead (inorganic), and PAHs.

The emissions inventory for the facility was based on production data from the facility for reporting year 2016.

B. Exposure Assessment

1. Facility Information

All American Asphalt owns and operates a Hot Mix Asphalt Facility located at 10671 Jeffrey Road in Irvine, CA (UTM 432692 m E, 3732941 m N, Zone 11). The facility is surrounded by undeveloped open space to the north, east, south, and west. Attached you will find a vicinity map which details the location of the facility (Refer to Figure 1). Refer to Figure 2, 3, and 4 for a facility plot plan detailing the emission source locations and property boundary lines. Refer to Figure 5 for a map detailing the locations of the receptors.

2. Toxic Emission Inventory Report – Reporting Year 2016

The following tables detail the toxic emissions for each source for the 2016 reporting year.

S0001 (Telsmith)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operatin g (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					6.54E-07				2.73E-10
Beryllium ¹	7440417					3.03E-08				1.26E-11
Cadmium ¹	7440439					7.71E-08				3.21E-11
Chrystaline Silica ²	1175					2.23E-03				9.29E-07
Copper ¹	7440508					3.22E-06				1.34E-09
Hex Chrome ¹	18540299					9.76E-08				4.07E-11
Lead ¹	7439921					2.44E-06				1.02E-09
Mercury ¹	7439976					0.00E+00				0.00E+00
Nickel ¹	7440020					2.83E-06				1.18E-09
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					8.10E-06				3.38E-09
Chromium ¹	7440473					3.22E-06				1.34E-09
Cobalt ¹	7440484					8.01E-07				3.34E-10
Zinc ¹	7440666					7.52E-06				3.13E-09
Vandium ¹	7440622					5.17E-06				2.15E-09

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystaline Silica Emissions Factors and Ambient Concentration, November 2009
3. Based on AP-42 11.19, Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

S0002 (Dryer)

Pollutant	Cas #	PR (MMcf/yr)	x	Eftac (lbs/MMcf)	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Ammonia	7664417					507.2				2.11E-01
Acrolein	107028					0.126800				5.28E-05

1. AB2588 Quadrennial Air Toxic Emissions Inventory Repeating Procedures-AER Program Appendix B, Table B-1: Default for Natural Gas Cmbutions (LB/MMSCF)
2. Polutants measured during the toxics stack test on the Baghouse were removed to avoid double counting toxics

S0002 (Baghouse)

Pollutant	Cas #	PR (ktons/yr)	x	EF ¹ (lbs/kton)	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic	7440382					0.00E+00				0.00E+00
1,3 Butadiene	106990					1.86E+02				7.77E-02
124 Trimethylbenze	95636					0.00E+00				0.00E+00
2-Methyl Naphthalene	91576					3.80E+00				1.58E-03
Acenaphthene	83329					1.82E-01				7.57E-05
Acenaphthylene	208968					7.60E-01				3.17E-04
Acetaldehyde	75070					1.15E+02				4.78E-02
Anthracene	120127					2.05E-02				8.53E-06
Barium	7440393					4.05E-01				1.69E-04
Benz[a] anthracene	56553					1.73E-04				7.20E-08
Benzene	71432					4.32E+02				1.80E-01
Benzo(a)pyrene	50328					0.00E+00				0.00E+00
Benzo(g,h,i)perylene	191242					0.00E+00				0.00E+00
Benzo[e]pyrene	192972					0.00E+00				0.00E+00
Benzo[k]fluoranthene	207089					0.00E+00				0.00E+00
Benzo[b]fluoranthene	205992					1.57E-04				6.53E-08
Beryllium	7440417					0.00E+00				0.00E+00
Cadmium	7440439					1.76E-02				7.32E-06
Carbon Disulfide	75150					4.64E+01				1.93E-02
Chromium, Hexavalent	18540299					2.57E-03				1.07E-06
Chrysene	218019					1.01E-03				4.22E-07
Cobalt	7440484					5.34E+00				2.22E-03
Copper	7440508					5.27E+01				2.19E-02
Dibenz(a,h)anthracene	53703					0.00E+00				0.00E+00
Ethanol	64175					4.41E+01				1.84E-02
Ethyl Benzene	100414					0.00E+00				0.00E+00
Fluoranthene	206440					9.45E-04				3.94E-07
Fluorene	86737					2.26E-01				9.40E-05
Formaldehyde	50000					5.00E+02				2.08E-01
Hexane	110543					0.00E+00				0.00E+00
Hydrogen Sulfide	7783064					0.00E+00				0.00E+00
Indeo[1,2,3-cd]pyrene	193395					2.24E-04				9.31E-08
Lead compunds (inorganic)	1128					0.00E+00				0.00E+00
Manganese	7439965					1.82E+02				7.60E-02
MEK	78933					4.87E+01				2.03E-02
Mercury	7439976					0.00E+00				0.00E+00
Methanol	67561					1.79E+02				7.44E-02
Methly Chloroform	71556					0.00E+00				0.00E+00
Naphthalene	91203					1.12E+01				4.66E-03
Nickel	7440020					4.79E+00				2.00E-03
Perylene	198550					0.00E+00				0.00E+00
Phenanthrene	85018					2.53E-01				1.06E-04
Phosphorus	7723140					5.07E+02				2.11E-01
propene	115071					1.03E+03				4.28E-01
Pyrene	129000					8.98E-03				3.74E-06
Selenium	7782492					0.00E+00				0.00E+00
Styrene	100425					3.51E+02				1.46E-01
Toluene	108883					1.82E+02				7.60E-02
Total PAH	1151					0.00E+00				0.00E+00
Xylenes	1330207					7.43E+01				3.10E-02
Zink	7440666					6.75E+02				2.81E-01

1. AIRX Testing Services, Inc. Source Test Emission Report, June 2, 3, 7, July 14, 25, 17

S0003 (Screen S-1)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operatin g (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					1.52E-05				6.33E-09
Beryllium ¹	7440417					7.03E-07				2.93E-10
Cadmium ¹	7440439					1.79E-06				7.46E-10
Chrystaline Silica ²	1175					5.19E-02				2.16E-05
Copper ¹	7440508					7.49E-05				3.12E-08
Hex Chrome ¹	18540299					2.27E-06				9.46E-10
Lead ¹	7439921					5.67E-05				2.36E-08
Mercury ¹	7439976					0.00E+00				0.00E+00
Nickel ¹	7440020					6.58E-05				2.74E-08
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					1.88E-04				7.83E-08
Chromium ¹	7440473					7.49E-05				3.12E-08
Cobalt ¹	7440484					1.86E-05				7.75E-09
Zinc ¹	7440666					1.75E-04				7.29E-08
Vandium ¹	7440622					1.20E-04				5.00E-08

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentration, November 2009
3. Based on AP-42 11.19, Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

S0004 (Lipman)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operatin g (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					2.18E-06				9.08E-10
Beryllium ¹	7440417					1.01E-07				4.21E-11
Cadmium ¹	7440439					2.57E-07				1.07E-10
Chrystaline Silica ²	1175					7.44E-03				3.10E-06
Copper ¹	7440508					1.07E-05				4.46E-09
Hex Chrome ¹	18540299					3.25E-07				1.35E-10
Lead ¹	7439921					8.14E-06				3.39E-09
Mercury ¹	7439976					0.00E+00				0.00E+00
Nickel ¹	7440020					9.44E-06				3.93E-09
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					2.70E-05				1.13E-08
Chromium ¹	7440473					1.07E-05				4.46E-09
Cobalt ¹	7440484					2.67E-06				1.11E-09
Zinc ¹	7440666					2.51E-05				1.05E-08
Vandium ¹	7440622					1.72E-05				7.17E-09

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentration, November 2009
3. Based on AP-42 11.19, Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

S0005 (Mixing Tank 1)

Chemical	Cas #	Average Emissions Rate (lb/hr) ¹	Average Tons/Hr Source Test ¹	Annual Production (tons/yr)	PM Control Efficiency	Proportional Tank Size	2016 PM/VOC Controlled Emissions Per Tank (lbs/yr)	280	2016 PM/VOC Controlled Emissions Per Tank (lbs/hr)
1,3 Butadiene	106990				1	0.02	0.00E+00		0.00E+00
2,2,4- Trimethylpentane	540841				1	0.02	2.53E-02		9.02E-05
2-Butanone (MEK)	78933				1	0.02	6.73E-02		2.41E-04
4-Methyl-2-pentanone (MIBK)	108101				1	0.02	3.23E-01		1.15E-03
Benzene	71432				1	0.02	6.31E-02		2.25E-04
Carbon disulfide	75150				1	0.02	2.95E-02		1.05E-04
Chlorodifluoromethane (TIC)	75456				1	0.02	0.00E+00		0.00E+00
Cyclohexane	110827				1	0.02	8.84E-02		3.16E-04
Dichlorofluoromethane (TIC)	75434				1	0.02	0.00E+00		0.00E+00
Ethanol	64175				1	0.02	4.35E-01		1.55E-03
Ethylbenzene	100414				1	0.02	1.39E-02		4.96E-05
Heptane	142825				1	0.02	1.16E-01		4.16E-04
Hexane	110543				1	0.02	1.96E-01		7.02E-04
Methanol	67561				1	0.02	7.58E-01		2.71E-03
m-Xylene & p-xylene	1330207				1	0.02	1.82E-01		6.51E-04
o-Xylene	95476				1	0.02	9.12E-03		3.26E-05
Propene	115071				1	0.02	1.82E-01		6.51E-04
Toluene	108883				1	0.02	6.59E-02		2.36E-04
2-Methylnaphthalene	91576				0.1	0.02	4.77E-04		1.70E-06
Acenaphthene	83329				0.1	0.02	3.93E-06		1.40E-08
Acenaphthylene	208968				0.1	0.02	1.96E-06		7.02E-09
Anthracene	120127				0.1	0.02	2.81E-06		1.00E-08
Benza(a)anthracene	56553				0.1	0.02	4.63E-09		1.65E-11
Benza(b)fluoranthene	205992				0.1	0.02	1.22E-08		4.36E-11
Benza(k)fluoranthene	207089				0.1	0.02	4.35E-09		1.55E-11
Benzo(a)pyrene	50328				0.1	0.02	1.11E-08		3.96E-11
Benzo(e)pyrene	192972				0.1	0.02	7.72E-08		2.76E-10
Benzo(g,h,i)perylene	191242				0.1	0.02	1.23E-07		4.41E-10
Chrysene	218019				0.1	0.02	3.37E-08		1.20E-10
Dibenzo(a,h)anthracene	53703				0.1	0.02	0.00E+00		0.00E+00
Fluoranthene	206440				0.1	0.02	1.54E-07		5.51E-10
Fluorene	86737				0.1	0.02	2.95E-06		1.05E-08
Indeno(1,2,3-c,d)pyrene	193395				0.1	0.02	1.68E-08		6.01E-11
Napthalene	91203				0.1	0.02	1.36E-03		4.86E-06
Perylene	198550				0.1	0.02	3.93E-09		1.40E-11
Phenanthrene	85018				0.1	0.02	3.93E-06		1.40E-08
Pyrene	129000				0.1	0.02	3.23E-07		1.15E-09
Aluminum	7429905				1	0.02	3.23E-04		1.15E-06
Antimony	7440360				1	0.02	0.00E+00		0.00E+00
Arsenic	7440382				1	0.02	1.68E-06		6.01E-09
Barium	7440393				1	0.02	2.10E-05		7.52E-08
Beryllium	7440417				1	0.02	0.00E+00		0.00E+00
Cadmium	7440439				1	0.02	5.19E-07		1.85E-09
Chromium	7440473				1	0.02	9.12E-06		3.26E-08
Cobalt	7440484				1	0.02	1.82E-07		6.51E-10
Copper	7440508				1	0.02	1.82E-05		6.51E-08
Lead	7439921				1	0.02	2.95E-06		1.05E-08
Manganese	7439965				1	0.02	1.82E-05		6.51E-08
Mercury	7439976				1	0.02	5.05E-06		1.80E-08
Nickel	7440020				1	0.02	1.14E-05		4.06E-08
Phosphorous	7723140				1	0.02	1.01E-04		3.61E-07
Selenium	7782492				1	0.02	9.12E-07		3.26E-09
Silver	7440224				1	0.02	1.54E-06		5.51E-09
Thallium	7440280				1	0.02	0.00E+00		0.00E+00
Vanadium	7440622				1	0.02	0.00E+00		0.00E+00
Zinc	7440666				1	0.02	3.09E-05		1.10E-07

1. Alliance Source Testing, Source Test Report, March 17-19, 2021

S0006 (Mixing Tank 2)

Chemical	Cas #	Average Emissions Rate (lb/hr) ¹	Average Tons/Hr Source Test ¹	Annual Production (tons/yr)	PM Control Efficiency	Proportional Tank Size	2016 PM/VOC Controlled Emissions Per tank (lbs/yr)	280	2016 PM/VOC Controlled Emissions Per tank (lbs/hr)
1,3 Butadiene	106990				1	0.98	0.00E+00		0.00E+00
2,2,4- Trimethylpentane	540841				1	0.98	1.24E+00		4.42E-03
2-Butanone (MEK)	78933				1	0.98	3.30E+00		1.18E-02
4-Methyl-2-pentanone (MIBK)	108101				1	0.98	1.58E+01		5.65E-02
Benzene	71432				1	0.98	3.09E+00		1.10E-02
Carbon disulfide	75150				1	0.98	1.44E+00		5.16E-03
Chlorodifluoromethane (TIC)	75456				1	0.98	0.00E+00		0.00E+00
Cyclohexane	110827				1	0.98	4.33E+00		1.55E-02
Dichlorofluoromethane (TIC)	75434				1	0.98	0.00E+00		0.00E+00
Ethanol	64175				1	0.98	2.13E+01		7.61E-02
Ethylbenzene	100414				1	0.98	6.81E-01		2.43E-03
Heptane	142825				1	0.98	5.71E+00		2.04E-02
Hexane	110543				1	0.98	9.63E+00		3.44E-02
Methanol	67561				1	0.98	3.71E+01		1.33E-01
m-Xylene & p-xylene	1330207				1	0.98	8.94E+00		3.19E-02
o-Xylene	95476				1	0.98	4.47E-01		1.60E-03
Propene	115071				1	0.98	8.94E+00		3.19E-02
Toluene	108883				1	0.98	3.23E+00		1.15E-02
2-Methylnaphthalene	91576				0.1	0.98	2.34E-02		8.35E-05
Acenaphthene	83329				0.1	0.98	1.93E-04		6.88E-07
Acenaphthylene	208968				0.1	0.98	9.63E-05		3.44E-07
Anthracene	120127				0.1	0.98	1.38E-04		4.91E-07
Benza(a)anthracene	56553				0.1	0.98	2.27E-07		8.10E-10
Benza(b)fluoranthene	205992				0.1	0.98	5.98E-07		2.14E-09
Benza(k)fluoranthene	207089				0.1	0.98	2.13E-07		7.61E-10
Benzo(a)pyrene	50328				0.1	0.98	5.43E-07		1.94E-09
Benzo(e)pyrene	192972				0.1	0.98	3.78E-06		1.35E-08
Benzo(g,h,i)perylene	191242				0.1	0.98	6.05E-06		2.16E-08
Chrysene	218019				0.1	0.98	1.65E-06		5.89E-09
Dibenzo(a,h)anthracene	53703				0.1	0.98	0.00E+00		0.00E+00
Fluoranthene	206440				0.1	0.98	7.56E-06		2.70E-08
Fluorene	86737				0.1	0.98	1.44E-04		5.16E-07
Indeno(1,2,3-c,d)pyrene	193395				0.1	0.98	8.25E-07		2.95E-09
Napthalene	91203				0.1	0.98	6.67E-02		2.38E-04
Perylene	198550				0.1	0.98	1.93E-07		6.88E-10
Phenanthrene	85018				0.1	0.98	1.93E-04		6.88E-07
Pyrene	129000				0.1	0.98	1.58E-05		5.65E-08
Aluminum	7429905				1	0.98	1.58E-02		5.65E-05
Antimony	7440360				1	0.98	0.00E+00		0.00E+00
Arsenic	7440382				1	0.98	8.25E-05		2.95E-07
Barium	7440393				1	0.98	1.03E-03		3.68E-06
Beryllium	7440417				1	0.98	0.00E+00		0.00E+00
Cadmium	7440439				1	0.98	2.54E-05		9.09E-08
Chromium	7440473				1	0.98	4.47E-04		1.60E-06
Cobalt	7440484				1	0.98	8.94E-06		3.19E-08
Copper	7440508				1	0.98	8.94E-04		3.19E-06
Lead	7439921				1	0.98	1.44E-04		5.16E-07
Manganese	7439965				1	0.98	8.94E-04		3.19E-06
Mercury	7439976				1	0.98	2.48E-04		8.84E-07
Nickel	7440020				1	0.98	5.57E-04		1.99E-06
Phosphorous	7723140				1	0.98	4.95E-03		1.77E-05
Selenium	7782492				1	0.98	4.47E-05		1.60E-07
Silver	7440224				1	0.98	7.56E-05		2.70E-07
Thallium	7440280				1	0.98	0.00E+00		0.00E+00
Vanadium	7440622				1	0.98	0.00E+00		0.00E+00
Zinc	7440666				1	0.98	1.51E-03		5.40E-06

1. Alliance Source Testing, Source Test Report, March 17-19, 2021

S0007 (Rubber Tank Heater)

Pollutant	Cas #	PR (MMcf/yr)	x	Eftac (lbs/MMcf)	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Ammonia	7664417					2.50E+01				8.94E-02
Benzene	71432					1.33E-02				4.75E-05
Formaldehyde	50000					2.82E-02				1.01E-04
Naphthalene	91203					2.35E-03				8.38E-06
Total PAHs	1151					7.82E-04				2.79E-06
Acetaldehyde	75070					7.04E-03				2.51E-05
Acrolein	107028					6.26E-03				2.23E-05
Ethyl benzene	100414					1.56E-02				5.59E-05
Hexane	110543					1.02E-02				3.63E-05
Toluene	108883					6.10E-02				2.18E-04
Xylene	1330207					4.54E-02				1.62E-04

1. AB2588 Quadrennial Air Toxic Emissions Inventory Reporting Procedures-AER Program Appendix B, Table B-1: Default for Natural Gas Combustion (LB/MMSCF)

S0008 (Oil Tank Burner)

Pollutant	Cas #	PR (MMcf/yr)	x	Eftac (lbs/MMcf)	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Ammonia	7664417					4.18E+01				4.79E-03
Benzene	71432					2.22E-02				2.55E-06
Formaldehyde	50000					4.70E-02				5.39E-06
Naphthalene	91203					3.92E-03				4.49E-07
Total PAHs	1151					1.31E-03				1.50E-07
Acetaldehyde	75070					1.18E-02				1.35E-06
Acrolein	107028					1.04E-02				1.20E-06
Ethyl benzene	100414					2.61E-02				3.00E-06
Hexane	110543					1.70E-02				1.95E-06
Toluene	108883					1.02E-01				1.17E-05
Xylene	1330207					7.57E-02				8.69E-06

1. AB2588 Quadrennial Air Toxic Emissions Inventory Reporting Procedures-AER Program Appendix B, Table B-1: Default for Natural Gas Combustion (LB/MMSCF)

RISK ASSESSMENT PROCEDURES

S0009, S0010, S0011 (Oil Storage Tanks)

Chemical	Cas #	Total Uncontrolled Loss Lb/yr	Percent PM or VOC of Total Loss (%)	AP-42 Table 11.1-15, Present Organic PM cPM	AP-42 Table 11.1-16, Present Compound/ Organic VOC (%)	Number Of Tanks	Total Uncontrolled PM / VOC Per Tank (lbs/yr)	PM & VOC Control	2016 PM Controlled Emissions Per Tank (lbs/yr)	2016 VOC Emissions Per Tank (lbs/yr)	8760 (hr/yr)	2016 PM Controlled Emissions Per Tank (lbs/hr)	2016 VOC Emissions Per Tank (lbs/hr)
1,1,1-Trichloroethane	71556				0	3		1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
2-Methylnaphthalene [PAH, POM]	91576			5.27		3		0.1	2.17E-03	0.00E+00		2.47E-07	0.00E+00
Acenaphthene [PAH, POM]	83329			0.47		3		0.1	1.93E-04	0.00E+00		2.21E-08	0.00E+00
Acenaphthylene [PAH, POM]	208968			0.014		3		0.1	5.76E-06	0.00E+00		6.57E-10	0.00E+00
Anthracene [PAH, POM]	120127			0.130		3		0.1	5.35E-05	0.00E+00		6.11E-09	0.00E+00
Benzene	71432				0.032	3		1	0.00E+00	4.67E-04		0.00E+00	5.33E-08
Bromomethane	74839				0.0049	3		1	0.00E+00	7.15E-05		0.00E+00	8.16E-09
2-Butanone	78933				0.099	3		1	0.00E+00	5.69E-04		0.00E+00	6.49E-08
Carbon Disulfide	75150				0.016	3		1	0.00E+00	2.33E-04		0.00E+00	2.66E-08
Chloroethane	75003				0.004	3		1	0.00E+00	5.83E-05		0.00E+00	6.66E-09
Benz(a)anthracene [PAH, POM]	56553			0.056		3		0.1	2.30E-05	0.00E+00		2.63E-09	0.00E+00
Benzol(a)pyrene [PAH, POM]	50328			0		3		0.1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Benzol(b)fluoranthene [PAH, POM]	205992			0		3		0.1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Benzol(e)pyrene [PAH, POM]	192972			0.0995		3		0.1	3.91E-06	0.00E+00		0.00E+00	0.00E+00
Benzol(g,h,i)perylene [PAH, POM]	191242			0		3		0.1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Benzol(k)fluoranthene [PAH, POM]	207089			0		3		0.1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Chrysene [PAH, POM]	218019			0.21		3		0.1	8.64E-05	0.00E+00		9.86E-09	0.00E+00
Dibenz(a,h)anthracene [PAH, POM]	53703			0		3		0.1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Ethyl benzene	100414				0.038	3		1	0.00E+00	5.54E-04		0.00E+00	6.33E-08
Formaldehyde	50000				0.69	3		1	0.00E+00	1.01E-02		0.00E+00	1.15E-06
n-Hexane	110543				0.1	3		1	0.00E+00	1.46E-03		0.00E+00	1.67E-07
Indeno(1,2,3-cd)pyrene [PAH, POM]	193395				0.2	3		1	0.00E+00	2.92E-03		0.00E+00	3.33E-07
m-Xylene	108383				0	3		1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
p-Xylene	106423				0	3		1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Methylene chloride	75092				0.00027	3		1	0.00E+00	3.94E-06		0.00E+00	4.50E-10
o-Xylene	95476				0.057	3		1	0.00E+00	8.31E-04		0.00E+00	9.49E-08
Perylene [PAH, POM]	198550			0.03		3		0.1	1.23E-05	0.00E+00		1.41E-09	0.00E+00
Phenanthrene [PAH, POM]	85018			1.8		3		0.1	7.41E-04	0.00E+00		8.45E-08	0.00E+00
Pyrene [PAH, POM]	129000			0.44		3		0.1	1.81E-04	0.00E+00		2.07E-08	0.00E+00
Styrene	100425				0.0054	3		1	0.00E+00	7.88E-05		0.00E+00	8.99E-09
Tetrachloroethene	127184					3		1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Toluene	108883				0.062	3		1	0.00E+00	9.04E-04		0.00E+00	1.03E-07
Trichloroethene	79016				0	3		1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Trichlorofluoromethane	75694				0	3		1	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Fluoranthene	206440			0.15		3		0.1	6.17E-05	0.00E+00		7.04E-09	0.00E+00
Fluorene	86737			1.01		3		0.1	4.16E-04	0.00E+00		4.74E-08	0.00E+00
Naphthalene [PAH, POM]	91203			1.82		3		0.1	7.49E-04	0.00E+00		8.55E-08	0.00E+00

1. TANKS

2. AP-42, Chapter 11.1, Table 11.1-15 and Table 11.1-16

3. See Attachment "c" for Owens Coming Estimates of air emissions from Asphalt Storage Tanks and Truck Loading

S0012 (Asphalt Silo Filling)

Pollutant	Cas #	Asphaltic Concrete Manufactured (ktons/yr)	x	AP42 Emission Factor (%)	x	Organic PM/VOC Emission Factor (lbs/yr)	x	Filter Efficiency (%)	=	Annual Toxic Emissions (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E ₁₅ (lbs/hr)
Acenaphthene	83329			0.00470				0.1		8.06E-02				3.36E-05
Acenaphthylene	208968			0.00014				0.1		2.40E-03				1.00E-06
Anthracene	120127			0.00130				0.1		2.23E-02				9.29E-06
Benzo(a) anthracene	56553			0.00056				0.1		9.61E-03				4.00E-06
Benzo(b) fluoranthene	205992			0.00000				0.1		0.00E+00				0.00E+00
Benzo(k) fluoranthene	207089			0.00000				0.1		0.00E+00				0.00E+00
Benzo(g,h,i) perylene	191242			0.00000				0.1		0.00E+00				0.00E+00
Benzo(a) pyrene	50328			0.00000				0.1		0.00E+00				0.00E+00
Benzo(e) pyrene	192972			0.00010				0.1		1.63E-03				6.79E-07
Chrysene	218019			0.00210				0.1		3.60E-02				1.50E-05
Dibenz(a,h) anthracene	53703			0.00000				0.1		0.00E+00				0.00E+00
Fluoranthene	206440			0.00150				0.1		2.57E-02				1.07E-05
Fluorene	86737			0.01010				0.1		1.73E-01				7.22E-05
Indeno(1,2,3-cd)pyrene	193395			0.00000				0.1		0.00E+00				0.00E+00
2-Methylnaphthalene	91576			0.05270				0.1		9.04E-01				3.77E-04
Naphthalene	91203			0.01820				0.1		3.12E-01				1.30E-04
Perylene	198550			0.00030				0.1		5.15E-03				2.14E-06
Phenanthrene	85018			0.01800				0.1		3.09E-01				1.29E-04
Pyrene	129000			0.00440				0.1		7.55E-02				3.14E-05
Benzene*	71432			0.00032				1		2.63E+00				1.10E-03
Ethylbenzene	100414			0.00038				1		3.13E+00				1.30E-03
Formaldehyde*	50000			0.00690				1		5.68E+01				2.37E-02
n-hexane	110543			0.00100				1		8.23E+00				3.43E-03
Styrene	100425			0.00005				1		4.44E-01				1.85E-04
Toluene	108883			0.00062				1		5.10E+00				2.13E-03
Trichlorofluoromethane**	75694			0.00000				1		0.00E+00				0.00E+00
m-Xylene	108383			0.00200				1		1.65E+01				6.86E-03
p-Xylene	106423			0.00000				1		0.00E+00				0.00E+00
o-Xylene	95476			0.00057				1		4.69E+00				1.95E-03
Methylene Chloride	75092			0.00000				1		2.22E-02				9.26E-06

1. AP-42, Chapter 11.1, Table 11.1-15 and 11.1-16

S0012 (Asphalt Silo Loadout)

Pollutant	Cas #	Asphaltic Concrete Manufactured (ktons/yr)	x	AP42 Emission Factor (%)	x	Organic PM/VOC Emission Factor (lbs/yr)	x	Filter Efficiency (%)	=	Annual Toxic Emissions (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E ₁₅ (lbs/hr)
Acenaphthene	83329			0.0026				0.1		5.99E-02				2.49E-05
Acenaphthylene	208968			0.00028				0.1		6.45E-03				2.69E-06
Anthracene	120127			0.0007				0.1		1.61E-02				6.72E-06
Benzo(a) anthracene	56553			0.00019				0.1		4.37E-03				1.82E-06
Benzo(b) fluoranthene	205992			0.000076				0.1		1.75E-03				7.29E-07
Benzo(k) fluoranthene	207089			0.000022				0.1		5.07E-04				2.11E-07
Benzo(g,h,i) perylene	191242			0.000019				0.1		4.37E-04				1.82E-07
Benzo(a) pyrene	50328			0.000023				0.1		5.30E-04				2.21E-07
Benzo(e) pyrene	192972			0.000078				0.1		1.80E-03				7.48E-07
Chrysene	218019			0.00103				0.1		2.37E-02				9.88E-06
Dibenz(a,h) anthracene	53703			3.7E-06				0.1		8.52E-05				3.55E-08
Fluoranthene	206440			0.0005				0.1		1.15E-02				4.80E-06
Fluorene	86737			0.0077				0.1		1.77E-01				7.39E-05
Indeno(1,2,3-cd)pyrene	193395			4.7E-06				0.1		1.08E-04				4.51E-08
2-Methylnaphthalene	91576			0.0238				0.1		5.48E-01				2.28E-04
Naphthalene	91203			0.0125				0.1		2.88E-01				1.20E-04
Perylene	198550			0.00022				0.1		5.07E-03				2.11E-06
Phenanthrene	85018			0.0081				0.1		1.87E-01				7.77E-05
Pyrene	129000			0.0015				0.1		3.45E-02				1.44E-05
Benzene	71432			0.00052				1		1.46E+00				6.09E-04
Ethylbenzene	100414			0.0028				1		7.86E+00				3.28E-03
Formaldehyde	50000			0.00088				1		2.47E+00				1.03E-03
n-hexane	110543			0.0015				1		4.21E+00				1.76E-03
Styrene	100425			0.000073				1		2.05E-01				8.54E-05
Toluene	108883			0.0021				1		5.90E+00				2.46E-03
Trichlorofluoromethane	75694			0.000013				1		3.65E-02				1.52E-05
m-Xylene	108383			0.0041				1		1.15E+01				4.80E-03
p-Xylene	106423			0				1		0.00E+00				0.00E+00
o-Xylene	95476			0.0008				1		2.25E+00				9.36E-04

1. AP-42, Chapter 11.1, Table 11.1-15 and 11.1-16

S0013 (Aggregate Loading)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					1.86E-03				7.75E-07
Beryllium ¹	7440417					1.14E-04				4.74E-08
Cadmium ¹	7440439					1.98E-04				8.25E-08
Crystalline Silica ²	1175					7.88E+00				3.28E-03
Copper ¹	7440508					1.29E-02				5.38E-06
Hex Chrome ¹	18540299					2.34E-04				9.76E-08
Lead ¹	7439921					6.03E-03				2.51E-06
Mercury ¹	7439976					1.93E-05				8.04E-09
Nickel ¹	7440020					6.20E-03				2.58E-06
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					1.23E-02				5.12E-06
Chromium ¹	7440473					1.41E-02				5.89E-06
Cobalt ¹	7440484					4.31E-03				1.79E-06
Zinc ¹	7440666					1.085E-01				4.52E-05
Vandium ¹	7440622					2.60E-02				1.08E-05

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentration, November 2009
3. Based on AP-42 11.19, Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

S0014 (Aggregate Silo Loading)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					1.54E-03				6.41E-07
Beryllium ¹	7440417					9.40E-05				3.92E-08
Cadmium ¹	7440439					1.64E-04				6.82E-08
Crystalline Silica ²	1175					6.51E+00				2.71E-03
Copper ¹	7440508					1.07E-02				4.45E-06
Hex Chrome ¹	18540299					1.94E-04				8.07E-08
Lead ¹	7439921					4.98E-03				2.08E-06
Mercury ¹	7439976					1.60E-05				6.65E-09
Nickel ¹	7440020					5.13E-03				2.14E-06
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					1.02E-02				4.24E-06
Chromium ¹	7440473					1.17E-02				4.87E-06
Cobalt ¹	7440484					3.56E-03				1.48E-06
Zinc ¹	7440666					8.97E-02				3.74E-05
Vandium ¹	7440622					2.15E-02				8.96E-06

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentrations November 2009
3. Based on AP-42 11.19, Table 11.19.2.2 Emission Factors For Crushed Stone Processing

S0015 (RAP Lipman)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					6.83E-04				2.85E-07
Beryllium ¹	7440417					3.16E-05				1.32E-08
Cadmium ¹	7440439					8.06E-05				3.36E-08
Crystalline Silica ²	1175					2.33E+00				9.71E-04
Copper ¹	7440508					3.37E-03				1.40E-06
Hex Chrome ¹	18540299					1.02E-04				4.25E-08
Lead ¹	7439921					2.55E-03				1.06E-06
Mercury ¹	7439976					0.00E+00				0.00E+00
Nickel ¹	7440020					2.96E-03				1.23E-06
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					8.47E-03				3.53E-06
Chromium ¹	7440473					3.37E-03				1.40E-06
Cobalt ¹	7440484					8.36E-04				3.48E-07
Zinc ¹	7440666					7.85E-03				3.27E-06
Vandium ¹	7440622					5.41E-03				2.25E-06

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentrations November 2009
3. Based on AP-42 11.19, Table 11.19.2.2 Emission Factors For Crushed Stone Processing Operations

S0016 (Storage Pile)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{LS} Emission Factor (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					4.53E-02				1.89E-05
Beryllium ¹	7440417					2.10E-03				8.74E-07
Cadmium ¹	7440439					5.35E-03				2.23E-06
Crystalline Silica ²	1175					1.33E+02				5.53E-02
Copper ¹	7440508					2.23E-01				9.30E-05
Hex Chrome ¹	18540299					6.77E-03				2.82E-06
Lead ¹	7439921					1.69E-01				7.05E-05
Mercury ¹	7439976					0.00E+00				0.00E+00
Nickel ¹	7440020					1.96E-01				8.18E-05
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					5.62E-01				2.34E-04
Chromium ¹	7440473					2.23E-01				9.30E-05
Cobalt ¹	7440484					5.55E-02				2.31E-05
Zinc ¹	7440666					5.21E-01				2.17E-04
Vandium ¹	7440622					3.59E-01				1.49E-04

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentrations November 2009
3. Based on SCAQMD's Particulate Matter (PM) Emission Factors for Process/Equipment at Asphalt, Cement and Aggregate Product Plants interpretation of AP-42 11-19.1, Table 4-1

S0017 (Brake Cleaner)

Pollutant	Cas #	PR (mgal/yr)	x	Eftac (lbs/mgal)	x	Percent Present (%)	=	Annual (lbs/yr)	÷	Operating (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Toluene	108883	5		7.2		27%		9.72		52		1.87E-01
Methanol	67561	5		6.6		20%		6.6		52		1.27E-01

1. Safety Data Sheet

S0018 (Diesel Storage)

Pollutant	Cas #	PR (kgal/yr)	x	Eftac (lbs/kgal)	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Benzene	71432					5.2E-05				6.27E-08
n-hexane	110543					0.03				3.64E-05
Toluene	108883					0.07				8.48E-05
Ethylbenzene	100414					0.03				3.64E-05
m-xylene	108383					0.1				1.21E-04
1,2,4-trimethylbenzene	95636					0.02				2.42E-05
Naphtalene	91203					0.04				4.85E-05
2,2,3-Trimethylpentane	98828					0.01				1.21E-05
Isopropyl Benzene	108383					0.01				1.21E-05
Cyclohexane	110827					0.05				6.06E-05

1. TANKS with Vapor Weight Speciation

S0019 (Welding Rods)

Pollutant	Cas #	Throughput (lbs/yr)	x	SF _{LS} Emission Factor (lbs/lbs _{DM})	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Nickel	7440020			2.00E-06		1.80E-04				1.00E-06
Hex chromium	18540299			0.00E+00		0.00E+00				0.00E+00
Manganese	7439965			1.03E-03		9.27E-02				5.15E-04

1. AP-42 Chapter 12.19, Table 12.19-1 and 12.19-2

S0020 (Welding Rods)

Pollutant	Cas #	Throughput (lbs/yr)	\times	SF _{LS} Emission Factor (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	\div	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Nickel	7440020			4.00E-06		4.40E-04				3.33E-06
Hex chromium	18540299			1.00E-05		1.10E-03				8.33E-06
Manganese	7439965			9.91E-04		1.09E-01				8.26E-04

1. AP-42 Chapter 12.19, Table 12.19-1 and 12.19-2

S0021- S0031 (Haul Roads)

Note: The toxics in this table are calculated for individual road segments.

Pollutant	Cas #	PM ² (lbs _{pm} /yr)	\times	SF _{ks} (lbs/lbs _{pm})	\div	Individual Road Segments	=	Annual E _{LS} (lbs/yr)	\div	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Aluminum ¹	7429905					11		5.30E+01				2.21E-02
Antimony ¹	7440360					11		4.70E-03				1.96E-06
Arsenic ¹	7440382					11		1.01E-02				4.20E-06
Barium ¹	7440393					11		6.39E-01				2.66E-04
Bromine ¹	7726956					11		1.41E-02				5.87E-06
Cadmium ¹	7440439					11		1.68E-02				6.99E-06
Chromium ¹	7440473					11		1.64E-01				6.85E-05
Cobalt ¹	7440484					11		1.00E-01				4.17E-05
Copper ¹	7440508					11		5.84E-02				2.43E-05
Chlorine ¹	7782505					11		8.74E-01				3.64E-04
Lead ¹	7439921					11		6.05E-01				2.52E-04
Manganese ¹	7439965					11		7.06E-01				2.94E-04
Nickel ¹	7440020					11		4.23E-02				1.76E-05
Mercury ¹	7439976					11		1.01E-02				4.20E-06
Phosphorus ¹	7723140					11		1.08E+00				4.48E-04
Selenium ¹	7782492					11		6.71E-04				2.80E-07
Vanadium (Fume Or Dust) ¹	7440622					11		2.09E-01				8.73E-05
Silver ¹	7440224					11		6.04E-03				2.52E-06
Zinc ¹	7440666					11		4.18E-01				1.74E-04

1. CARB's CATEF data base Profile 416 for Windblown Dust- Unpaved RD/AREA

2. Based on SCAQMD's Particulate Matter (PM) Emission Factors for Process/Equipment at Asphalt, Cement and Aggregate Product Plants interpretation of AP-42 13.2.1, Equation 1

S0032 (Silo Feed Conveyors)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operatin g (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					9.30E-04				3.88E-07
Beryllium ¹	7440417					5.68E-05				2.37E-08
Cadmium ¹	7440439					9.90E-05				4.13E-08
Chrystaline Silica ²	1175					3.94E+00				1.64E-03
Copper ¹	7440508					6.46E-03				2.69E-06
Hex Chrome ¹	18540299					1.17E-04				4.88E-08
Lead ¹	7439921					3.01E-03				1.25E-06
Mercury ¹	7439976					9.65E-06				4.02E-09
Nickel ¹	7440020					3.10E-03				1.29E-06
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					6.15E-03				2.56E-06
Chromium ¹	7440473					7.06E-03				2.94E-06
Cobalt ¹	7440484					2.15E-03				8.96E-07
Zinc ¹	7440666					5.43E-02				2.26E-05
Vandium ¹	7440622					1.30E-02				5.42E-06

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentration, November 2009
3. Based on AP-42 11.19, Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

S0033 (RAP and Cold Feed)

Pollutant	Cas #	PM ³ (lbs _{pm} /yr)	x	SF _{ks*} (lbs/lbs _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operatin g (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Arsenic ¹	7440382					1.17E-02				4.87E-06
Beryllium ¹	7440417					5.41E-04				2.25E-07
Cadmium ¹	7440439					1.38E-03				5.74E-07
Chrystaline Silica ²	1175					3.99E+01				1.66E-02
Copper ¹	7440508					5.76E-02				2.40E-05
Hex Chrome ¹	18540299					1.74E-03				7.27E-07
Lead ¹	7439921					4.36E-02				1.82E-05
Mercury ¹	7439976					0.00E+00				0.00E+00
Nickel ¹	7440020					5.06E-02				2.11E-05
Selenium ¹	7782492					0.00E+00				0.00E+00
Barium ¹	7440393					1.45E-01				6.03E-05
Chromium ¹	7440473					5.76E-02				2.40E-05
Cobalt ¹	7440484					1.43E-02				5.96E-06
Zinc ¹	7440666					1.34E-01				5.60E-05
Vandium ¹	7440622					9.24E-02				3.85E-05

1. RMA Group Materials Test Report from All American, Irvine, August 18, 2021
2. CRNOS-PM4 Crystalline Silica Emissions Factors and Ambient Concentration, November 2009
3. Based on AP-42 11.19, Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

S0034 (Welding Rods)

Pollutant	Cas #	Throughput (lbs/yr)	x	SF _{LS} Emission Factor (lbs/lb _{pm})	=	Annual E _{LS} (lbs/yr)	÷	Operating Schedule (hr/yr)	=	Hourly E _{LS} (lbs/hr)
Nickel	7440020			2.26E-04		2.26E-02				1.88E-04
Hex chromium	18540299			1.00E-05		1.00E-03				8.33E-06
Manganese	7439965			2.45E-03		2.45E-01				2.04E-03

1. AP-42 Chapter 12.19, Table 12.19-1 and 12.19-2

3. Source and Emission Inventory Information

a. Release Parameters

Below you will find a table which summarizes the source release data which includes release name, release type, source identification numbers, release location, release parameters and stack information

Table 4 - Source Release Data

Type	Source ID	Description	Release Height [m]	Diam [m]	Exit Velocity [m/s]	Temp [C]	Exit Flow Rate [ft ³ /min]
Point	S0001	TelSmith	7.13	0.204	43.2	20	50
Point	S0002	Dryer Baghouse	9.85	1.69	9.41	126	750
Point	S0003	Screen S-1	10.29	0.2042185	43.2	20.0	50
Point	S0004	Lipman	6.172275	0.3627164	13.699	20.0	50.0000
Point	S0005	Mixing Tank 1	2.667032	0.3108998	6.215	20.0	16.6667
Point	S0006	Mixing Tank 2	2.209827	0.6248476	3.077	20.0	33.3300
Point	S0007	Rubber Tank Heater	4.08437	0.5090222	2.319	154.4	16.6667
Point	S0008	Oil Tank Burner	5.995489	0.4053889	2.387	118.3	10.8833
Point	S0009	Oil Storage Tank 1	6.339917	0.8534504	0.001	20.0	0.0202
Point	S0010	Oil Storage Tank 2	6.339917	0.8534504	0.001	20.0	0.0202
Point	S0011	Oil Storage Tank 3	6.339917	0.8534504	0.001	20.0	0.0202
Point	S0012	Blue Smoke Control	6.019873	1.13387	14.953	25.6	533.3334

Type	Source ID	Description	Release Height [m]	Initial Vertical Dimension [m]	Area [m ²]	Emission Rate (g/s-m ²)
Area	S0016	Storage Pile	6.096	1.8	3186.652	0.00031
Area	S0017	Brake Cleaner	1.524	0.354	0.836	1.19596
Area	S0018	Diesel Storage	1.524	0.354	0.836	1.19596
Area	S0019	Welding Rods	1.524	0.354	0.836	1.19596
Area	S0020	Welding Rods	1.524	0.354	0.836	1.19596
Area	S0021	Haul Road 1	3.048	6.096	171.663	0.00583
Area	S0022	Haul Road 2	3.048	6.096	171.328	0.00584
Area	S0023	Haul Road 3	3.048	6.096	173.675	0.00576
Area	S0024	Haul Road 4	3.048	6.096	163.952	0.0061
Area	S0025	Haul Road 5	3.048	6.096	181.051	0.00552
Area	S0026	Haul Road 6	3.048	6.096	174.010	0.00575
Area	S0027	Haul Road 7	3.048	6.096	174.346	0.00574
Area	S0028	Haul Road 8	3.048	6.096	172.334	0.0058
Area	S0029	Haul Road 9	3.048	6.096	168.646	0.00593
Area	S0030	Haul Road 10	3.048	6.096	171.663	0.00583
Area	S0031	Haul Road 11	3.048	6.096	173.675	0.00576
Area	S0034	Welding Rods	1.524	0.354	0.836	1.19596

Type	Source ID	Description	Release Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
Volume	S0013	Aggregate Loading	3.048	3.048	6.096
Volume	S0014	Aggregate Silo Loading	19.812	1.524	1.829
Volume	S0015	RAP Lipman	4.572	13.716	9.144
Volume	S0032	Silo Feed Conveyors	1.524	1.524	1.829
Volume	S0033	RAP and Cold Feed	4.572	15.240	9.144

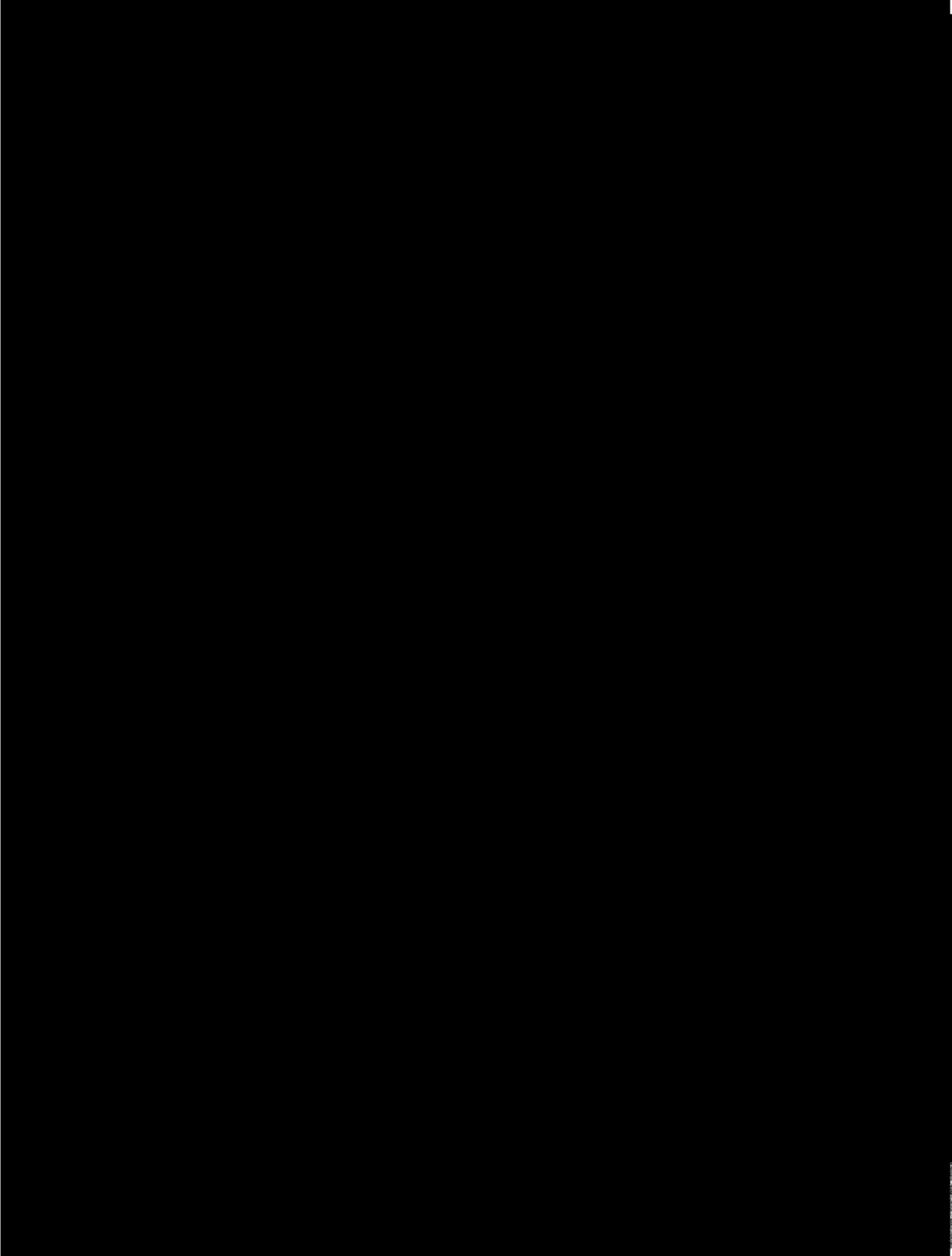


Figure 2 - Point Source ID Map

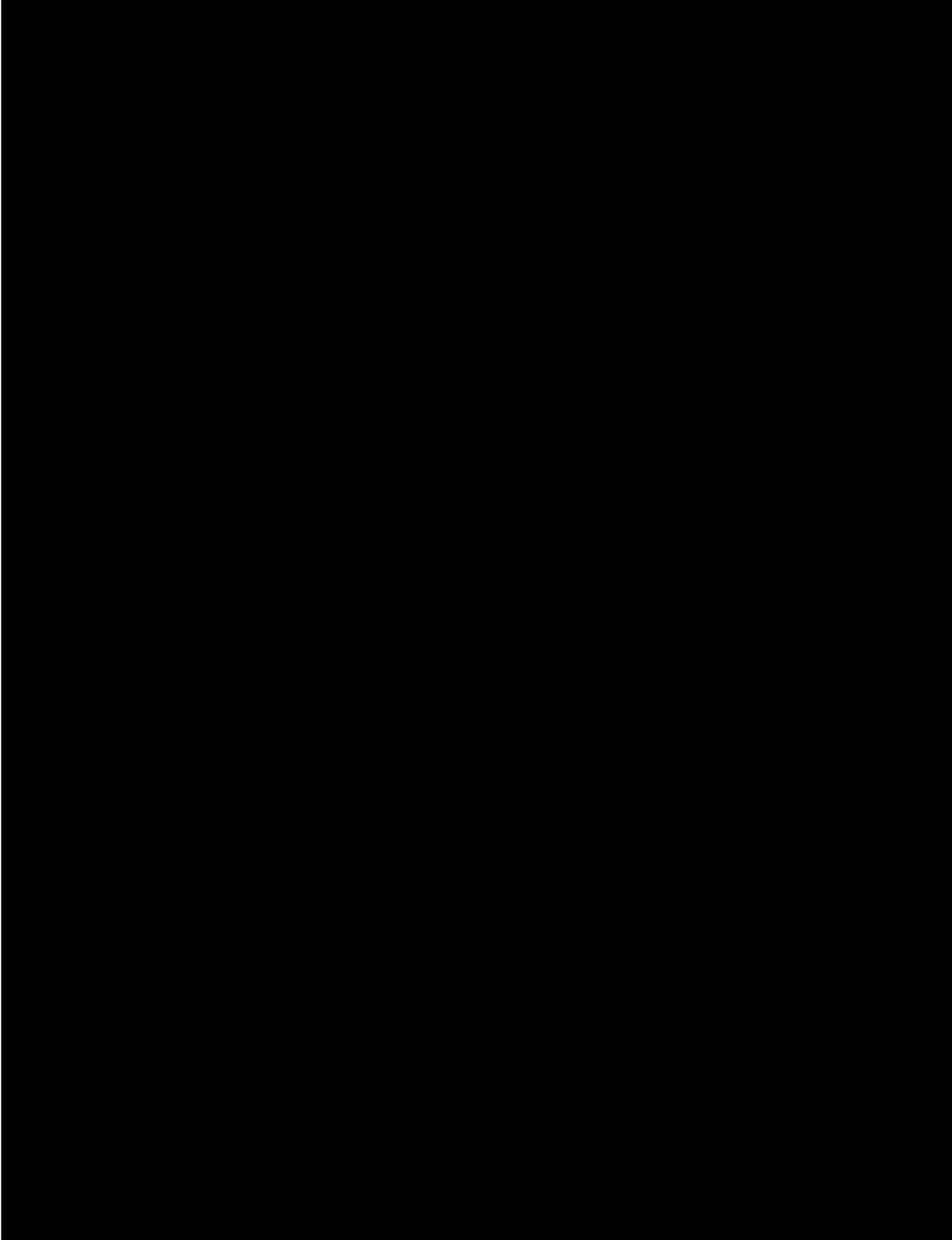


Figure 3 - Area Source ID Map

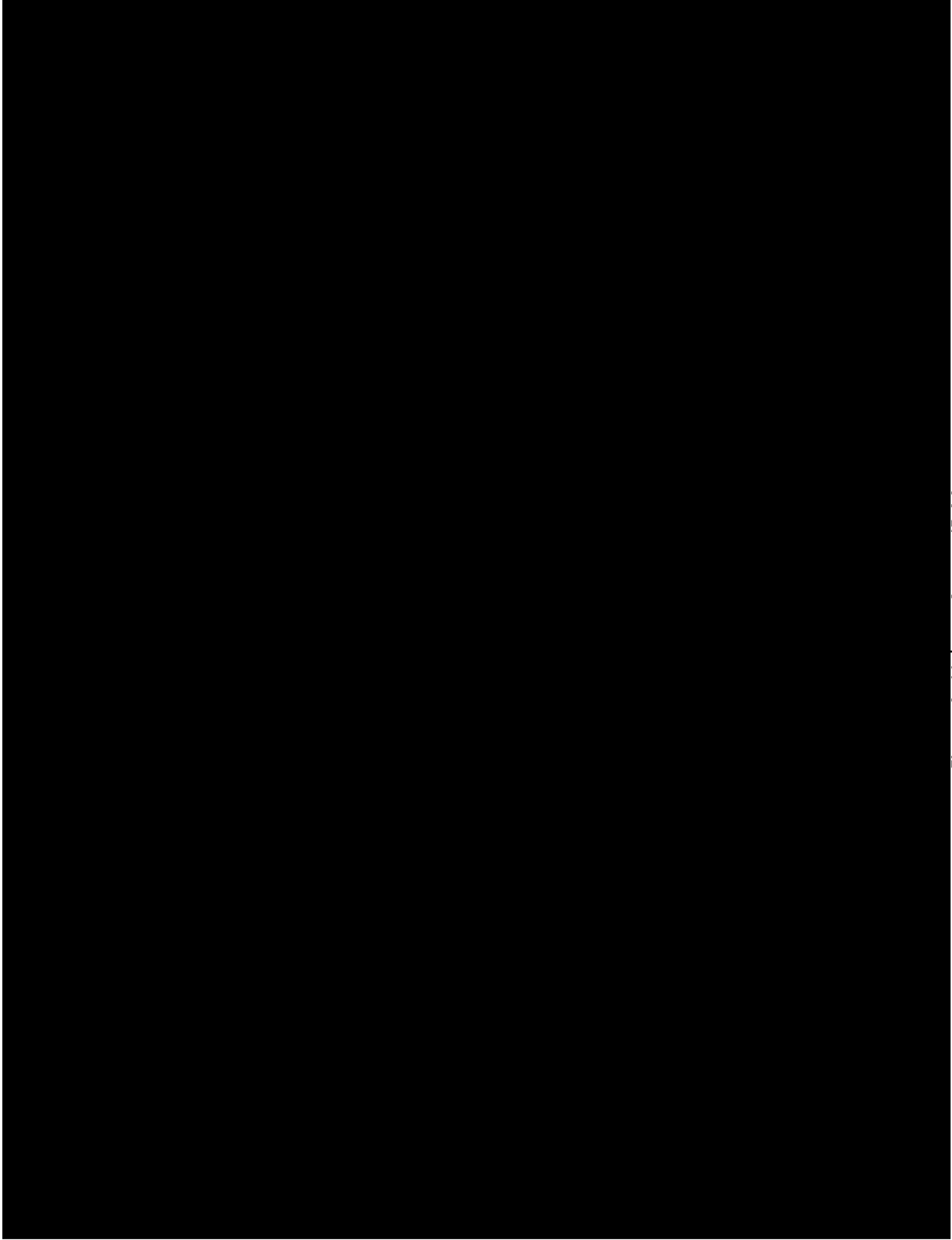


Figure 4 - Volume Source ID Map



Figure 5 - Receptor Locations

b. Source Description, Operating Schedule, Emission Control Equipment

A table detailing the source description, operating schedule, emission equipment control can be found below in Table 5.

Table 5 - Source Schedule and Control Equipment

Source ID	Description	Operating Schedule (hrs./yr)	Control Equipment
S0001	Telsmith		Baghouse
S0002	Dryer Baghouse		N/A
S0003	Screen S-1		Baghouse
S0004	Lipman		Baghouse
S0005	Mixing Tank 1		Carbon
S0006	Mixing Tank 2		Carbon
S0007	Rubber Tank Heater		Low-NOx
S0008	Oil Tank Burner		Low-NOx
S0009	Oil Storage Tank 1		Condenser
S0010	Oil Storage Tank 2		Condenser
S0011	Oil Storage Tank 3		Condenser
S0012	Blue Smoke Control		N/A
S0013	Aggregate loading		Water
S0014	Aggregate Silo Loading		Water
S0015	RAP Lipman		Baghouse
S0016	Storage Pile		Water
S0017	Brake Cleaner		SCAQMD Compliant
S0018	Diesel Storage		N/A
S0019	Welding Rods		N/A
S0020	Welding Rods		N/A
S0021	Haul Road 1		Water/Sweeping
S0022	Haul Road 2		Water/Sweeping
S0023	Haul Road 3		Water/Sweeping
S0024	Haul Road 4		Water/Sweeping
S0025	Haul Road 5		Water/Sweeping
S0026	Haul Road 6		Water/Sweeping
S0027	Haul Road 7		Water/Sweeping
S0028	Haul Road 8		Water/Sweeping
S0029	Haul Road 9		Water/Sweeping
S0030	Haul Road 10		Water/Sweeping
S0031	Haul Road 11		Water/Sweeping
S0032	Silo Feed Conveyors		Water
S0033	RAP and Cold Feed		Water
S0034	Welding Rods		N/A

c. Emissions Data Grouped by Source

Attached you will find a report which details the Annual and Hourly Emissions which includes the source name, source identification number, substance name and CAS number (Refer to Attachment "A", Table 1).

d. Emissions Data Grouped by Substance

Attached you will find a report which details the Annual and Hourly facility total emission rate by substance for all emitted substance (Refer to Attachment "A", Table 2).

e. Emission Estimation Methods

The emissions approved in the submitted toxic emission report were utilized in the Health Risk Assessment. The methods used to calculate the emissions are detailed in the submitted Toxic Emission Inventory Report (TEIR).

f. List of Substances

Attached you will find a table listing all "Hot Spots" Program substances which are emitted (Refer to Attachment "A", Table 2).

g. Exposed Population and Receptor Location

Below you will find Table 6 which summarizes the location of the Worker and Residential receptors. Figure 5 details the location of these receptors.

Table 6 - Receptor Location: Resident and Worker

Receptor No.	Name	UTM Coordinates		Miles From Site
		X (m)	Y (m)	
1939	Resident	431751	3733062	0.50
1940	Worker	433030	3731700	0.75
1941	Water Tank	432531	3732967	0.02
2012	Acute PMI Property Boundary Receptor	432611.1	3732931	0.00
2038	Front Gate	432879	3732893	0.00

Attached you will find isopleths which detail the cancer risk and the hazard index for both residential and worker impacts. (Refer to Attachment "B" for each respective isopleth).

All American Irvine sits in the foothills in a rugged area. This location has limited access. The site is surrounded by a secure fence and most of that fence is inaccessible to anyone due to the steep terrain and dense vegetation surrounding the facility. The fence line and area adjacent to the facility has no trails that would allow authorized or unauthorized access in the vicinity of the fence line. Receptors 1941(water tower), 2012 (PMI at property boundary) and 2038 (Front Gate) have been included in the acute evaluation per SCAQMD's request. These locations are being included to continue to work cooperatively with SCAQMD and to meet the requested deadlines. The previous submittal evaluated the water tower as the as the Acute HI. Additional evaluation of potential exposure scenarios were evaluated to address SCAQMD's comments. As a result, the front access gate has been added to the evaluation to address SCAQMD's concern. These three locations raise questions about their appropriateness for an Acute HI evaluation. As previously detailed, Rule 1402(c)(15) define a RECEPTOR Location is described as " any location outside the boundaries for the facility which a person could experience acute exposure...." Individuals are not going to experience acute exposure at locations where access, the topography and/or the surrounding vegetation make it inaccessible. That being said, the water tower and the front gate are very conservative locations to evaluate acute risk given the limited access which is controlled by All American. As a result, the evaluation focuses on these two locations for the HRA.

4. Meteorological Data

As requested by the SCAQMD, meteorological data for the surface and profile preprocessed files were obtained for Mission Viejo MET station (Station No. 99999) for years 2011-2016. Both the All American Facility and Mission Viejo meteorological sites experience a coastal effect. The MET Station is approximately 7.73 miles to the Southeast of the facility, with an elevation difference of approximately 10'. Figure 6 details the location of the meteorological station and the site location.

Figure 7 wind rose details the prevailing wind direction coming from the South/Southwest direction.

5. Geographical Data

The Geographic Data for the Health Risk Assessment included in the model is the *World Geodetic System 1984 (WGS 84)* and *Universal Transverse Mercator Zone 11N (UTM WGS 84)*. Both coordinate systems were used in site and device identification, receptor location, and modeling.

6. Land Use Analysis

The land use procedure described in Section 7.2.1.1(b)(i) of the US EPA's *Guideline on Air Quality Models* was used to determine whether urban or rural coefficients are appropriate for the model, since it is preferred over the population density procedure. All land within a 3km radius of the site was classified based on the land use types described in Table 4.1 of the OEHHA 2015 Guidance Manual, as shown in Table 7 of this report. According to this procedure, if more than 50% of the land contained within this radius is Type I1, I2, C1, R1, or R2, the site is in an urban region. In this case, the region was determined to be rural as only 15.4% of the area within 3 km of the facility was residential. Figure 8 details the land uses surrounding the facility.

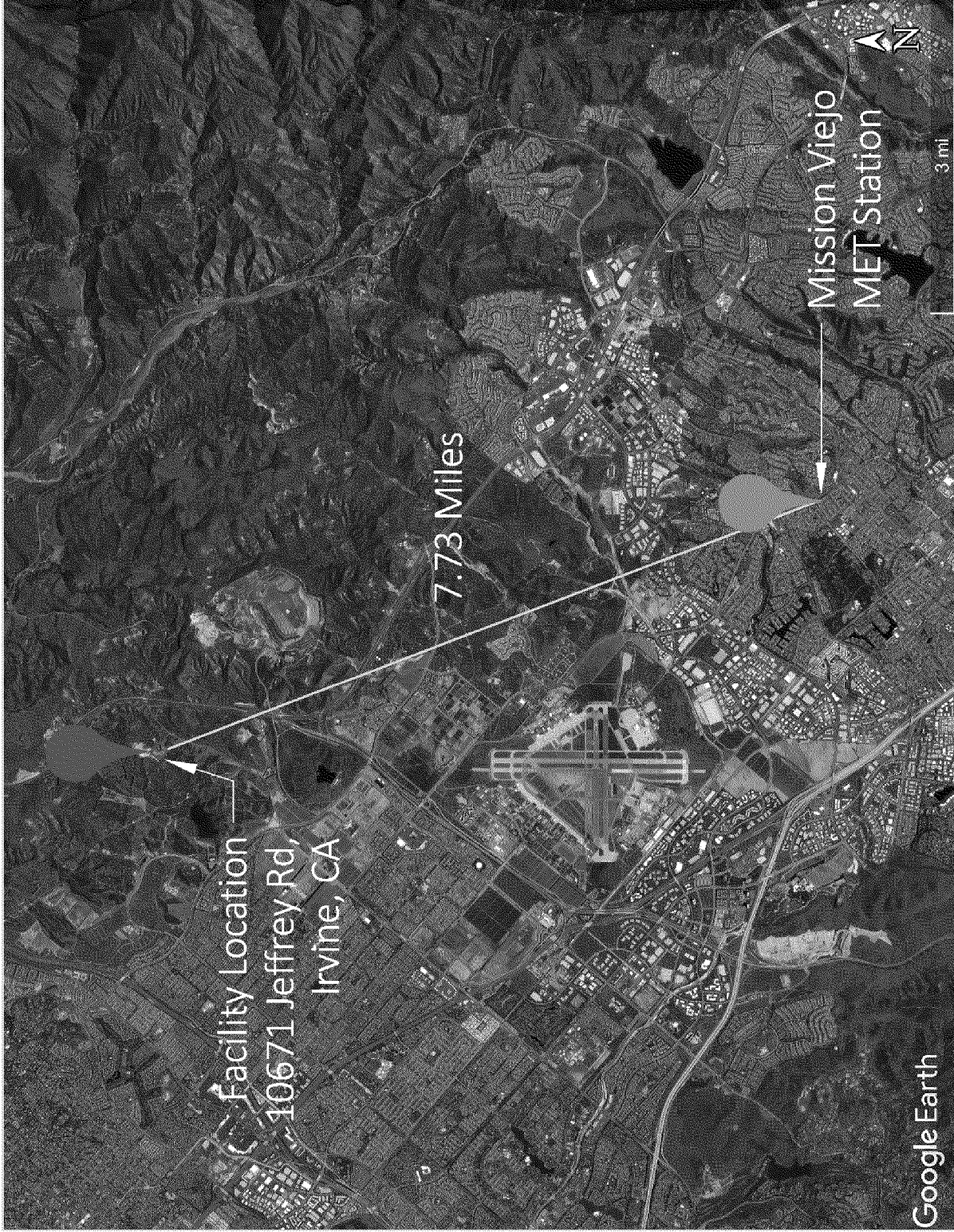


Figure 6 - Met Station Location

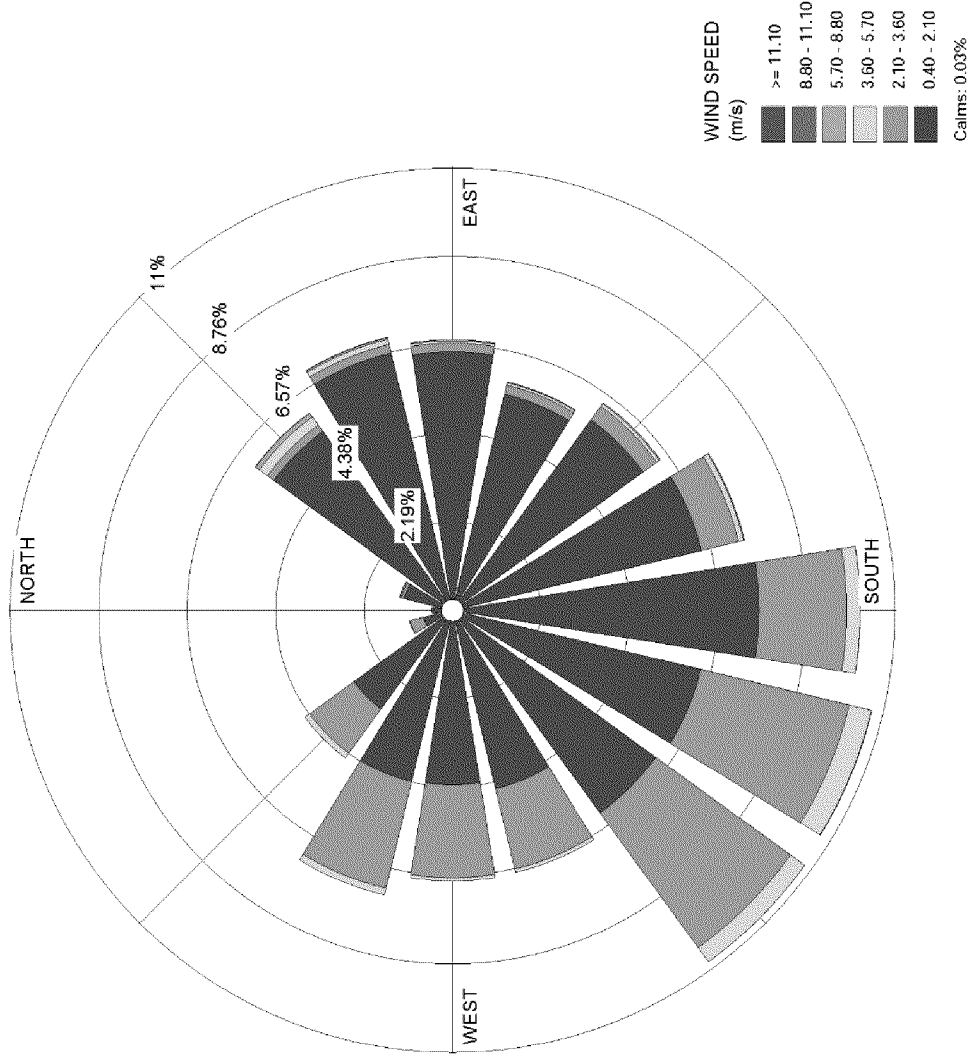


Figure 7 - Windrose

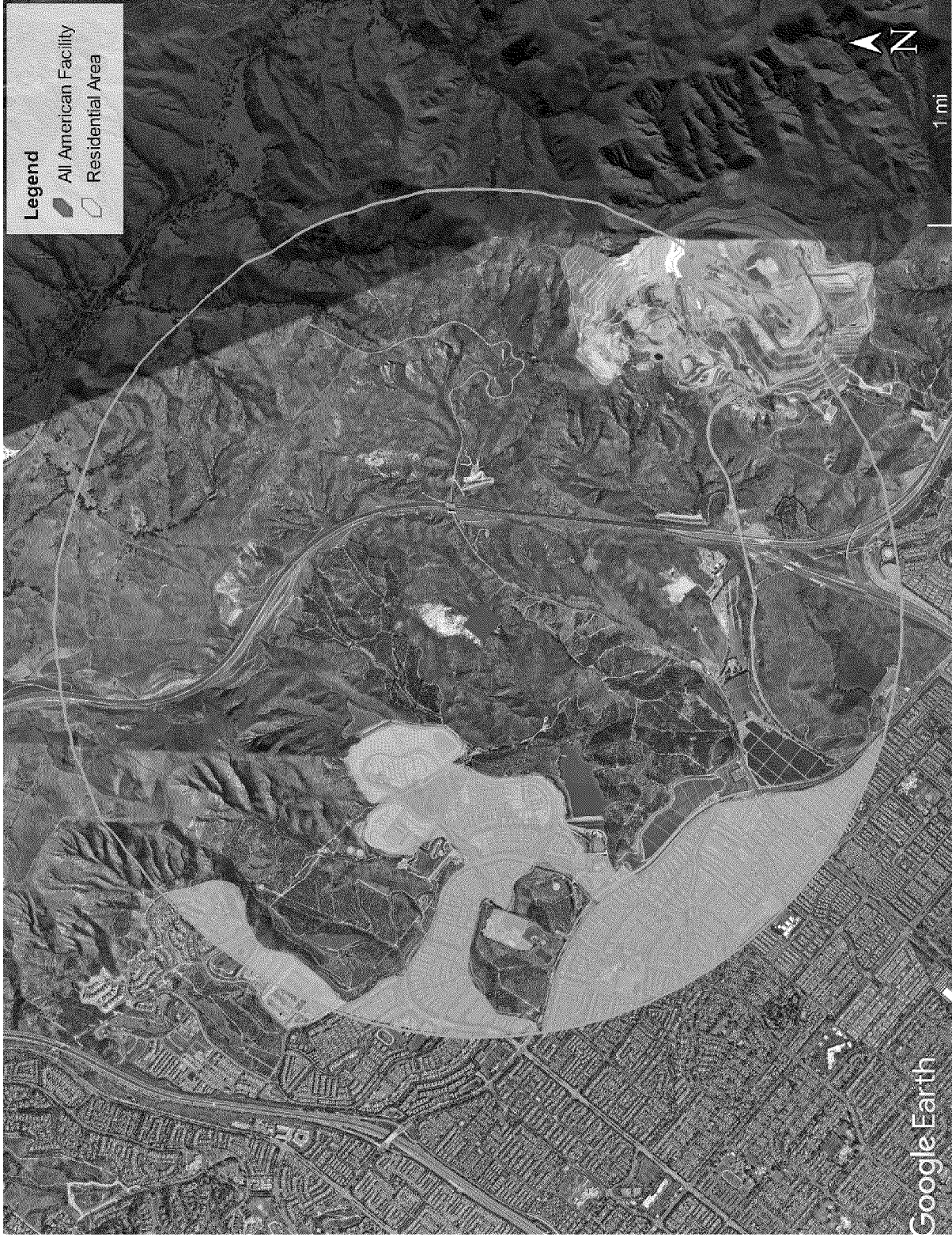


Figure 8 - Land Use

Table 7 - Land Use Categories

Type	Use and Structures	Vegetation
I1	Heavy Industrial: Major chemical, steel and fabrication industries; generally 3-5 story buildings, flat roofs	Grass and tree growth extremely rare; < 5% vegetation
I2	Light-moderate industrial: Rail yards, truck depots, warehouses, industrial parks, minor fabrications; generally 1-3 story buildings, flat roofs	Very limited grass, trees almost total absent; < 5% vegetation
C1	Commercial: Office and apartment buildings, hotels; > 10 story heights, flat roofs	Limited grass and trees; < 15% vegetation
R1	Common residential: Single family dwelling with normal easements; generally one story, pitched roof structures; frequent driveways	Abundant grass lawns and light-moderately wooded; > 70% vegetation
R2	Compact residential: Single, some multiple, family dwelling with close spacing; generally <2 story, pitched roof structures; garages (via alley), no driveways	Limited lawn sizes and shade trees; < 30% vegetation
R3	Compact residential: Old multi-family dwellings with close (<2 m) lateral separation; generally 2 story, flat roof structures; garages (via alley) and ashpits, no driveways	Limited lawn sizes, old established shade trees; < 35% vegetation
R4	Estate residential: Expansive family dwelling on multi-acre tracts	Abundant grass lawns and lightly wooded; > 95% vegetation
A1	Metropolitan natural: Major municipal, state, or federal parks, golf courses, cemeteries, campuses; occasional single story structures	Nearly total grass and lightly wooded; > 95% vegetation
A2	Agricultural rural	Local crops (e.g. corn, soybean); > 95% vegetation
A3	Undeveloped: Uncultivated; wasteland	Mostly wild grasses and weeds, lightly wooded; > 90% vegetation
A4	Undeveloped rural	Heavily wooded; > 95% vegetation
A5	Water surfaces: Rivers, lakes	

7. Model Selection

The air dispersion modeling was done using HARP 2 version 21081. An emission rate of 1 g/s was used to complete the model. A Cartesian Grid of 5 km x 3.7 km was created with a 100 m receptor spacing. Receptors were placed on the boundary of the facility with a 15 m spacing.

In Figure 9 below you will find a map detailing the gridded receptors.

8. Terrain Data

Terrain Data was obtained from the United States Geological Survey (USGS) 1 arc-second DEM with spatial resolution of approximately 30 m. The terrain data was uploaded to HARP 2 and AERMAP was run to obtain the elevations for the sources and receptors.

9. Model Options

No non-regulatory options or deposition was used in the HARP 2 model. Table 8 below details the options and parameters used in HARP 2.

Table 8 - HARP Model Options

HARP MODEL OPTIONS
AERMOD Version 18081
Model Result Type- Concentration
Rural

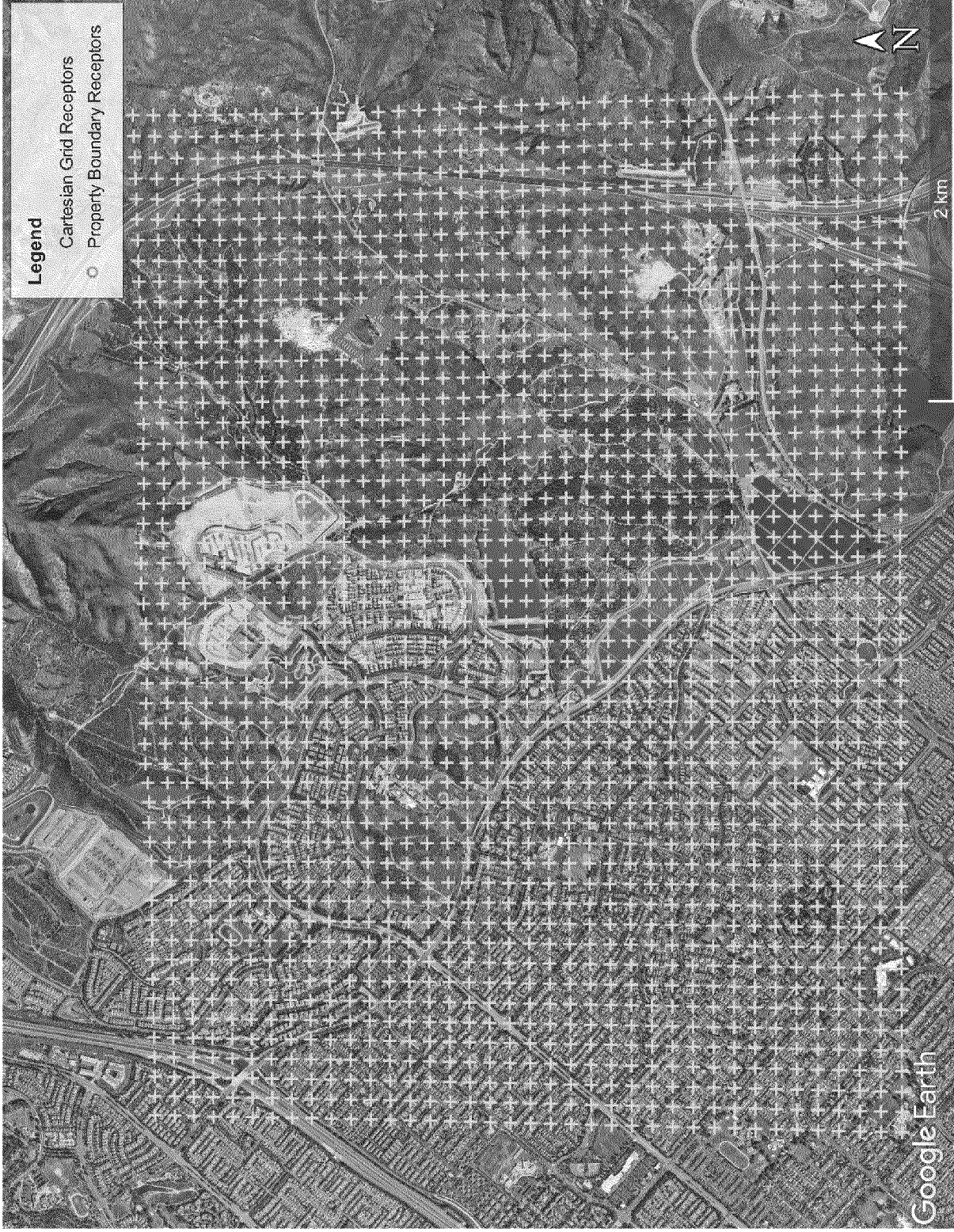


Figure 9 - Receptor Grid

10. Air Dispersion Modeling Results

The modeling files were uploaded through the SCAQMD HARP Electronic Files Submittal Form.

C. Health Values Used in Dose-Response and Dose Estimates

Refer to Attachment "C" for the Health Value tables which detail the REL, cancer potency factors, and target organ systems evaluated for the health risk assessment.

D. Risk Characterization

1. HARP2 Modeling Parameters

The HARP 2 model was prepared using Office of Environmental Health Hazard Assessment Air Toxic Hot Spots Program Risk Assessment Guidelines “Guidance Manual for Preparation of Health Risk Assessments”, dated February 2015. HARP Version 21081, released March 23, 2021, was used to calculate the health risk for resident and worker. Tables 9, 10, and 11 list the parameters for the residential worker, and acute analysis.

Tier 1 evaluation was completed for all risk scenarios for comparison with South Coast AQMD Rule 1402 thresholds.

Table 9 - Residential Risk HARP Parameters

Cancer Risk 30-year Lifetime Exposure Period
RMP Derived Method
Exposure Pathways: Inhalation, Soil, Dermal, Mother’s Milk, and Home Grown Produce
Dermal Climate: Warm
Deposition of 0.02 m/s
Fraction at Time at Home: 16 years to 70 years enabled
Daily Breathing Rates: RMP
Tier 1 Analysis Completed for all Pathways

Resident Chronic HI Risk
OEHHA Derived Method
Exposure Pathway: Inhalation, Soil, Dermal, Mother’s Milk, and Home Grown Produce
Dermal Climate: Warm
Deposition of 0.02 m/s
Fraction at Time at Home: Disabled
Daily Breathing Rates: Long Term 24 hr
Tier 1 Analysis Completed for all Pathways

Table 10 - Worker Risk HARP Parameters

Cancer Risk 25-year Lifetime Exposure Period
OEHHA Derived Method
Worker Exposure Pathways: Inhalation, Soil, Dermal Dermal Climate: Warm Deposition of 0.02 m/s Fraction at Time at Home: Disabled Worker Adjustment Factors: Assume Facility operates 8 hours, 5 days/week, with Worker Adjustment Factor of 4.2 (24 hours per day/8 hours per shift) x (7 days in a week/5 day in a work week) and Exposure Frequency is 250 days/yr. Daily Breathing Rate: 8-hour Moderate Intensity Tier 1 Analysis Completed for all Pathways

Worker Chronic HI Risk
OEHHA Derived Method
Exposure Pathway: Inhalation, Soil, Dermal Dermal Climate: Warm Deposition of 0.02 m/s Fraction at Time at Home: Disabled Daily Breathing Rates: 8-hour Moderate Intensity Tier 1 Analysis Completed for all Pathways

Table 11 - Acute Risk HARP Parameters

Acute
OEHHA Derived Method
Exposure Pathway: Inhalation Daily Breathing Rates: Long Term 24hr Fraction at time at home: Disabled

2. Summary of Risk Results

Table 12 below details the facility Health Risk Assessment for the worker, residential, water tank, property boundary receptor, and front gate. As you will find the worker and residential cancer risk is less than 10 in a million. Chronic Hazard Index is below 1 for Hazard Index (HI). The Acute HI risk is below 1 for the water tank receptor and front gate receptor. The Acute PMI is provided for informational purposes but is not being used for risk evaluation. See the Source and Emission Inventory section for a more detailed discussion regarding the acute

HI receptors. A map detailing the location of the Maximum Exposed Cancer Risk for Worker and Residential Receptors can be found in Figure 10.

Table 12 - Summary of Health Risk Assessment Results

Receptor No.	Name	UTM Coordinates		30 Year Cancer Risk in a million (MEIR)	25 Year Cancer Risk in a million (MEIW)	Chronic HI	Acute HI
		X (m)	Y (m)				
1939	Resident	431751	3733062	4.51	--	0.072	0.091
1940	Worker	433030	3731700	--	0.080	2.38E-3	0.044
1941	Water Tank	432531	3732967	--	--	--	0.58
2012	Acute PMI Boundary Line Receptor	432611.1	3732931	--	--	--	2.41
2038	Front Gate	432879	3732893	--	--	--	0.61

This facility is below SCAQMD Rule 1402 thresholds. The resulting HRA cancer risk is < 10 in a million, and hazard index (HI) at the potential exposure locations are < 1.0 which is below the public notice level and action risk level.



Figure 10 - Maximum Individual Cancer Risk Locations

3. Risk Drivers

The following section details the device and listed substances driving the cancer, chronic and acute impacts.

Table 13 - Facility Risk Summary

Facility Risk Summary			
Facility Name:	All American Asphalt		
Facility Location:	10671 Jeffrey Road, Irvine, CA 92602		
Facility ID:	82207	Inventory Year:	2016
Cancer Risk (in a million):			
Maximally exposed individual resident 30-year (MEIR)	4.51		
Maximally exposed individual worker 25-year (MEIW)	0.08		
Chronic hazard index (HI):			
Maximally exposed individual resident (MEIR)	0.072		
Maximally exposed individual worker (MEIW)	2.38E-03		
Maximally exposed individual worker 8-hr (MEIW)	2.72E-03		
Acute hazard index			
Point of maximum impact (PMI) (Boundary Line)	2.41		
PMI at potential exposure location (Front Gate)	0.61		

Table 14 - MEIR Risk Drivers

MEIR Risk Drivers			
Receptor ID:	1939	UTM Zone:	11
UTME (m):	431751	UTMN (m):	3733062
Total cancer risk (in a million):	4.51		
Cancer risk contribution by substance	Pathway	Risk (in a million)	
Total PAHs	Soil/Crop/Mothers Milk	1.51	
Cobalt	Inhalation	1.39	
Arsenic	Soil/Crop	0.82	
Hexavalent chromium	Inhalation/Crop	0.38	
Lead	Soil/Crop	0.14	
Cancer risk contribution by device	Risk (% of total)	Risk (in a million)	
S0021-S0031 (All Haul Road Segments)	45%	2.02	
S0012 (Blue Smoke Control)	33%	1.50	
S0016 (Storage Pile)	12%	0.55	

Table 15 - MEIW Risk Drivers

MEIW Risk Drivers			
Receptor ID:	1940	UTM Zone:	11
UTME (m):	433030	UTMN (m):	3731700
Total cancer risk (in a million):	0.08		
Cancer risk contribution by substance	Pathway	Risk (in a million)	
Cobalt	Inhalation	0.037	
1,3-Butadiene	Inhalation	0.012	
Total PAHs	Inhalation/Soil/Dermal	0.01	
Hexavalent Chromium	Inhalation	7.10E-03	
Benzene	Inhalation	5.50E-03	
Cancer risk contribution by device	Risk (% of total)	Risk (in a million)	
S0002 (Dryer Baghouse)	41%	0.033	
S0021-S0031 (All Haul Road Segments)	29%	0.023	
S0012 (Blue Smoke Control)	14%	0.011	
S0033 (RAP and Cold Feed)	7%	5.85E-03	
S0016 (Storage Pile)	5%	4.05E-03	

Table 16 - MEIR Chronic Risk Drivers

MEIR Chronic Risk Drivers			
Receptor ID:	1939	UTM Zone:	11
UTME (m):	431751	UTMN (m):	3733062
Total chronic hazard index:	0.072		
Chronic endpoint:	Respiratory		
Chronic hazard index contribution by substance	HI (% of total)	HI	
Arsenic	85%	0.061	
Crystalline Silica	5%	3.72E-03	
Nickel	5%	3.55E-03	
Chlorine	4%	2.93E-03	
Chronic hazard index contribution by device	HI (% of total)	HI	
S0021-S0031 (All Haul Road Segments)	63%	0.045	
S0016 (Storage Pile)	29%	0.021	
S0033 (RAP and Cold Feed)	6%	4.03E-03	

Table 17 - Chronic Worker Risk Drivers

MEIOW Chronic Risk Drivers			
Receptor ID:	1940	UTM Zone:	11
UTME (m):	433030	UTMN (m):	3731700
Total chronic hazard index:	2.38E-03		
Chronic endpoint:	Central Nervous System		
Chronic hazard index contribution by substance	HI (% of total)	HI	
Arsenic	52%	1.23E-03	
Manganese	48%	1.13E-03	
Chronic hazard index contribution by device	HI (% of total)	HI	
S0002 (Dryer Baghouse)	37%	8.84E-04	
S0021-S0031 (All Haul Road Segments)	34%	8.20E-04	
S0033 (RAP and Cold Feed)	14%	3.41E-04	
S0016 (Storage Pile)	10%	2.36E-04	

Table 18 - Acute PMI Risk Drivers

Acute PMI Risk Drivers			
Receptor ID:	2012	UTM Zone:	11
UTME (m):	432611.1	UTMN (m):	3732931
Total acute hazard index:	2.41		
Acute endpoint:	Immune		
Acute hazard index contribution by substance	HI (% of total)	HI	
Nickel:	90%	2.16	
Benzene:	10%	0.25	
Chronic hazard index contribution by device	HI (% of total)	HI	
S0034 (Welding Rods)	58%	1.40	
S0021-S0031 (All Haul Road Segments)	19%	0.47	
S0006 (Mixing Tank II)	7%	0.18	
S0016 (Storage Pile)	7%	0.16	
S0002 (Dryer Baghouse)	6%	0.14	

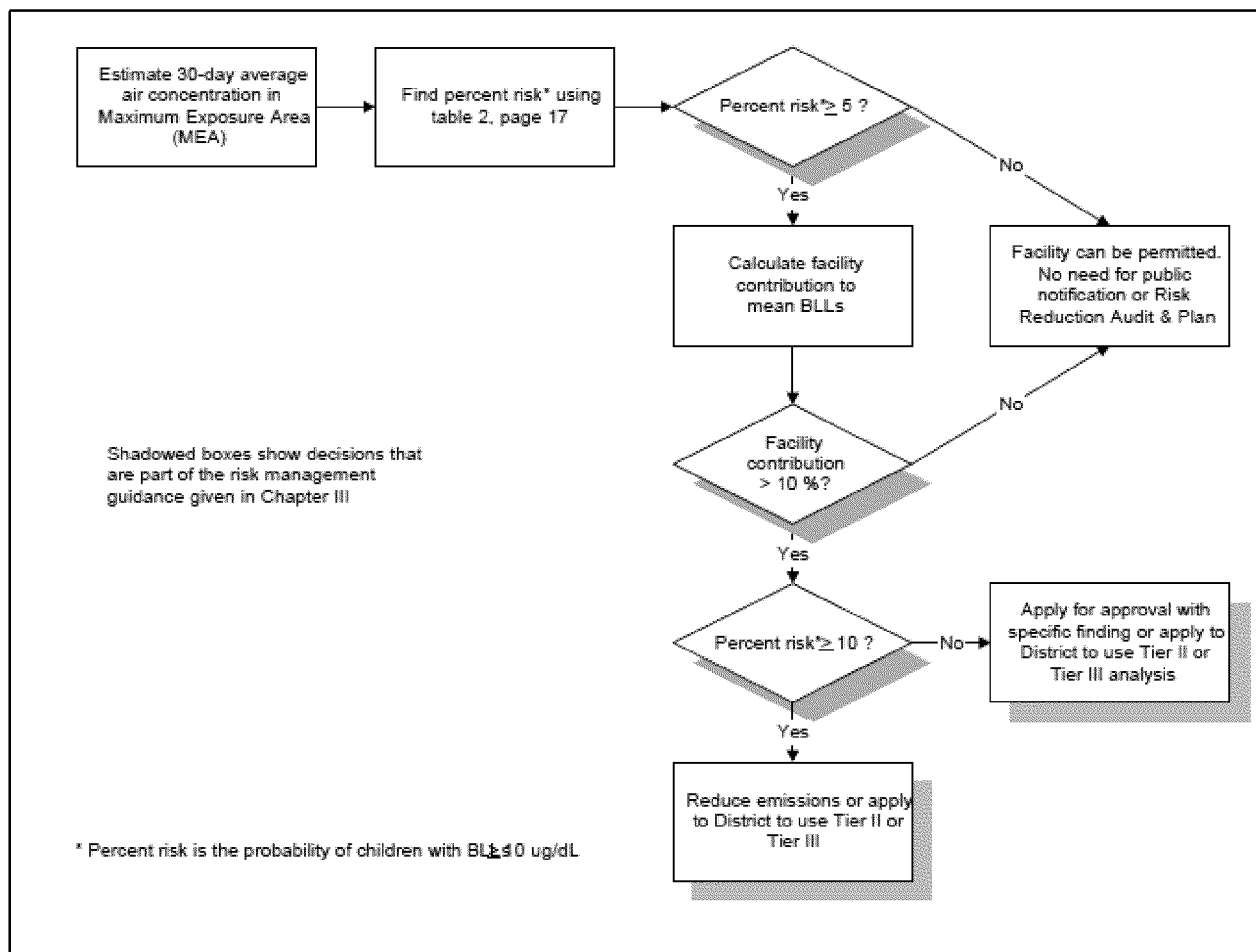
Table 19 - Acute Potential Exposure Location Risk Drivers

Acute Risk Drivers (Front Gate)			
Receptor ID:	2038	UTM Zone:	11
UTME (m):	432879	UTMN (m):	3732893
Total acute hazard index:	0.61		
Acute endpoint:	Immune		
Acute hazard index contribution by substance	HI (% of total)		HI
Nickel	89%		0.54
Benzene	11%		0.07
Chronic hazard index contribution by device	HI (% of total)		HI
S0021-S0031 (All Haul Road Segments)	41%		0.25
S0034 (Welding Rods)	33%		0.20
S0006 (Mixing Tank II)	8%		0.05
S0016 (Storage Pile)	8%		0.05
S0002 (Dryer Baghouse)	6%		0.04

4. Lead Analysis

All sources which have a potential for emitting lead based on the available toxics data has been included in the lead analysis. A Tier 1 lead evaluation was completed utilizing the California Environmental Protection Agency Air Resources Board "Risk Management Guidelines for New, Modified, and Existing Sources of Lead" March 2001. The analysis predicts the contribution the facility could potentially make to the existing lead baseline for a high-risk scenario and determines the percentage of the Blood Lead Level (BLL) it makes up.

The following flow chart details the Tier 1 approach.



* Reference (Risk Management Guidelines for New, Modified, and Existing Source of Lead, March 2001)

a. 30-day Average Air Concentration

The 30-day average air concentration was determined utilizing the HARP2 modeling software for the lead emitting sources. The resulting 30-day air concentration at the acute potential exposure location (Front Gate Receptor 2038) is 9.69 E-3 $\mu\text{g}/\text{m}^3$ at coordinates 432879, 3732893.

b. Percent Risk

Since the lead concentration from these sources are low, a worst-case evaluation was completed with an assumed high exposure scenario. With a 30-day average concentration of 9.69E-3 $\mu\text{g}/\text{m}^3$, the facility resulting percent >10 $\mu\text{g}/\text{dl}$ is 5.4 according to Table 2 of the risk management guidelines.

c. Facility Contribution to mean BLL

The facility contribution was calculating utilizing Figure 4 of the lead guidance. The geometric standard deviation (GSD) for high exposure is 1.84 (Table 1). The geometric mean (GM) BLL for high exposure scenario is 3.76 at an air lead concentration of 0.02 $\mu\text{g}/\text{m}^3$ (Table 3). The following calculation was utilized to convert the geometric mean (GM) to an arithmetic mean:

$$\mu_c = \exp [\ln(\mu_G) + 1/2 ((\ln(\sigma_G))^2)]$$

Where: $\ln(\mu_G)$ is the natural log of the geometric mean,
 $\ln(\sigma_G)$ is the natural log of the geometric standard deviation,
 μ_c is the arithmetic mean

Therefore: $\mu_c = \exp [\ln(3.76) + 1/2 ((\ln(1.84))^2)]$
 $\mu_c = 4.53 \mu\text{g}/\text{dL}$

The blood lead level at an air lead concentration of 9.69 E-3 $\mu\text{g}/\text{m}^3$. The aggregate air lead slope of 4.2 $\mu\text{g}/\text{dL}/\mu\text{g}/\text{m}^3$ is:
 $= 9.69 \text{ E-}3 \mu\text{g}/\text{m}^3 \times 4.2 \mu\text{g}/\text{dL}/\mu\text{g}/\text{m}^3$
 $= 0.041 \mu\text{g}/\text{dL}$

Therefore, the facility contribution is:

$$= 0.041 \mu\text{g/dL} \div 4.53 \mu\text{g/dL} = 9.05 \text{ E-3} \times 100 = 0.905\%$$

d. Conclusion

The CARB risk management guidelines for lead set a <10% contribution threshold trigger. The analysis has used a conservative approach which assumes a high-risk exposure area and utilizing the Acute PMI. The resulting facility contribution is 0.905%. Since the facility contribution is less than 10% no further analysis is necessary and Toxic Best Available Control Technology (TBACT) is not triggered.

ATTACHMENT "A"
SUMMARY TABLES

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0001	7440382	Arsenic	6.54E-07	2.73E-10
S0001	7440417	Beryllium	3.03E-08	1.26E-11
S0001	7440439	Cadmium	7.71E-08	3.21E-11
S0001	1175	Silica, Crystln	0.00223	9.29E-07
S0001	7440508	Copper	3.22E-06	1.34E-09
S0001	18540299	Cr(VI)	9.76E-08	4.07E-11
S0001	7439921	Lead	2.44E-06	1.02E-09
S0001	7439965	Manganese	0	0
S0001	7439976	Mercury	0	0
S0001	7440020	Nickel	2.83E-06	1.18E-09
S0001	7782492	Selenium	0	0
S0001	7429905	Aluminum	0	0
S0001	7440393	Barium	8.10E-06	3.38E-09
S0001	7440473	Chromium	3.22E-06	1.34E-09
S0001	7440484	Cobalt	8.01E-07	3.34E-10
S0001	7440666	Zinc	7.52E-06	3.13E-09
S0001	7440622	Vanadium	5.17E-06	2.15E-09
S0002	107028	Acrolein	0.1268	5.28E-05
S0002	7664417	NH3	507.2	0.211333333
S0002	71556	1,1,1-TCA	0	0
S0002	95636	1,2,4TriMeBenze	0	0
S0002	106990	1,3-Butadiene	186.3961667	0.077665069
S0002	91576	2MeNaphthalene	3.8	0.00158
S0002	83329	Acenaphthene	0.182	7.57E-05
S0002	208968	Acenaphthylene	0.76	0.000317
S0002	75070	Acetaldehyde	114.8092331	0.04783718
S0002	120127	Anthracene	0.0205	8.53E-06
S0002	7440382	Arsenic	0	0
S0002	56553	B[a]anthracene	0.000173	7.20E-08
S0002	50328	B[a]P	0	0
S0002	205992	B[b]fluoranthen	0.000157	6.53E-08
S0002	192972	B[e]pyrene	0	0
S0002	191242	B[g,h,i]perylene	0	0
S0002	207089	B[k]fluoranthen	0	0
S0002	7440393	Barium	0.405209058	0.000168837
S0002	71432	Benzene	432.2229952	0.180092915
S0002	7440417	Beryllium	0	0
S0002	7440439	Cadmium	0.017559059	7.32E-06
S0002	218019	Chrysene	0.00101	4.22E-07
S0002	7440484	Cobalt	5.335252597	0.002223022
S0002	7440508	Copper	52.67717754	0.021948824
S0002	18540299	Cr(VI)	0.002566324	1.07E-06
S0002	75150	CS2	46.38380813	0.019326587
S0002	53703	D[a,h]anthracen	0	0
S0002	100414	Ethyl Benzene	0	0

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0002	206440	Fluoranthene	0.945487802	0.000393953
S0002	86737	Fluorene	0.226	9.40E-05
S0002	50000	Formaldehyde	499.7578382	0.208232433
S0002	7783064	H2S	0	0
S0002	110543	Hexane	0	0
S0002	193395	In[1,2,3-cd]pyr	0.000224	9.31E-08
S0002	1128	Lead cmp(inorg)	0	0
S0002	7439965	Manganese	182.3440761	0.075976698
S0002	78933	MEK	48.70302217	0.020292926
S0002	7439976	Mercury	0	0
S0002	67561	Methanol	178.5776579	0.074407357
S0002	91203	Naphthalene	11.2	0.00466
S0002	7440020	Nickel	4.794973853	0.001997906
S0002	1151	PAHs-w/o	0	0
S0002	198550	Perylene	0	0
S0002	85018	Phenanthrene	0.253	0.000106
S0002	7723140	Phosphorus	506.5113225	0.211046384
S0002	115071	Propylene	1026.529614	0.427720672
S0002	129000	Pyrene	0.00898	3.74E-06
S0002	7782492	Selenium	0	0
S0002	100425	Styrene	351.1811836	0.146325493
S0002	108883	Toluene	182.3440761	0.075976698
S0002	1330207	Xylenes	74.2883273	0.03095347
S0002	7440666	Zinc	675.34843	0.281395179
S0003	7440382	Arsenic	1.52E-05	6.33E-09
S0003	7440417	Beryllium	7.03E-07	2.93E-10
S0003	7440439	Cadmium	1.79E-06	7.46E-10
S0003	1175	Silica, Crystln	0.0519	2.16E-05
S0003	7440508	Copper	7.49E-05	3.12E-08
S0003	18540299	Cr(VI)	2.27E-06	9.46E-10
S0003	7439921	Lead	5.67E-05	2.36E-08
S0003	7439965	Manganese	0	0
S0003	7439976	Mercury	0	0
S0003	7440020	Nickel	6.58E-05	2.74E-08
S0003	7782492	Selenium	0	0
S0003	7429905	Aluminum	0	0
S0003	7440393	Barium	0.000188	7.83E-08
S0003	7440473	Chromium	7.49E-05	3.12E-08
S0003	7440484	Cobalt	1.86E-05	7.75E-09
S0003	7440666	Zinc	0.000175	7.29E-08
S0003	7440622	Vanadium	0.00012	5.00E-08
S0004	7440382	Arsenic	2.18E-06	9.08E-10
S0004	7440417	Beryllium	1.01E-07	4.21E-11
S0004	7440439	Cadmium	2.57E-07	1.07E-10
S0004	1175	Silica, Crystln	0.00744	3.10E-06

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0004	7440508	Copper	1.07E-05	4.46E-09
S0004	18540299	Cr(VI)	3.25E-07	1.35E-10
S0004	7439921	Lead	8.14E-06	3.39E-09
S0004	7439965	Manganese	0	0
S0004	7439976	Mercury	0	0
S0004	7440020	Nickel	9.44E-06	3.93E-09
S0004	7782492	Selenium	0	0
S0004	7429905	Aluminum	0	0
S0004	7440393	Barium	2.70E-05	1.13E-08
S0004	7440473	Chromium	1.07E-05	4.46E-09
S0004	7440484	Cobalt	2.67E-06	1.11E-09
S0004	7440666	Zinc	2.51E-05	1.05E-08
S0004	7440622	Vanadium	1.72E-05	7.17E-09
S0005	106990	1,3-Butadiene	0	0
S0005	540841	2,2,4TriMePentn	0.02525567	9.02E-05
S0005	91576	2MeNaphthalene	0.000477052	1.70E-06
S0005	83329	Acenaphthene	3.93E-06	1.40E-08
S0005	208968	Acenaphthylene	1.96E-06	7.02E-09
S0005	7429905	Aluminum	0.000322711	1.15E-06
S0005	120127	Anthracene	2.81E-06	1.00E-08
S0005	7440360	Antimony	0	0
S0005	7440382	Arsenic	1.68E-06	6.01E-09
S0005	56553	B[a]anthracene	4.63E-09	1.65E-11
S0005	50328	B[a]P	1.11E-08	3.96E-11
S0005	205992	B[b]fluoranthen	1.22E-08	4.36E-11
S0005	192972	B[e]pyrene	7.72E-08	2.76E-10
S0005	191242	B[g,h,i]perylene	1.23E-07	4.41E-10
S0005	207089	B[k]fluoranthen	4.35E-09	1.55E-11
S0005	7440393	Barium	2.10E-05	7.52E-08
S0005	71432	Benzene	0.063139174	0.000225497
S0005	7440417	Beryllium	0	0
S0005	7440439	Cadmium	5.19E-07	1.85E-09
S0005	7440473	Chromium	9.12E-06	3.26E-08
S0005	218019	Chrysene	3.37E-08	1.20E-10
S0005	75456	ClDiFluorMethan	0	0
S0005	7440484	Cobalt	1.82E-07	6.51E-10
S0005	7440508	Copper	1.82E-05	6.51E-08
S0005	75150	CS2	0.029464948	0.000105232
S0005	110827	Cyclohexane	0.088394844	0.000315696
S0005	53703	D[a,h]anthracen	0	0
S0005	75434	DiClFluorMethan	0	0
S0005	100414	Ethyl Benzene	0.013890618	4.96E-05
S0005	206440	Fluoranthene	1.54E-07	5.51E-10
S0005	86737	Fluorene	2.95E-06	1.05E-08
S0005	110543	Hexane	0.196432986	0.000701546
S0005	193395	ln[1,2,3-cd]pyr	1.68E-08	6.01E-11

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0005	7439921	Lead	2.95E-06	1.05E-08
S0005	7439965	Manganese	1.82E-05	6.51E-08
S0005	78933	MEK	0.067348452	0.00024053
S0005	7439976	Mercury	5.05E-06	1.80E-08
S0005	67561	Methanol	0.75767009	0.002705965
S0005	108101	MIBK	0.322711335	0.00115254
S0005	91203	Naphthalene	0.001361	4.86E-06
S0005	7440020	Nickel	1.14E-05	4.06E-08
S0005	95476	o-Xylene	0.009120103	3.26E-05
S0005	198550	Perylene	3.93E-09	1.40E-11
S0005	85018	Phenanthrene	3.93E-06	1.40E-08
S0005	7723140	Phosphorus	0.000101023	3.61E-07
S0005	115071	Propylene	0.182402059	0.000651436
S0005	129000	Pyrene	3.23E-07	1.15E-09
S0005	7782492	Selenium	9.12E-07	3.26E-09
S0005	7440224	Silver	1.54E-06	5.51E-09
S0005	7440280	Thallium	0	0
S0005	108883	Toluene	0.06594536	0.000235519
S0005	7440622	Vanadium	0	0
S0005	1330207	Xylenes	0.182402059	0.000651436
S0005	7440666	Zinc	3.09E-05	1.10E-07
S0006	106990	1,3-Butadiene	0	0
S0006	540841	2,2,4TriMePentn	1.237527814	0.004419742
S0006	91576	2MeNaphthalene	0.023375525	8.35E-05
S0006	83329	Acenaphthene	0.000192504	6.88E-07
S0006	208968	Acenaphthylene	9.63E-05	3.44E-07
S0006	7429905	Aluminum	0.015812855	5.65E-05
S0006	120127	Anthracene	0.000137503	4.91E-07
S0006	7440360	Antimony	0	0
S0006	7440382	Arsenic	8.25E-05	2.95E-07
S0006	56553	B[a]anthracene	2.27E-07	8.10E-10
S0006	50328	B[a]P	5.43E-07	1.94E-09
S0006	205992	B[b]fluoranthen	5.98E-07	2.14E-09
S0006	192972	B[e]pyrene	3.78E-06	1.35E-08
S0006	191242	B[g,h,i]perylene	6.05E-06	2.16E-08
S0006	207089	B[k]fluoranthen	2.13E-07	7.61E-10
S0006	7440393	Barium	0.001031273	3.68E-06
S0006	71432	Benzene	3.093819535	0.011049355
S0006	7440417	Beryllium	0	0
S0006	7440439	Cadmium	2.54E-05	9.09E-08
S0006	7440473	Chromium	0.000446885	1.60E-06
S0006	218019	Chrysene	1.65E-06	5.89E-09
S0006	75456	ClDiFluorMethan	0	0
S0006	7440484	Cobalt	8.94E-06	3.19E-08
S0006	7440508	Copper	0.00089377	3.19E-06
S0006	75150	CS2	1.44378245	0.005156366

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0006	110827	Cyclohexane	4.33134735	0.015469098
S0006	53703	D[a,h]anthracen	0	0
S0006	75434	DiClFluorMethan	0	0
S0006	100414	Ethyl Benzene	0.680640298	0.002430858
S0006	206440	Fluoranthene	7.56E-06	2.70E-08
S0006	86737	Fluorene	0.000144378	5.16E-07
S0006	110543	Hexane	9.625216332	0.034375773
S0006	193395	In[1,2,3-cd]pyr	8.25E-07	2.95E-09
S0006	7439921	Lead	0.000144378	5.16E-07
S0006	7439965	Manganese	0.00089377	3.19E-06
S0006	78933	MEK	3.300074171	0.011785979
S0006	7439976	Mercury	0.000247506	8.84E-07
S0006	67561	Methanol	37.12583442	0.132592266
S0006	108101	MIBK	15.8128554	0.056474484
S0006	91203	Naphthalene	0.066688999	0.000238175
S0006	7440020	Nickel	0.000556888	1.99E-06
S0006	95476	o-Xylene	0.446885044	0.001596018
S0006	198550	Perylene	1.93E-07	6.88E-10
S0006	85018	Phenanthrene	0.000192504	6.88E-07
S0006	7723140	Phosphorus	0.004950111	1.77E-05
S0006	115071	Propylene	8.93770088	0.03192036
S0006	129000	Pyrene	1.58E-05	5.65E-08
S0006	7782492	Selenium	4.47E-05	1.60E-07
S0006	7440224	Silver	7.56E-05	2.70E-07
S0006	7440280	Thallium	0	0
S0006	108883	Toluene	3.231322626	0.011540438
S0006	7440622	Vanadium	0	0
S0006	1330207	Xylenes	8.93770088	0.03192036
S0006	7440666	Zinc	0.001512534	5.40E-06
S0007	75070	Acetaldehyde	0.00703782	2.51E-05
S0007	107028	Acrolein	0.00625584	2.23E-05
S0007	71432	Benzene	0.01329366	4.75E-05
S0007	100414	Ethyl Benzene	0.0156396	5.59E-05
S0007	50000	Formaldehyde	0.02815128	0.00010054
S0007	110543	Hexane	0.01016574	3.63E-05
S0007	91203	Naphthalene	0.00234594	8.38E-06
S0007	7664417	NH3	25.02336	0.089369143
S0007	1151	PAHs-w/o	0.00078198	2.79E-06
S0007	108883	Toluene	0.06099444	0.000217837
S0007	1330207	Xylenes	0.04535484	0.000161982
S0008	75070	Acetaldehyde	0.0117531	1.35E-06
S0008	107028	Acrolein	0.0104472	1.20E-06
S0008	71432	Benzene	0.0222003	2.55E-06
S0008	100414	Ethyl Benzene	0.026118	3.00E-06
S0008	50000	Formaldehyde	0.0470124	5.39E-06
S0008	110543	Hexane	0.0169767	1.95E-06

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0008	91203	Naphthalene	0.0039177	4.49E-07
S0008	7664417	NH3	41.7888	0.004792294
S0008	1151	PAHs-w/o	0.0013059	1.50E-07
S0008	108883	Toluene	0.1018602	1.17E-05
S0008	1330207	Xylenes	0.0757422	8.69E-06
S0009	71556	1,1,1-TCA	0	0
S0009	91576	2MeNaphthalene	0.002168078	2.47E-07
S0009	83329	Acenaphthene	0.000193358	2.21E-08
S0009	208968	Acenaphthylene	5.76E-06	6.57E-10
S0009	120127	Anthracene	5.35E-05	6.11E-09
S0009	56553	B[a]anthracene	2.30E-05	2.63E-09
S0009	50328	B[a]P	0	0
S0009	205992	B[b]fluoranthene	0	0
S0009	192972	B[e]pyrene	3.91E-06	4.46E-10
S0009	191242	B[g,h,i]perylene	0	0
S0009	207089	B[k]fluoranthene	0	0
S0009	71432	Benzene	0.000466752	5.33E-08
S0009	218019	Chrysene	8.64E-05	9.86E-09
S0009	75150	CS2	0.000233376	2.66E-08
S0009	53703	D[a,h]anthracene	0	0
S0009	100414	Ethyl Benzene	0.000554268	6.33E-08
S0009	75003	Ethyl Chloride	5.83E-05	6.66E-09
S0009	206440	Fluoranthene	6.17E-05	7.04E-09
S0009	86737	Fluorene	0.000415514	4.74E-08
S0009	50000	Formaldehyde	0.01006434	1.15E-06
S0009	110543	Hexane	0.0014586	1.67E-07
S0009	193395	In[1,2,3-cd]pyr	0	0
S0009	78933	MEK	0.000568854	6.49E-08
S0009	74839	Methyl Bromide	7.15E-05	8.16E-09
S0009	75092	Methylene Chlor	3.94E-06	4.50E-10
S0009	108383	m-Xylene	0.0029172	3.33E-07
S0009	91203	Naphthalene	0.000748748	8.55E-08
S0009	95476	o-Xylene	0.000831402	9.49E-08
S0009	1151	PAHs-w/o	0.00468996	5.35E-07
S0009	127184	Perc	0	0
S0009	198550	Perylene	1.23E-05	1.41E-09
S0009	85018	Phenanthrene	0.00074052	8.45E-08
S0009	106423	p-Xylene	0	0
S0009	129000	Pyrene	0.000181016	2.07E-08
S0009	100425	Styrene	7.88E-05	8.99E-09
S0009	79016	TCE	0	0
S0009	108883	Toluene	0.000904332	1.03E-07
S0009	75694	TriClFluorMetha	0	0
S0010	71556	1,1,1-TCA	0	0
S0010	91576	2MeNaphthalene	0.002168078	2.47E-07
S0010	83329	Acenaphthene	0.000193358	2.21E-08

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0010	208968	Acenaphthylene	5.76E-06	6.57E-10
S0010	120127	Anthracene	5.35E-05	6.11E-09
S0010	56553	B[a]anthracene	2.30E-05	2.63E-09
S0010	50328	B[a]P	0	0
S0010	205992	B[b]fluoranthen	0	0
S0010	192972	B[e]pyrene	3.91E-06	4.46E-10
S0010	191242	B[g,h,i]perylene	0	0
S0010	207089	B[k]fluoranthen	0	0
S0010	71432	Benzene	0.000466752	5.33E-08
S0010	218019	Chrysene	8.64E-05	9.86E-09
S0010	75150	CS2	0.000233376	2.66E-08
S0010	53703	D[a,h]anthracen	0	0
S0010	100414	Ethyl Benzene	0.000554268	6.33E-08
S0010	75003	Ethyl Chloride	5.83E-05	6.66E-09
S0010	206440	Fluoranthene	6.17E-05	7.04E-09
S0010	86737	Fluorene	0.000415514	4.74E-08
S0010	50000	Formaldehyde	0.01006434	1.15E-06
S0010	110543	Hexane	0.0014586	1.67E-07
S0010	193395	In[1,2,3-cd]pyr	0	0
S0010	78933	MEK	0.000568854	6.49E-08
S0010	74839	Methyl Bromide	7.15E-05	8.16E-09
S0010	75092	Methylene Chlor	3.94E-06	4.50E-10
S0010	108383	m-Xylene	0.0029172	3.33E-07
S0010	91203	Naphthalene	0.000748748	8.55E-08
S0010	95476	o-Xylene	0.000831402	9.49E-08
S0010	127184	Perc	0	0
S0010	198550	Perylene	1.23E-05	1.41E-09
S0010	85018	Phenanthrene	0.00074052	8.45E-08
S0010	106423	p-Xylene	0	0
S0010	129000	Pyrene	0.000181016	2.07E-08
S0010	100425	Styrene	7.88E-05	8.99E-09
S0010	79016	TCE	0	0
S0010	108883	Toluene	0.000904332	1.03E-07
S0010	75694	TriClFluorMetha	0	0
S0011	71556	1,1,1-TCA	0	0
S0011	91576	2MeNaphthalene	0.002168078	2.47E-07
S0011	83329	Acenaphthene	0.000193358	2.21E-08
S0011	208968	Acenaphthylene	5.76E-06	6.57E-10
S0011	120127	Anthracene	5.35E-05	6.11E-09
S0011	56553	B[a]anthracene	2.30E-05	2.63E-09
S0011	50328	B[a]P	0	0
S0011	205992	B[b]fluoranthen	0	0
S0011	192972	B[e]pyrene	3.91E-06	4.46E-10
S0011	191242	B[g,h,i]perylene	0	0
S0011	207089	B[k]fluoranthen	0	0
S0011	71432	Benzene	0.000466752	5.33E-08

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0011	218019	Chrysene	8.64E-05	9.86E-09
S0011	75150	CS2	0.000233376	2.66E-08
S0011	53703	D[a,h]anthracen	0	0
S0011	100414	Ethyl Benzene	0.000554268	6.33E-08
S0011	75003	Ethyl Chloride	5.83E-05	6.66E-09
S0011	206440	Fluoranthene	6.17E-05	7.04E-09
S0011	86737	Fluorene	0.000415514	4.74E-08
S0011	50000	Formaldehyde	0.01006434	1.15E-06
S0011	110543	Hexane	0.0014586	1.67E-07
S0011	193395	In[1,2,3-cd]pyr	0	0
S0011	78933	MEK	0.000568854	6.49E-08
S0011	74839	Methyl Bromide	7.15E-05	8.16E-09
S0011	75092	Methylene Chlor	3.94E-06	4.50E-10
S0011	108383	m-Xylene	0.0029172	3.33E-07
S0011	91203	Naphthalene	0.000748748	8.55E-08
S0011	95476	o-Xylene	0.000831402	9.49E-08
S0011	127184	Perc	0	0
S0011	198550	Perylene	1.23E-05	1.41E-09
S0011	85018	Phenanthrene	0.00074052	8.45E-08
S0011	106423	p-Xylene	0	0
S0011	129000	Pyrene	0.000181016	2.07E-08
S0011	100425	Styrene	7.88E-05	8.99E-09
S0011	79016	TCE	0	0
S0011	108883	Toluene	0.000904332	1.03E-07
S0011	75694	TriClFluorMetha	0	0
S0012	91576	2MeNaphthalene	0.904007901	0.00037667
S0012	83329	Acenaphthene	0.080623096	3.36E-05
S0012	208968	Acenaphthylene	0.002401539	1.00E-06
S0012	120127	Anthracene	0.022300005	9.29E-06
S0012	56553	B[a]anthracene	0.009606156	4.00E-06
S0012	50328	B[a]P	0	0
S0012	205992	B[b]fluoranthen	0	0
S0012	192972	B[e]pyrene	0.001629616	6.79E-07
S0012	191242	B[g,h,i]perylene	0	0
S0012	207089	B[k]fluoranthen	0	0
S0012	71432	Benzene	2.63353471	0.001097306
S0012	218019	Chrysene	0.036023085	1.50E-05
S0012	53703	D[a,h]anthracen	0	0
S0012	100414	Ethyl Benzene	3.127322468	0.001303051
S0012	206440	Fluoranthene	0.025730775	1.07E-05
S0012	86737	Fluorene	0.173253886	7.22E-05
S0012	50000	Formaldehyde	56.78559218	0.023660663
S0012	110543	Hexane	8.229795968	0.003429082
S0012	193395	In[1,2,3-cd]pyr	0	0
S0012	75092	Methylene Chlor	0.022220449	9.26E-06
S0012	108383	m-Xylene	16.45959194	0.006858163

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0012	91203	Naphthalene	0.312200072	0.000130083
S0012	95476	o-Xylene	4.690983702	0
S0012	1151	PAHs-w/o	1.95715975	0.001954577
S0012	198550	Perylene	0.005146155	2.14E-06
S0012	85018	Phenanthrene	0.308769302	0.000128654
S0012	106423	p-Xylene	0	0
S0012	129000	Pyrene	0.075476941	3.14E-05
S0012	100425	Styrene	0.444408982	0.00018517
S0012	108883	Toluene	5.1024735	0.002126031
S0012	75694	TriClFluorMetha	0	0
S0012	91576	2MeNaphthalene	0.547998017	0.000228333
S0012	83329	Acenaphthene	0.05986533	2.49E-05
S0012	208968	Acenaphthylene	0.006447035	2.69E-06
S0012	120127	Anthracene	0.016117589	6.72E-06
S0012	56553	B[a]anthracene	0.004374774	1.82E-06
S0012	50328	B[a]P	0.000529578	2.21E-07
S0012	205992	B[b]fluoranthen	0.00174991	7.29E-07
S0012	192972	B[e]pyrene	0.00179596	7.48E-07
S0012	191242	B[g,h,i]perylene	0.000437477	1.82E-07
S0012	207089	B[k]fluoranthen	0.000506553	2.11E-07
S0012	71432	Benzene	1.460527424	0.000608553
S0012	218019	Chrysene	0.023715881	9.88E-06
S0012	53703	D[a,h]anthracen	8.52E-05	3.55E-08
S0012	100414	Ethyl Benzene	7.864378439	0.003276824
S0012	206440	Fluoranthene	0.011512563	4.80E-06
S0012	86737	Fluorene	0.177293476	7.39E-05
S0012	50000	Formaldehyde	2.471661795	0.001029859
S0012	110543	Hexane	4.213059878	0.001755442
S0012	193395	ln[1,2,3-cd]pyr	0.000108218	4.51E-08
S0012	75092	Methylene Chlor	0.022218963	9.26E-06
S0012	108383	m-Xylene	11.515697	0.004798207
S0012	91203	Naphthalene	0.287814085	0.000119923
S0012	95476	o-Xylene	2.246965268	0.000936236
S0012	198550	Perylene	0.005065528	2.11E-06
S0012	85018	Phenanthrene	0.186503527	7.77E-05
S0012	106423	p-Xylene	0	0
S0012	129000	Pyrene	0.03453769	1.44E-05
S0012	100425	Styrene	0.205035581	8.54E-05
S0012	108883	Toluene	5.89828383	0.002457618
S0012	75694	TriClFluorMetha	0.036513186	1.52E-05
S0013	7440382	Arsenic	0.00093014	3.88E-07
S0013	7440417	Beryllium	5.68E-05	2.37E-08
S0013	7440439	Cadmium	9.90E-05	4.13E-08
S0013	1175	Silica, Crystln	3.938076129	0.001640865
S0013	7440508	Copper	0.006459307	2.69E-06
S0013	18540299	Cr(VI)	0.000117129	4.88E-08

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0013	7439921	Lead	0.003014343	1.26E-06
S0013	7439965	Manganese	0	0
S0013	7439976	Mercury	9.65E-06	4.02E-09
S0013	7440020	Nickel	0.003100468	1.29E-06
S0013	7782492	Selenium	0	0
S0013	7429905	Aluminum	0	0
S0013	7440393	Barium	0.006149261	2.56E-06
S0013	7440473	Chromium	0.007062176	2.94E-06
S0013	7440484	Cobalt	0.002153102	8.97E-07
S0013	7440666	Zinc	0.054258183	2.26E-05
S0013	7440622	Vanadium	0.013004739	5.42E-06
S0014	7440382	Arsenic	0.00154	6.41E-07
S0014	7440417	Beryllium	9.40E-05	3.92E-08
S0014	7440439	Cadmium	0.000164	6.82E-08
S0014	1175	Silica, Crystln	6.51	0.00271
S0014	7440508	Copper	0.0107	4.45E-06
S0014	18540299	Cr(VI)	0.000194	8.07E-08
S0014	7439921	Lead	0.00498	2.08E-06
S0014	7439965	Manganese	0	0
S0014	7439976	Mercury	1.60E-05	6.65E-09
S0014	7440020	Nickel	0.00513	2.14E-06
S0014	7782492	Selenium	0	0
S0014	7429905	Aluminum	0	0
S0014	7440393	Barium	0.0102	4.24E-06
S0014	7440473	Chromium	0.0117	4.87E-06
S0014	7440484	Cobalt	0.00356	1.48E-06
S0014	7440666	Zinc	0.0897	3.74E-05
S0014	7440622	Vanadium	0.0215	8.96E-06
S0015	7440382	Arsenic	0.000683	2.85E-07
S0015	7440417	Beryllium	3.16E-05	1.32E-08
S0015	7440439	Cadmium	8.06E-05	3.36E-08
S0015	1175	Silica, Crystln	2.33	0.000970833
S0015	7440508	Copper	0.00337	1.40E-06
S0015	18540299	Cr(VI)	0.000102	4.25E-08
S0015	7439921	Lead	0.00255	1.06E-06
S0015	7439965	Manganese	0	0
S0015	7439976	Mercury	0	0
S0015	7440020	Nickel	0.00296	1.23E-06
S0015	7782492	Selenium	0	0
S0015	7429905	Aluminum	0	0
S0015	7440393	Barium	0.00847	3.53E-06
S0015	7440473	Chromium	0.00337	1.40E-06
S0015	7440484	Cobalt	0.000836	3.48E-07
S0015	7440666	Zinc	0.00785	3.27E-06
S0015	7440622	Vanadium	0.00541	2.25E-06
S0016	7429905	Aluminum	0	0

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0016	7440382	Arsenic	0.045338187	1.89E-05
S0016	7440393	Barium	0.561652164	0.000234022
S0016	7440417	Beryllium	0.002097737	8.74E-07
S0016	7440439	Cadmium	0.005345846	2.23E-06
S0016	7440473	Chromium	0.223307487	9.30E-05
S0016	7440484	Cobalt	0.055488527	2.31E-05
S0016	7440508	Copper	0.223307487	9.30E-05
S0016	18540299	Cr(VI)	0.006766894	2.82E-06
S0016	7439921	Lead	0.169172339	7.05E-05
S0016	7439965	Manganese	0	0
S0016	7439976	Mercury	0	0
S0016	7440020	Nickel	0.196239913	8.18E-05
S0016	7782492	Selenium	0	0
S0016	1175	Silica, Crystln	132.6311134	0.055262964
S0016	7440622	Vanadium	0.358645358	0.000149436
S0016	7440666	Zinc	0.521050803	0.000217105
S0017	67561	Methanol	6.6	0.126923077
S0017	108883	Toluene	9.72	0.186923077
S0018	95636	1,2,4TriMeBenze	0.02	2.42E-05
S0018	540841	2,2,4TriMePentn	0.01	1.21E-05
S0018	71432	Benzene	5.18E-05	6.27E-08
S0018	98828	Cumene	0.01	1.21E-05
S0018	110827	Cyclohexane	0.05	6.06E-05
S0018	100414	Ethyl Benzene	0.03	3.64E-05
S0018	110543	Hexane	0.03	3.64E-05
S0018	108383	m-Xylene	0.1	0.000121212
S0018	91203	Naphthalene	0.04	4.85E-05
S0018	108883	Toluene	0.07	8.48E-05
S0019	18540299	Cr(VI)	0	0
S0019	7439965	Manganese	0.0927	0.000515
S0019	7440020	Nickel	0.00018	1.00E-06
S0020	18540299	Cr(VI)	0.0011	8.33E-06
S0020	7439965	Manganese	0.10901	0.000825833
S0020	7440020	Nickel	0.00044	3.33E-06
S0021	7429905	Aluminum	52.97695467	0.022073731
S0021	7440360	Antimony	0.004699991	1.96E-06
S0021	7440382	Arsenic	0.010071409	4.20E-06
S0021	7440393	Barium	0.639198764	0.000266333
S0021	7726956	Bromine	0.014099973	5.87E-06
S0021	7440439	Cadmium	0.016785682	6.99E-06
S0021	7782505	Chlorine	0.874198309	0.000364249
S0021	7440473	Chromium	0.164499682	6.85E-05
S0021	7440484	Cobalt	0.100042664	4.17E-05
S0021	7440508	Copper	0.058414173	2.43E-05
S0021	7439921	Lead	0.604955973	0.000252065
S0021	7439965	Manganese	0.705670064	0.000294029

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0021	7439976	Mercury	0.010071409	4.20E-06
S0021	7440020	Nickel	0.042299918	1.76E-05
S0021	7723140	Phosphorus	1.075626491	0.000448178
S0021	7782492	Selenium	0.000671427	2.80E-07
S0021	7440224	Silver	0.006042845	2.52E-06
S0021	7440622	Vanadium	0.209485309	8.73E-05
S0021	7440666	Zinc	0.417627764	0.000174012
S0022	7429905	Aluminum	52.97695467	0.022073731
S0022	7440360	Antimony	0.004699991	1.96E-06
S0022	7440382	Arsenic	0.010071409	4.20E-06
S0022	7440393	Barium	0.639198764	0.000266333
S0022	7726956	Bromine	0.014099973	5.87E-06
S0022	7440439	Cadmium	0.016785682	6.99E-06
S0022	7782505	Chlorine	0.874198309	0.000364249
S0022	7440473	Chromium	0.164499682	6.85E-05
S0022	7440484	Cobalt	0.100042664	4.17E-05
S0022	7440508	Copper	0.058414173	2.43E-05
S0022	7439921	Lead	0.604955973	0.000252065
S0022	7439965	Manganese	0.705670064	0.000294029
S0022	7439976	Mercury	0.010071409	4.20E-06
S0022	7440020	Nickel	0.042299918	1.76E-05
S0022	7723140	Phosphorus	1.075626491	0.000448178
S0022	7782492	Selenium	0.000671427	2.80E-07
S0022	7440224	Silver	0.006042845	2.52E-06
S0022	7440622	Vanadium	0.209485309	8.73E-05
S0022	7440666	Zinc	0.417627764	0.000174012
S0023	7429905	Aluminum	52.97695467	0.022073731
S0023	7440360	Antimony	0.004699991	1.96E-06
S0023	7440382	Arsenic	0.010071409	4.20E-06
S0023	7440393	Barium	0.639198764	0.000266333
S0023	7726956	Bromine	0.014099973	5.87E-06
S0023	7440439	Cadmium	0.016785682	6.99E-06
S0023	7782505	Chlorine	0.874198309	0.000364249
S0023	7440473	Chromium	0.164499682	6.85E-05
S0023	7440484	Cobalt	0.100042664	4.17E-05
S0023	7440508	Copper	0.058414173	2.43E-05
S0023	7439921	Lead	0.604955973	0.000252065
S0023	7439965	Manganese	0.705670064	0.000294029
S0023	7439976	Mercury	0.010071409	4.20E-06
S0023	7440020	Nickel	0.042299918	1.76E-05
S0023	7723140	Phosphorus	1.075626491	0.000448178
S0023	7782492	Selenium	0.000671427	2.80E-07
S0023	7440224	Silver	0.006042845	2.52E-06
S0023	7440622	Vanadium	0.209485309	8.73E-05
S0023	7440666	Zinc	0.417627764	0.000174012
S0024	7429905	Aluminum	52.97695467	0.022073731

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0024	7440360	Antimony	0.004699991	1.96E-06
S0024	7440382	Arsenic	0.010071409	4.20E-06
S0024	7440393	Barium	0.639198764	0.000266333
S0024	7726956	Bromine	0.014099973	5.87E-06
S0024	7440439	Cadmium	0.016785682	6.99E-06
S0024	7782505	Chlorine	0.874198309	0.000364249
S0024	7440473	Chromium	0.164499682	6.85E-05
S0024	7440484	Cobalt	0.100042664	4.17E-05
S0024	7440508	Copper	0.058414173	2.43E-05
S0024	7439921	Lead	0.604955973	0.000252065
S0024	7439965	Manganese	0.705670064	0.000294029
S0024	7439976	Mercury	0.010071409	4.20E-06
S0024	7440020	Nickel	0.042299918	1.76E-05
S0024	7723140	Phosphorus	1.075626491	0.000448178
S0024	7782492	Selenium	0.000671427	2.80E-07
S0024	7440224	Silver	0.006042845	2.52E-06
S0024	7440622	Vanadium	0.209485309	8.73E-05
S0024	7440666	Zinc	0.417627764	0.000174012
S0025	7429905	Aluminum	52.97695467	0.022073731
S0025	7440360	Antimony	0.004699991	1.96E-06
S0025	7440382	Arsenic	0.010071409	4.20E-06
S0025	7440393	Barium	0.639198764	0.000266333
S0025	7726956	Bromine	0.014099973	5.87E-06
S0025	7440439	Cadmium	0.016785682	6.99E-06
S0025	7782505	Chlorine	0.874198309	0.000364249
S0025	7440473	Chromium	0.164499682	6.85E-05
S0025	7440484	Cobalt	0.100042664	4.17E-05
S0025	7440508	Copper	0.058414173	2.43E-05
S0025	7439921	Lead	0.604955973	0.000252065
S0025	7439965	Manganese	0.705670064	0.000294029
S0025	7439976	Mercury	0.010071409	4.20E-06
S0025	7440020	Nickel	0.042299918	1.76E-05
S0025	7723140	Phosphorus	1.075626491	0.000448178
S0025	7782492	Selenium	0.000671427	2.80E-07
S0025	7440224	Silver	0.006042845	2.52E-06
S0025	7440622	Vanadium	0.209485309	8.73E-05
S0025	7440666	Zinc	0.417627764	0.000174012
S0026	7429905	Aluminum	52.97695467	0.022073731
S0026	7440360	Antimony	0.004699991	1.96E-06
S0026	7440382	Arsenic	0.010071409	4.20E-06
S0026	7440393	Barium	0.639198764	0.000266333
S0026	7726956	Bromine	0.014099973	5.87E-06
S0026	7440439	Cadmium	0.016785682	6.99E-06
S0026	7782505	Chlorine	0.874198309	0.000364249
S0026	7440473	Chromium	0.164499682	6.85E-05
S0026	7440484	Cobalt	0.100042664	4.17E-05

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0026	7440508	Copper	0.058414173	2.43E-05
S0026	7439921	Lead	0.604955973	0.000252065
S0026	7439965	Manganese	0.705670064	0.000294029
S0026	7439976	Mercury	0.010071409	4.20E-06
S0026	7440020	Nickel	0.042299918	1.76E-05
S0026	7723140	Phosphorus	1.075626491	0.000448178
S0026	7782492	Selenium	0.000671427	2.80E-07
S0026	7440224	Silver	0.006042845	2.52E-06
S0026	7440622	Vanadium	0.209485309	8.73E-05
S0026	7440666	Zinc	0.417627764	0.000174012
S0027	7429905	Aluminum	52.97695467	0.022073731
S0027	7440360	Antimony	0.004699991	1.96E-06
S0027	7440382	Arsenic	0.010071409	4.20E-06
S0027	7440393	Barium	0.639198764	0.000266333
S0027	7726956	Bromine	0.014099973	5.87E-06
S0027	7440439	Cadmium	0.016785682	6.99E-06
S0027	7782505	Chlorine	0.874198309	0.000364249
S0027	7440473	Chromium	0.164499682	6.85E-05
S0027	7440484	Cobalt	0.100042664	4.17E-05
S0027	7440508	Copper	0.058414173	2.43E-05
S0027	7439921	Lead	0.604955973	0.000252065
S0027	7439965	Manganese	0.705670064	0.000294029
S0027	7439976	Mercury	0.010071409	4.20E-06
S0027	7440020	Nickel	0.042299918	1.76E-05
S0027	7723140	Phosphorus	1.075626491	0.000448178
S0027	7782492	Selenium	0.000671427	2.80E-07
S0027	7440224	Silver	0.006042845	2.52E-06
S0027	7440622	Vanadium	0.209485309	8.73E-05
S0027	7440666	Zinc	0.417627764	0.000174012
S0028	7429905	Aluminum	52.97695467	0.022073731
S0028	7440360	Antimony	0.004699991	1.96E-06
S0028	7440382	Arsenic	0.010071409	4.20E-06
S0028	7440393	Barium	0.639198764	0.000266333
S0028	7726956	Bromine	0.014099973	5.87E-06
S0028	7440439	Cadmium	0.016785682	6.99E-06
S0028	7782505	Chlorine	0.874198309	0.000364249
S0028	7440473	Chromium	0.164499682	6.85E-05
S0028	7440484	Cobalt	0.100042664	4.17E-05
S0028	7440508	Copper	0.058414173	2.43E-05
S0028	7439921	Lead	0.604955973	0.000252065
S0028	7439965	Manganese	0.705670064	0.000294029
S0028	7439976	Mercury	0.010071409	4.20E-06
S0028	7440020	Nickel	0.042299918	1.76E-05
S0028	7723140	Phosphorus	1.075626491	0.000448178
S0028	7782492	Selenium	0.000671427	2.80E-07
S0028	7440224	Silver	0.006042845	2.52E-06

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0028	7440622	Vanadium	0.209485309	8.73E-05
S0028	7440666	Zinc	0.417627764	0.000174012
S0029	7429905	Aluminum	52.97695467	0.022073731
S0029	7440360	Antimony	0.004699991	1.96E-06
S0029	7440382	Arsenic	0.010071409	4.20E-06
S0029	7440393	Barium	0.639198764	0.000266333
S0029	7726956	Bromine	0.014099973	5.87E-06
S0029	7440439	Cadmium	0.016785682	6.99E-06
S0029	7782505	Chlorine	0.874198309	0.000364249
S0029	7440473	Chromium	0.164499682	6.85E-05
S0029	7440484	Cobalt	0.100042664	4.17E-05
S0029	7440508	Copper	0.058414173	2.43E-05
S0029	7439921	Lead	0.604955973	0.000252065
S0029	7439965	Manganese	0.705670064	0.000294029
S0029	7439976	Mercury	0.010071409	4.20E-06
S0029	7440020	Nickel	0.042299918	1.76E-05
S0029	7723140	Phosphorus	1.075626491	0.000448178
S0029	7782492	Selenium	0.000671427	2.80E-07
S0029	7440224	Silver	0.006042845	2.52E-06
S0029	7440622	Vanadium	0.209485309	8.73E-05
S0029	7440666	Zinc	0.417627764	0.000174012
S0030	7429905	Aluminum	52.97695467	0.022073731
S0030	7440360	Antimony	0.004699991	1.96E-06
S0030	7440382	Arsenic	0.010071409	4.20E-06
S0030	7440393	Barium	0.639198764	0.000266333
S0030	7726956	Bromine	0.014099973	5.87E-06
S0030	7440439	Cadmium	0.016785682	6.99E-06
S0030	7782505	Chlorine	0.874198309	0.000364249
S0030	7440473	Chromium	0.164499682	6.85E-05
S0030	7440484	Cobalt	0.100042664	4.17E-05
S0030	7440508	Copper	0.058414173	2.43E-05
S0030	7439921	Lead	0.604955973	0.000252065
S0030	7439965	Manganese	0.705670064	0.000294029
S0030	7439976	Mercury	0.010071409	4.20E-06
S0030	7440020	Nickel	0.042299918	1.76E-05
S0030	7723140	Phosphorus	1.075626491	0.000448178
S0030	7782492	Selenium	0.000671427	2.80E-07
S0030	7440224	Silver	0.006042845	2.52E-06
S0030	7440622	Vanadium	0.209485309	8.73E-05
S0030	7440666	Zinc	0.417627764	0.000174012
S0031	7429905	Aluminum	52.97695467	0.022073731
S0031	7440360	Antimony	0.004699991	1.96E-06
S0031	7440382	Arsenic	0.010071409	4.20E-06
S0031	7440393	Barium	0.639198764	0.000266333
S0031	7726956	Bromine	0.014099973	5.87E-06
S0031	7440439	Cadmium	0.016785682	6.99E-06

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0031	7782505	Chlorine	0.874198309	0.000364249
S0031	7440473	Chromium	0.164499682	6.85E-05
S0031	7440484	Cobalt	0.100042664	4.17E-05
S0031	7440508	Copper	0.058414173	2.43E-05
S0031	7439921	Lead	0.604955973	0.000252065
S0031	7439965	Manganese	0.705670064	0.000294029
S0031	7439976	Mercury	0.010071409	4.20E-06
S0031	7440020	Nickel	0.042299918	1.76E-05
S0031	7723140	Phosphorus	1.075626491	0.000448178
S0031	7782492	Selenium	0.000671427	2.80E-07
S0031	7440224	Silver	0.006042845	2.52E-06
S0031	7440622	Vanadium	0.209485309	8.73E-05
S0031	7440666	Zinc	0.417627764	0.000174012
S0032	7440382	Arsenic	0.00093	3.88E-07
S0032	7440417	Beryllium	5.68E-05	2.37E-08
S0032	7440439	Cadmium	9.90E-05	4.13E-08
S0032	1175	Silica, Crystln	3.94	0.00164
S0032	7440508	Copper	0.00646	2.69E-06
S0032	18540299	Cr(VI)	0.000117	4.88E-08
S0032	7439921	Lead	0.00301	1.25E-06
S0032	7439965	Manganese	0	0
S0032	7439976	Mercury	9.65E-06	4.02E-09
S0032	7440020	Nickel	0.0031	1.29E-06
S0032	7782492	Selenium	0	0
S0032	7429905	Aluminum	0	0
S0032	7440393	Barium	0.00615	2.56E-06
S0032	7440473	Chromium	0.00706	2.94E-06
S0032	7440484	Cobalt	0.00215	8.96E-07
S0032	7440666	Zinc	0.0543	2.26E-05
S0032	7440622	Vanadium	0.013	5.42E-06
S0033	7440382	Arsenic	0.011686526	4.87E-06
S0033	7440417	Beryllium	0.00054072	2.25E-07
S0033	7440439	Cadmium	0.001377964	5.74E-07
S0033	1175	Silica, Crystln	39.87861271	0.016616089
S0033	7440508	Copper	0.057560501	2.40E-05
S0033	18540299	Cr(VI)	0.001744258	7.27E-07
S0033	7439921	Lead	0.04360644	1.82E-05
S0033	7439965	Manganese	0	0
S0033	7439976	Mercury	0	0
S0033	7440020	Nickel	0.05058347	2.11E-05
S0033	7782492	Selenium	0	0
S0033	7429905	Aluminum	0	0
S0033	7440393	Barium	0.144773381	6.03E-05
S0033	7440473	Chromium	0.057560501	2.40E-05
S0033	7440484	Cobalt	0.014302912	5.96E-06
S0033	7440666	Zinc	0.134307835	5.60E-05
S0033	7440622	Vanadium	0.092445653	3.85E-05

Table A1 - Emissions Grouped by Source ID

Source	CAS Number	Pollutant	Annual Emission Rate (lb/yr)	Hourly Emission Rate (lb/hr)
S0034	7440020	Nickel	0.0226	0.000188
S0034	18540299	Cr(VI)	0.001	0.00000833
S0034	7439965	Manganese	0.245	0.00204

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0002	71556	1,1,1-TCA	0	0	0	0
S0009	71556	1,1,1-TCA	0	0		
S0010	71556	1,1,1-TCA	0	0		
S0011	71556	1,1,1-TCA	0	0		
S0002	95636	1,2,4TriMeBenze	0	0	0.02	0.0000242
S0018	95636	1,2,4TriMeBenze	0.02	0.0000242		
S0002	106990	1,3-Butadiene	186.3961667	0.077665069	186.3961667	0.077665069
S0005	106990	1,3-Butadiene	0	0		
S0006	106990	1,3-Butadiene	0	0		
S0005	540841	2,2,4TriMePentn	0.02525567	0.0000902	1.272783484	0.004522042
S0006	540841	2,2,4TriMePentn	1.237527814	0.004419742		
S0018	540841	2,2,4TriMePentn	0.01	0.0000121		
S0002	91576	2MeNaphthalene	3.8	0.00158	5.282362729	0.002270944
S0005	91576	2MeNaphthalene	0.000477052	0.0000017		
S0006	91576	2MeNaphthalene	0.023375525	0.0000835		
S0009	91576	2MeNaphthalene	0.002168078	0.000000247		
S0010	91576	2MeNaphthalene	0.002168078	0.000000247		
S0011	91576	2MeNaphthalene	0.002168078	0.000000247		
S0012	91576	2MeNaphthalene	0.904007901	0.00037667		
S0012	91576	2MeNaphthalene	0.547998017	0.000228333		
S0002	83329	Acenaphthene	0.182	0.0000757	0.323264934	0.000134968
S0005	83329	Acenaphthene	0.00000393	0.000000014		
S0006	83329	Acenaphthene	0.000192504	0.000000688		
S0009	83329	Acenaphthene	0.000193358	2.21E-08		
S0010	83329	Acenaphthene	0.000193358	2.21E-08		
S0011	83329	Acenaphthene	0.000193358	2.21E-08		
S0012	83329	Acenaphthene	0.080623096	0.0000336		
S0012	83329	Acenaphthene	0.05986533	0.0000249		
S0002	208968	Acenaphthylene	0.76	0.000317	0.768964114	0.000321043
S0005	208968	Acenaphthylene	0.00000196	7.02E-09		
S0006	208968	Acenaphthylene	0.0000963	0.000000344		
S0009	208968	Acenaphthylene	0.00000576	6.57E-10		
S0010	208968	Acenaphthylene	0.00000576	6.57E-10		
S0011	208968	Acenaphthylene	0.00000576	6.57E-10		
S0012	208968	Acenaphthylene	0.002401539	0.000001		
S0012	208968	Acenaphthylene	0.006447035	0.00000269		
S0002	75070	Acetaldehyde	114.8092331	0.04783718	114.828024	0.04786363
S0007	75070	Acetaldehyde	0.00703782	0.0000251		
S0008	75070	Acetaldehyde	0.0117531	0.00000135		
S0002	107028	Acrolein	0.1268	0.0000528	0.14350304	0.0000763
S0007	107028	Acrolein	0.00625584	0.0000223		
S0008	107028	Acrolein	0.0104472	0.0000012		
S0001	7429905	Aluminum	0	0	582.7626369	0.242868691
S0003	7429905	Aluminum	0	0		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0004	7429905	Aluminum	0	0		
S0005	7429905	Aluminum	0.000322711	0.00000115		
S0006	7429905	Aluminum	0.015812855	0.0000565		
S0013	7429905	Aluminum	0	0		
S0014	7429905	Aluminum	0	0		
S0015	7429905	Aluminum	0	0		
S0016	7429905	Aluminum	0	0		
S0021	7429905	Aluminum	52.97695467	0.022073731		
S0022	7429905	Aluminum	52.97695467	0.022073731		
S0023	7429905	Aluminum	52.97695467	0.022073731		
S0024	7429905	Aluminum	52.97695467	0.022073731		
S0025	7429905	Aluminum	52.97695467	0.022073731		
S0026	7429905	Aluminum	52.97695467	0.022073731		
S0027	7429905	Aluminum	52.97695467	0.022073731		
S0028	7429905	Aluminum	52.97695467	0.022073731		
S0029	7429905	Aluminum	52.97695467	0.022073731		
S0030	7429905	Aluminum	52.97695467	0.022073731		
S0031	7429905	Aluminum	52.97695467	0.022073731		
S0032	7429905	Aluminum	0	0		
S0033	7429905	Aluminum	0	0		
S0002	120127	Anthracene	0.0205	0.00000853	0.059218407	2.50593E-05
S0005	120127	Anthracene	0.00000281	0.00000001		
S0006	120127	Anthracene	0.000137503	0.000000491		
S0009	120127	Anthracene	0.0000535	6.11E-09		
S0010	120127	Anthracene	0.0000535	6.11E-09		
S0011	120127	Anthracene	0.0000535	6.11E-09		
S0012	120127	Anthracene	0.022300005	0.00000929		
S0012	120127	Anthracene	0.016117589	0.00000672		
S0005	7440360	Antimony	0	0	0.051699901	0.00002156
S0006	7440360	Antimony	0	0		
S0021	7440360	Antimony	0.004699991	0.00000196		
S0022	7440360	Antimony	0.004699991	0.00000196		
S0023	7440360	Antimony	0.004699991	0.00000196		
S0024	7440360	Antimony	0.004699991	0.00000196		
S0025	7440360	Antimony	0.004699991	0.00000196		
S0026	7440360	Antimony	0.004699991	0.00000196		
S0027	7440360	Antimony	0.004699991	0.00000196		
S0028	7440360	Antimony	0.004699991	0.00000196		
S0029	7440360	Antimony	0.004699991	0.00000196		
S0030	7440360	Antimony	0.004699991	0.00000196		
S0031	7440360	Antimony	0.004699991	0.00000196		
S0001	7440382	Arsenic	0.000000654	2.73E-10	0.171995566	7.19805E-05
S0002	7440382	Arsenic	0	0		
S0003	7440382	Arsenic	0.0000152	6.33E-09		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0004	7440382	Arsenic	0.00000218	9.08E-10		
S0005	7440382	Arsenic	0.00000168	6.01E-09		
S0006	7440382	Arsenic	0.0000825	0.000000295		
S0013	7440382	Arsenic	0.00093014	0.000000388		
S0014	7440382	Arsenic	0.00154	0.000000641		
S0015	7440382	Arsenic	0.000683	0.000000285		
S0016	7440382	Arsenic	0.045338187	0.0000189		
S0021	7440382	Arsenic	0.010071409	0.0000042		
S0022	7440382	Arsenic	0.010071409	0.0000042		
S0023	7440382	Arsenic	0.010071409	0.0000042		
S0024	7440382	Arsenic	0.010071409	0.0000042		
S0025	7440382	Arsenic	0.010071409	0.0000042		
S0026	7440382	Arsenic	0.010071409	0.0000042		
S0027	7440382	Arsenic	0.010071409	0.0000042		
S0028	7440382	Arsenic	0.010071409	0.0000042		
S0029	7440382	Arsenic	0.010071409	0.0000042		
S0030	7440382	Arsenic	0.010071409	0.0000042		
S0031	7440382	Arsenic	0.010071409	0.0000042		
S0032	7440382	Arsenic	0.00093	0.000000388		
S0033	7440382	Arsenic	0.011686526	0.00000487		
S0002	56553	B[a]anthracene	0.000173	0.000000072	0.014223162	5.90072E-06
S0005	56553	B[a]anthracene	4.63E-09	1.65E-11		
S0006	56553	B[a]anthracene	0.000000227	8.1E-10		
S0009	56553	B[a]anthracene	0.000023	2.63E-09		
S0010	56553	B[a]anthracene	0.000023	2.63E-09		
S0011	56553	B[a]anthracene	0.000023	2.63E-09		
S0012	56553	B[a]anthracene	0.009606156	0.000004		
S0012	56553	B[a]anthracene	0.004374774	0.00000182		
S0002	50328	B[a]P	0	0	0.000530132	2.2298E-07
S0005	50328	B[a]P	1.11E-08	3.96E-11		
S0006	50328	B[a]P	0.000000543	1.94E-09		
S0009	50328	B[a]P	0	0		
S0010	50328	B[a]P	0	0		
S0011	50328	B[a]P	0	0		
S0012	50328	B[a]P	0	0		
S0012	50328	B[a]P	0.000529578	0.000000221		
S0002	205992	B[b]fluoranthen	0.000157	6.53E-08	0.00190752	7.96484E-07
S0005	205992	B[b]fluoranthen	1.22E-08	4.36E-11		
S0006	205992	B[b]fluoranthen	0.000000598	2.14E-09		
S0009	205992	B[b]fluoranthen	0	0		
S0010	205992	B[b]fluoranthen	0	0		
S0011	205992	B[b]fluoranthen	0	0		
S0012	205992	B[b]fluoranthen	0	0		
S0012	205992	B[b]fluoranthen	0.00174991	0.000000729		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0002	192972	B[e]pyrene	0	0	0.003441163	1.44211E-06
S0005	192972	B[e]pyrene	7.72E-08	2.76E-10		
S0006	192972	B[e]pyrene	0.00000378	1.35E-08		
S0009	192972	B[e]pyrene	0.00000391	4.46E-10		
S0010	192972	B[e]pyrene	0.00000391	4.46E-10		
S0011	192972	B[e]pyrene	0.00000391	4.46E-10		
S0012	192972	B[e]pyrene	0.001629616	0.000000679		
S0012	192972	B[e]pyrene	0.00179596	0.000000748		
S0002	191242	B[g,h,i]perylene	0	0	0.00044365	2.04041E-07
S0005	191242	B[g,h,i]perylene	0.000000123	4.41E-10		
S0006	191242	B[g,h,i]perylene	0.00000605	2.16E-08		
S0009	191242	B[g,h,i]perylene	0	0		
S0010	191242	B[g,h,i]perylene	0	0		
S0011	191242	B[g,h,i]perylene	0	0		
S0012	191242	B[g,h,i]perylene	0	0		
S0012	191242	B[g,h,i]perylene	0.000437477	0.000000182		
S0002	207089	B[k]fluoranthene	0	0	0.00050677	2.11777E-07
S0005	207089	B[k]fluoranthene	4.35E-09	1.55E-11		
S0006	207089	B[k]fluoranthene	0.000000213	7.61E-10		
S0009	207089	B[k]fluoranthene	0	0		
S0010	207089	B[k]fluoranthene	0	0		
S0011	207089	B[k]fluoranthene	0	0		
S0012	207089	B[k]fluoranthene	0	0		
S0012	207089	B[k]fluoranthene	0.000506553	0.000000211		
S0001	7440393	Barium	0.0000081	3.38E-09	8.175065641	0.00340956
S0002	7440393	Barium	0.405209058	0.000168837		
S0003	7440393	Barium	0.000188	7.83E-08		
S0004	7440393	Barium	0.000027	1.13E-08		
S0005	7440393	Barium	0.000021	7.52E-08		
S0006	7440393	Barium	0.001031273	0.00000368		
S0013	7440393	Barium	0.006149261	0.00000256		
S0014	7440393	Barium	0.0102	0.00000424		
S0015	7440393	Barium	0.00847	0.00000353		
S0016	7440393	Barium	0.561652164	0.000234022		
S0021	7440393	Barium	0.639198764	0.000266333		
S0022	7440393	Barium	0.639198764	0.000266333		
S0023	7440393	Barium	0.639198764	0.000266333		
S0024	7440393	Barium	0.639198764	0.000266333		
S0025	7440393	Barium	0.639198764	0.000266333		
S0026	7440393	Barium	0.639198764	0.000266333		
S0027	7440393	Barium	0.639198764	0.000266333		
S0028	7440393	Barium	0.639198764	0.000266333		
S0029	7440393	Barium	0.639198764	0.000266333		
S0030	7440393	Barium	0.639198764	0.000266333		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0031	7440393	Barium	0.639198764	0.000266333		
S0032	7440393	Barium	0.00615	0.00000256		
S0033	7440393	Barium	0.144773381	0.0000603		
S0002	71432	Benzene	432.2229952	0.180092915	439.5109621	0.193123899
S0005	71432	Benzene	0.063139174	0.000225497		
S0006	71432	Benzene	3.093819535	0.011049355		
S0007	71432	Benzene	0.01329366	0.0000475		
S0008	71432	Benzene	0.0222003	0.00000255		
S0009	71432	Benzene	0.000466752	5.33E-08		
S0010	71432	Benzene	0.000466752	5.33E-08		
S0011	71432	Benzene	0.000466752	5.33E-08		
S0012	71432	Benzene	2.63353471	0.001097306		
S0012	71432	Benzene	1.460527424	0.000608553		
S0018	71432	Benzene	0.0000518	6.27E-08		
S0001	7440417	Beryllium	3.03E-08	1.26E-11	0.002878491	1.19915E-06
S0002	7440417	Beryllium	0	0		
S0003	7440417	Beryllium	0.000000703	2.93E-10		
S0004	7440417	Beryllium	0.000000101	4.21E-11		
S0005	7440417	Beryllium	0	0		
S0006	7440417	Beryllium	0	0		
S0013	7440417	Beryllium	0.0000568	2.37E-08		
S0014	7440417	Beryllium	0.000094	3.92E-08		
S0015	7440417	Beryllium	0.0000316	1.32E-08		
S0016	7440417	Beryllium	0.002097737	0.000000874		
S0032	7440417	Beryllium	0.0000568	2.37E-08		
S0033	7440417	Beryllium	0.00054072	0.000000225		
S0021	7726956	Bromine	0.014099973	0.00000587	0.155099703	0.00006457
S0022	7726956	Bromine	0.014099973	0.00000587		
S0023	7726956	Bromine	0.014099973	0.00000587		
S0024	7726956	Bromine	0.014099973	0.00000587		
S0025	7726956	Bromine	0.014099973	0.00000587		
S0026	7726956	Bromine	0.014099973	0.00000587		
S0027	7726956	Bromine	0.014099973	0.00000587		
S0028	7726956	Bromine	0.014099973	0.00000587		
S0029	7726956	Bromine	0.014099973	0.00000587		
S0030	7726956	Bromine	0.014099973	0.00000587		
S0031	7726956	Bromine	0.014099973	0.00000587		
S0001	7440439	Cadmium	7.71E-08	3.21E-11	0.209396014	8.7292E-05
S0002	7440439	Cadmium	0.017559059	0.00000732		
S0003	7440439	Cadmium	0.00000179	7.46E-10		
S0004	7440439	Cadmium	0.000000257	1.07E-10		
S0005	7440439	Cadmium	0.000000519	1.85E-09		
S0006	7440439	Cadmium	0.0000254	9.09E-08		
S0013	7440439	Cadmium	0.000099	4.13E-08		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0014	7440439	Cadmium	0.000164	6.82E-08		
S0015	7440439	Cadmium	0.0000806	3.36E-08		
S0016	7440439	Cadmium	0.005345846	0.00000223		
S0021	7440439	Cadmium	0.016785682	0.00000699		
S0022	7440439	Cadmium	0.016785682	0.00000699		
S0023	7440439	Cadmium	0.016785682	0.00000699		
S0024	7440439	Cadmium	0.016785682	0.00000699		
S0025	7440439	Cadmium	0.016785682	0.00000699		
S0026	7440439	Cadmium	0.016785682	0.00000699		
S0027	7440439	Cadmium	0.016785682	0.00000699		
S0028	7440439	Cadmium	0.016785682	0.00000699		
S0029	7440439	Cadmium	0.016785682	0.00000699		
S0030	7440439	Cadmium	0.016785682	0.00000699		
S0031	7440439	Cadmium	0.016785682	0.00000699		
S0032	7440439	Cadmium	0.000099	4.13E-08		
S0033	7440439	Cadmium	0.001377964	0.000000574		
S0021	7782505	Chlorine	0.874198309	0.000364249	9.616181399	0.004006739
S0022	7782505	Chlorine	0.874198309	0.000364249		
S0023	7782505	Chlorine	0.874198309	0.000364249		
S0024	7782505	Chlorine	0.874198309	0.000364249		
S0025	7782505	Chlorine	0.874198309	0.000364249		
S0026	7782505	Chlorine	0.874198309	0.000364249		
S0027	7782505	Chlorine	0.874198309	0.000364249		
S0028	7782505	Chlorine	0.874198309	0.000364249		
S0029	7782505	Chlorine	0.874198309	0.000364249		
S0030	7782505	Chlorine	0.874198309	0.000364249		
S0031	7782505	Chlorine	0.874198309	0.000364249		
S0001	7440473	Chromium	0.00000322	1.34E-09	2.120101491	0.00088432
S0003	7440473	Chromium	0.0000749	3.12E-08		
S0004	7440473	Chromium	0.0000107	4.46E-09		
S0005	7440473	Chromium	0.00000912	3.26E-08		
S0006	7440473	Chromium	0.000446885	0.0000016		
S0013	7440473	Chromium	0.007062176	0.00000294		
S0014	7440473	Chromium	0.0117	0.00000487		
S0015	7440473	Chromium	0.00337	0.0000014		
S0016	7440473	Chromium	0.223307487	0.000093		
S0021	7440473	Chromium	0.164499682	0.0000685		
S0022	7440473	Chromium	0.164499682	0.0000685		
S0023	7440473	Chromium	0.164499682	0.0000685		
S0024	7440473	Chromium	0.164499682	0.0000685		
S0025	7440473	Chromium	0.164499682	0.0000685		
S0026	7440473	Chromium	0.164499682	0.0000685		
S0027	7440473	Chromium	0.164499682	0.0000685		
S0028	7440473	Chromium	0.164499682	0.0000685		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0029	7440473	Chromium	0.164499682	0.0000685		
S0030	7440473	Chromium	0.164499682	0.0000685		
S0031	7440473	Chromium	0.164499682	0.0000685		
S0032	7440473	Chromium	0.00706	0.0000294		
S0033	7440473	Chromium	0.057560501	0.000024		
S0002	218019	Chrysene	0.00101	0.00000422	0.06100985	2.53376E-05
S0005	218019	Chrysene	3.37E-08	1.2E-10		
S0006	218019	Chrysene	0.00000165	5.89E-09		
S0009	218019	Chrysene	0.0000864	9.86E-09		
S0010	218019	Chrysene	0.0000864	9.86E-09		
S0011	218019	Chrysene	0.0000864	9.86E-09		
S0012	218019	Chrysene	0.036023085	0.000015		
S0012	218019	Chrysene	0.023715881	0.00000988		
S0005	75456	ClDiFluorMethan	0	0	0	0
S0006	75456	ClDiFluorMethan	0	0		
S0001	7440484	Cobalt	0.00000801	3.34E-10	6.514243635	0.002714445
S0002	7440484	Cobalt	5.335252597	0.002223022		
S0003	7440484	Cobalt	0.0000186	7.75E-09		
S0004	7440484	Cobalt	0.00000267	1.11E-09		
S0005	7440484	Cobalt	0.000000182	6.51E-10		
S0006	7440484	Cobalt	0.00000894	3.19E-08		
S0013	7440484	Cobalt	0.002153102	0.000000897		
S0014	7440484	Cobalt	0.00356	0.00000148		
S0015	7440484	Cobalt	0.000836	0.000000348		
S0016	7440484	Cobalt	0.055488527	0.0000231		
S0021	7440484	Cobalt	0.100042664	0.0000417		
S0022	7440484	Cobalt	0.100042664	0.0000417		
S0023	7440484	Cobalt	0.100042664	0.0000417		
S0024	7440484	Cobalt	0.100042664	0.0000417		
S0025	7440484	Cobalt	0.100042664	0.0000417		
S0026	7440484	Cobalt	0.100042664	0.0000417		
S0027	7440484	Cobalt	0.100042664	0.0000417		
S0028	7440484	Cobalt	0.100042664	0.0000417		
S0029	7440484	Cobalt	0.100042664	0.0000417		
S0030	7440484	Cobalt	0.100042664	0.0000417		
S0031	7440484	Cobalt	0.100042664	0.0000417		
S0032	7440484	Cobalt	0.00215	0.000000896		
S0033	7440484	Cobalt	0.014302912	0.00000596		
S0001	7440508	Copper	0.00000322	1.34E-09	53.62859153	0.022347646
S0002	7440508	Copper	52.67717754	0.021948824		
S0003	7440508	Copper	0.0000749	3.12E-08		
S0004	7440508	Copper	0.0000107	4.46E-09		
S0005	7440508	Copper	0.0000182	6.51E-08		
S0006	7440508	Copper	0.00089377	0.00000319		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0013	7440508	Copper	0.006459307	0.00000269		
S0014	7440508	Copper	0.0107	0.00000445		
S0015	7440508	Copper	0.00337	0.0000014		
S0016	7440508	Copper	0.223307487	0.000093		
S0021	7440508	Copper	0.058414173	0.0000243		
S0022	7440508	Copper	0.058414173	0.0000243		
S0023	7440508	Copper	0.058414173	0.0000243		
S0024	7440508	Copper	0.058414173	0.0000243		
S0025	7440508	Copper	0.058414173	0.0000243		
S0026	7440508	Copper	0.058414173	0.0000243		
S0027	7440508	Copper	0.058414173	0.0000243		
S0028	7440508	Copper	0.058414173	0.0000243		
S0029	7440508	Copper	0.058414173	0.0000243		
S0030	7440508	Copper	0.058414173	0.0000243		
S0031	7440508	Copper	0.058414173	0.0000243		
S0032	7440508	Copper	0.00646	0.00000269		
S0033	7440508	Copper	0.057560501	0.000024		
S0001	18540299	Cr(VI)	9.76E-08	4.07E-11	0.013710298	2.14989E-05
S0002	18540299	Cr(VI)	0.002566324	0.00000107		
S0003	18540299	Cr(VI)	0.00000227	9.46E-10		
S0004	18540299	Cr(VI)	0.000000325	1.35E-10		
S0013	18540299	Cr(VI)	0.000117129	4.88E-08		
S0014	18540299	Cr(VI)	0.000194	8.07E-08		
S0015	18540299	Cr(VI)	0.000102	4.25E-08		
S0016	18540299	Cr(VI)	0.006766894	0.00000282		
S0019	18540299	Cr(VI)	0	0		
S0020	18540299	Cr(VI)	0.0011	0.00000833		
S0032	18540299	Cr(VI)	0.000117	4.88E-08		
S0033	18540299	Cr(VI)	0.001744258	0.000000727		
S0034	18540299	Cr(VI)	0.001	0.00000833		
S0002	75150	CS2	46.38380813	0.019326587	47.85775566	0.024588265
S0005	75150	CS2	0.029464948	0.000105232		
S0006	75150	CS2	1.44378245	0.005156366		
S0009	75150	CS2	0.000233376	2.66E-08		
S0010	75150	CS2	0.000233376	2.66E-08		
S0011	75150	CS2	0.000233376	2.66E-08		
S0018	98828	Cumene	0.01	0.0000121	0.01	0.0000121
S0005	110827	Cyclohexane	0.088394844	0.000315696	4.469742194	0.015845394
S0006	110827	Cyclohexane	4.33134735	0.015469098		
S0018	110827	Cyclohexane	0.05	0.0000606		
S0002	53703	D[a,h]anthracen	0	0	0.0000852	3.55E-08
S0005	53703	D[a,h]anthracen	0	0		
S0006	53703	D[a,h]anthracen	0	0		
S0009	53703	D[a,h]anthracen	0	0		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0010	53703	D[a,h]anthracen	0	0		
S0011	53703	D[a,h]anthracen	0	0		
S0012	53703	D[a,h]anthracen	0	0		
S0012	53703	D[a,h]anthracen	0.0000852	3.55E-08		
S0005	75434	DiClFluorMethan	0	0	0	0
S0006	75434	DiClFluorMethan	0	0		
S0002	100414	Ethyl Benzene	0	0	11.75965223	0.007155823
S0005	100414	Ethyl Benzene	0.013890618	0.0000496		
S0006	100414	Ethyl Benzene	0.680640298	0.002430858		
S0007	100414	Ethyl Benzene	0.0156396	0.0000559		
S0008	100414	Ethyl Benzene	0.026118	0.000003		
S0009	100414	Ethyl Benzene	0.000554268	6.33E-08		
S0010	100414	Ethyl Benzene	0.000554268	6.33E-08		
S0011	100414	Ethyl Benzene	0.000554268	6.33E-08		
S0012	100414	Ethyl Benzene	3.127322468	0.001303051		
S0012	100414	Ethyl Benzene	7.864378439	0.003276824		
S0018	100414	Ethyl Benzene	0.03	0.0000364		
S0009	75003	Ethyl Chloride	0.0000583	6.66E-09	0.0001749	1.998E-08
S0010	75003	Ethyl Chloride	0.0000583	6.66E-09		
S0011	75003	Ethyl Chloride	0.0000583	6.66E-09		
S0002	206440	Fluoranthene	0.945487802	0.000393953	0.982923954	0.000409502
S0005	206440	Fluoranthene	0.000000154	5.51E-10		
S0006	206440	Fluoranthene	0.00000756	0.000000027		
S0009	206440	Fluoranthene	0.0000617	7.04E-09		
S0010	206440	Fluoranthene	0.0000617	7.04E-09		
S0011	206440	Fluoranthene	0.0000617	7.04E-09		
S0012	206440	Fluoranthene	0.025730775	0.0000107		
S0012	206440	Fluoranthene	0.011512563	0.0000048		
S0002	86737	Fluorene	0.226	0.000094	0.577941232	0.000240769
S0005	86737	Fluorene	0.00000295	1.05E-08		
S0006	86737	Fluorene	0.000144378	0.000000516		
S0009	86737	Fluorene	0.000415514	4.74E-08		
S0010	86737	Fluorene	0.000415514	4.74E-08		
S0011	86737	Fluorene	0.000415514	4.74E-08		
S0012	86737	Fluorene	0.173253886	0.0000722		
S0012	86737	Fluorene	0.177293476	0.0000739		
S0002	50000	Formaldehyde	499.7578382	0.208232433	559.1204489	0.233032335
S0007	50000	Formaldehyde	0.02815128	0.00010054		
S0008	50000	Formaldehyde	0.0470124	0.00000539		
S0009	50000	Formaldehyde	0.01006434	0.00000115		
S0010	50000	Formaldehyde	0.01006434	0.00000115		
S0011	50000	Formaldehyde	0.01006434	0.00000115		
S0012	50000	Formaldehyde	56.78559218	0.023660663		
S0012	50000	Formaldehyde	2.471661795	0.001029859		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0002	7783064	H2S	0	0	0	0
S0002	110543	Hexane	0	0	22.3260234	0.040336994
S0005	110543	Hexane	0.196432986	0.000701546		
S0006	110543	Hexane	9.625216332	0.034375773		
S0007	110543	Hexane	0.01016574	0.0000363		
S0008	110543	Hexane	0.0169767	0.00000195		
S0009	110543	Hexane	0.0014586	0.000000167		
S0010	110543	Hexane	0.0014586	0.000000167		
S0011	110543	Hexane	0.0014586	0.000000167		
S0012	110543	Hexane	8.229795968	0.003429082		
S0012	110543	Hexane	4.213059878	0.001755442		
S0018	110543	Hexane	0.03	0.0000364		
S0002	193395	ln[1,2,3-cd]pyr	0.000224	9.31E-08	0.00033306	1.4121E-07
S0005	193395	ln[1,2,3-cd]pyr	1.68E-08	6.01E-11		
S0006	193395	ln[1,2,3-cd]pyr	0.000000825	2.95E-09		
S0009	193395	ln[1,2,3-cd]pyr	0	0		
S0010	193395	ln[1,2,3-cd]pyr	0	0		
S0011	193395	ln[1,2,3-cd]pyr	0	0		
S0012	193395	ln[1,2,3-cd]pyr	0	0		
S0012	193395	ln[1,2,3-cd]pyr	0.000108218	4.51E-08		
S0001	7439921	Lead	0.00000244	1.02E-09	6.881063433	0.00286762
S0003	7439921	Lead	0.0000567	2.36E-08		
S0004	7439921	Lead	0.00000814	3.39E-09		
S0005	7439921	Lead	0.00000295	1.05E-08		
S0006	7439921	Lead	0.000144378	0.000000516		
S0013	7439921	Lead	0.003014343	0.00000126		
S0014	7439921	Lead	0.00498	0.00000208		
S0015	7439921	Lead	0.00255	0.00000106		
S0016	7439921	Lead	0.169172339	0.0000705		
S0021	7439921	Lead	0.604955973	0.000252065		
S0022	7439921	Lead	0.604955973	0.000252065		
S0023	7439921	Lead	0.604955973	0.000252065		
S0024	7439921	Lead	0.604955973	0.000252065		
S0025	7439921	Lead	0.604955973	0.000252065		
S0026	7439921	Lead	0.604955973	0.000252065		
S0027	7439921	Lead	0.604955973	0.000252065		
S0028	7439921	Lead	0.604955973	0.000252065		
S0029	7439921	Lead	0.604955973	0.000252065		
S0030	7439921	Lead	0.604955973	0.000252065		
S0031	7439921	Lead	0.604955973	0.000252065		
S0032	7439921	Lead	0.00301	0.00000125		
S0033	7439921	Lead	0.04360644	0.0000182		
S0002	1128	Lead cmp(inorg)	0	0	0	0
S0001	7439965	Manganese	0	0	190.5540688	0.082595105

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0002	7439965	Manganese	182.3440761	0.075976698		
S0003	7439965	Manganese	0	0		
S0004	7439965	Manganese	0	0		
S0005	7439965	Manganese	0.0000182	6.51E-08		
S0006	7439965	Manganese	0.00089377	0.00000319		
S0013	7439965	Manganese	0	0		
S0014	7439965	Manganese	0	0		
S0015	7439965	Manganese	0	0		
S0016	7439965	Manganese	0	0		
S0019	7439965	Manganese	0.0927	0.000515		
S0020	7439965	Manganese	0.10901	0.000825833		
S0021	7439965	Manganese	0.705670064	0.000294029		
S0022	7439965	Manganese	0.705670064	0.000294029		
S0023	7439965	Manganese	0.705670064	0.000294029		
S0024	7439965	Manganese	0.705670064	0.000294029		
S0025	7439965	Manganese	0.705670064	0.000294029		
S0026	7439965	Manganese	0.705670064	0.000294029		
S0027	7439965	Manganese	0.705670064	0.000294029		
S0028	7439965	Manganese	0.705670064	0.000294029		
S0029	7439965	Manganese	0.705670064	0.000294029		
S0030	7439965	Manganese	0.705670064	0.000294029		
S0031	7439965	Manganese	0.705670064	0.000294029		
S0032	7439965	Manganese	0	0		
S0033	7439965	Manganese	0	0		
S0034	7439965	Manganese	0.245	0.00204		
S0002	78933	MEK	48.70302217	0.020292926	52.07215136	0.03231963
S0005	78933	MEK	0.067348452	0.00024053		
S0006	78933	MEK	3.300074171	0.011785979		
S0009	78933	MEK	0.000568854	6.49E-08		
S0010	78933	MEK	0.000568854	6.49E-08		
S0011	78933	MEK	0.000568854	6.49E-08		
S0001	7439976	Mercury	0	0	0.111073355	4.71167E-05
S0002	7439976	Mercury	0	0		
S0003	7439976	Mercury	0	0		
S0004	7439976	Mercury	0	0		
S0005	7439976	Mercury	0.00000505	0.000000018		
S0006	7439976	Mercury	0.000247506	0.000000884		
S0013	7439976	Mercury	0.00000965	4.02E-09		
S0014	7439976	Mercury	0.000016	6.65E-09		
S0015	7439976	Mercury	0	0		
S0016	7439976	Mercury	0	0		
S0021	7439976	Mercury	0.010071409	0.0000042		
S0022	7439976	Mercury	0.010071409	0.0000042		
S0023	7439976	Mercury	0.010071409	0.0000042		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0024	7439976	Mercury	0.010071409	0.0000042		
S0025	7439976	Mercury	0.010071409	0.0000042		
S0026	7439976	Mercury	0.010071409	0.0000042		
S0027	7439976	Mercury	0.010071409	0.0000042		
S0028	7439976	Mercury	0.010071409	0.0000042		
S0029	7439976	Mercury	0.010071409	0.0000042		
S0030	7439976	Mercury	0.010071409	0.0000042		
S0031	7439976	Mercury	0.010071409	0.0000042		
S0032	7439976	Mercury	0.00000965	4.02E-09		
S0033	7439976	Mercury	0	0		
S0002	67561	Methanol	178.5776579	0.074407357	223.0611624	0.336628665
S0005	67561	Methanol	0.75767009	0.002705965		
S0006	67561	Methanol	37.12583442	0.132592266		
S0017	67561	Methanol	6.6	0.126923077		
S0009	74839	Methyl Bromide	0.0000715	8.16E-09	0.0002145	2.448E-08
S0010	74839	Methyl Bromide	0.0000715	8.16E-09		
S0011	74839	Methyl Bromide	0.0000715	8.16E-09		
S0009	75092	Methylene Chlor	0.00000394	4.5E-10	0.044451232	1.85214E-05
S0010	75092	Methylene Chlor	0.00000394	4.5E-10		
S0011	75092	Methylene Chlor	0.00000394	4.5E-10		
S0012	75092	Methylene Chlor	0.022220449	0.00000926		
S0012	75092	Methylene Chlor	0.022218963	0.00000926		
S0005	108101	MIBK	0.322711335	0.00115254	16.13556674	0.057627024
S0006	108101	MIBK	15.8128554	0.056474484		
S0009	108383	m-Xylene	0.0029172	0.000000333	28.08404054	0.011778581
S0010	108383	m-Xylene	0.0029172	0.000000333		
S0011	108383	m-Xylene	0.0029172	0.000000333		
S0012	108383	m-Xylene	16.45959194	0.006858163		
S0012	108383	m-Xylene	11.515697	0.004798207		
S0018	108383	m-Xylene	0.1	0.000121212		
S0002	91203	Naphthalene	11.2	0.00466	11.91657404	0.005210627
S0005	91203	Naphthalene	0.001361	0.00000486		
S0006	91203	Naphthalene	0.066688999	0.000238175		
S0007	91203	Naphthalene	0.00234594	0.00000838		
S0008	91203	Naphthalene	0.0039177	0.000000449		
S0009	91203	Naphthalene	0.000748748	8.55E-08		
S0010	91203	Naphthalene	0.000748748	8.55E-08		
S0011	91203	Naphthalene	0.000748748	8.55E-08		
S0012	91203	Naphthalene	0.312200072	0.000130083		
S0012	91203	Naphthalene	0.287814085	0.000119923		
S0018	91203	Naphthalene	0.04	0.0000485		
S0002	7664417	NH3	507.2	0.211333333	574.01216	0.30549477
S0007	7664417	NH3	25.02336	0.089369143		
S0008	7664417	NH3	41.7888	0.004792294		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0001	7440020	Nickel	0.00000283	1.18E-09	5.54525316	0.002494749
S0002	7440020	Nickel	4.794973853	0.001997906		
S0003	7440020	Nickel	0.0000658	2.74E-08		
S0004	7440020	Nickel	0.00000944	3.93E-09		
S0005	7440020	Nickel	0.0000114	4.06E-08		
S0006	7440020	Nickel	0.000556888	0.00000199		
S0013	7440020	Nickel	0.003100468	0.00000129		
S0014	7440020	Nickel	0.00513	0.00000214		
S0015	7440020	Nickel	0.00296	0.00000123		
S0016	7440020	Nickel	0.196239913	0.0000818		
S0019	7440020	Nickel	0.00018	0.000001		
S0020	7440020	Nickel	0.00044	0.00000333		
S0021	7440020	Nickel	0.042299918	0.0000176		
S0022	7440020	Nickel	0.042299918	0.0000176		
S0023	7440020	Nickel	0.042299918	0.0000176		
S0024	7440020	Nickel	0.042299918	0.0000176		
S0025	7440020	Nickel	0.042299918	0.0000176		
S0026	7440020	Nickel	0.042299918	0.0000176		
S0027	7440020	Nickel	0.042299918	0.0000176		
S0028	7440020	Nickel	0.042299918	0.0000176		
S0029	7440020	Nickel	0.042299918	0.0000176		
S0030	7440020	Nickel	0.042299918	0.0000176		
S0031	7440020	Nickel	0.042299918	0.0000176		
S0032	7440020	Nickel	0.0031	0.00000129		
S0033	7440020	Nickel	0.05058347	0.0000211		
S0034	7440020	Nickel	0.0226	0.000188		
S0005	95476	o-Xylene	0.009120103	0.0000326	7.396448323	0.002565139
S0006	95476	o-Xylene	0.446885044	0.001596018		
S0009	95476	o-Xylene	0.000831402	9.49E-08		
S0010	95476	o-Xylene	0.000831402	9.49E-08		
S0011	95476	o-Xylene	0.000831402	9.49E-08		
S0012	95476	o-Xylene	4.690983702	0		
S0012	95476	o-Xylene	2.246965268	0.000936236		
S0002	1151	PAHs-w/o	0	0	1.96393759	0.001958052
S0007	1151	PAHs-w/o	0.00078198	0.00000279		
S0008	1151	PAHs-w/o	0.0013059	0.00000015		
S0009	1151	PAHs-w/o	0.00468996	0.000000535		
S0012	1151	PAHs-w/o	1.95715975	0.001954577		
S0009	127184	Perc	0	0	0	0
S0010	127184	Perc	0	0		
S0011	127184	Perc	0	0		
S0002	198550	Perylene	0	0	0.01024878	4.25493E-06
S0005	198550	Perylene	3.93E-09	1.4E-11		
S0006	198550	Perylene	0.000000193	6.88E-10		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0009	198550	Perylene	0.0000123	1.41E-09		
S0010	198550	Perylene	0.0000123	1.41E-09		
S0011	198550	Perylene	0.0000123	1.41E-09		
S0012	198550	Perylene	0.005146155	0.00000214		
S0012	198550	Perylene	0.005065528	0.00000211		
S0002	85018	Phenanthrene	0.253	0.000106	0.750690823	0.00031331
S0005	85018	Phenanthrene	0.00000393	0.000000014		
S0006	85018	Phenanthrene	0.000192504	0.000000688		
S0009	85018	Phenanthrene	0.00074052	8.45E-08		
S0010	85018	Phenanthrene	0.00074052	8.45E-08		
S0011	85018	Phenanthrene	0.00074052	8.45E-08		
S0012	85018	Phenanthrene	0.308769302	0.000128654		
S0012	85018	Phenanthrene	0.186503527	0.0000777		
S0002	7723140	Phosphorus	506.5113225	0.211046384	518.348265	0.215994403
S0005	7723140	Phosphorus	0.000101023	0.000000361		
S0006	7723140	Phosphorus	0.004950111	0.0000177		
S0021	7723140	Phosphorus	1.075626491	0.000448178		
S0022	7723140	Phosphorus	1.075626491	0.000448178		
S0023	7723140	Phosphorus	1.075626491	0.000448178		
S0024	7723140	Phosphorus	1.075626491	0.000448178		
S0025	7723140	Phosphorus	1.075626491	0.000448178		
S0026	7723140	Phosphorus	1.075626491	0.000448178		
S0027	7723140	Phosphorus	1.075626491	0.000448178		
S0028	7723140	Phosphorus	1.075626491	0.000448178		
S0029	7723140	Phosphorus	1.075626491	0.000448178		
S0030	7723140	Phosphorus	1.075626491	0.000448178		
S0031	7723140	Phosphorus	1.075626491	0.000448178		
S0002	115071	Propylene	1026.529614	0.427720672	1035.649717	0.460292468
S0005	115071	Propylene	0.182402059	0.000651436		
S0006	115071	Propylene	8.93770088	0.03192036		
S0009	106423	p-Xylene	0	0	0	0
S0010	106423	p-Xylene	0	0		
S0011	106423	p-Xylene	0	0		
S0012	106423	p-Xylene	0	0		
S0012	106423	p-Xylene	0	0		
S0002	129000	Pyrene	0.00898	0.00000374	0.119553802	4.96598E-05
S0005	129000	Pyrene	0.000000323	1.15E-09		
S0006	129000	Pyrene	0.0000158	5.65E-08		
S0009	129000	Pyrene	0.000181016	2.07E-08		
S0010	129000	Pyrene	0.000181016	2.07E-08		
S0011	129000	Pyrene	0.000181016	2.07E-08		
S0012	129000	Pyrene	0.075476941	0.0000314		
S0012	129000	Pyrene	0.03453769	0.0000144		
S0001	7782492	Selenium	0	0	0.007431309	3.24326E-06

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0002	7782492	Selenium	0	0		
S0003	7782492	Selenium	0	0		
S0004	7782492	Selenium	0	0		
S0005	7782492	Selenium	0.000000912	3.26E-09		
S0006	7782492	Selenium	0.0000447	0.00000016		
S0013	7782492	Selenium	0	0		
S0014	7782492	Selenium	0	0		
S0015	7782492	Selenium	0	0		
S0016	7782492	Selenium	0	0		
S0021	7782492	Selenium	0.000671427	0.00000028		
S0022	7782492	Selenium	0.000671427	0.00000028		
S0023	7782492	Selenium	0.000671427	0.00000028		
S0024	7782492	Selenium	0.000671427	0.00000028		
S0025	7782492	Selenium	0.000671427	0.00000028		
S0026	7782492	Selenium	0.000671427	0.00000028		
S0027	7782492	Selenium	0.000671427	0.00000028		
S0028	7782492	Selenium	0.000671427	0.00000028		
S0029	7782492	Selenium	0.000671427	0.00000028		
S0030	7782492	Selenium	0.000671427	0.00000028		
S0031	7782492	Selenium	0.000671427	0.00000028		
S0032	7782492	Selenium	0	0		
S0033	7782492	Selenium	0	0		
S0001	1175	Silica, Crystln	0.00223	0.000000929	189.2893722	0.07886638
S0003	1175	Silica, Crystln	0.0519	0.0000216		
S0004	1175	Silica, Crystln	0.00744	0.0000031		
S0013	1175	Silica, Crystln	3.938076129	0.001640865		
S0014	1175	Silica, Crystln	6.51	0.00271		
S0015	1175	Silica, Crystln	2.33	0.000970833		
S0016	1175	Silica, Crystln	132.6311134	0.055262964		
S0032	1175	Silica, Crystln	3.94	0.00164		
S0033	1175	Silica, Crystln	39.87861271	0.016616089		
S0005	7440224	Silver	0.00000154	5.51E-09	0.066548435	2.79955E-05
S0006	7440224	Silver	0.0000756	0.00000027		
S0021	7440224	Silver	0.006042845	0.00000252		
S0022	7440224	Silver	0.006042845	0.00000252		
S0023	7440224	Silver	0.006042845	0.00000252		
S0024	7440224	Silver	0.006042845	0.00000252		
S0025	7440224	Silver	0.006042845	0.00000252		
S0026	7440224	Silver	0.006042845	0.00000252		
S0027	7440224	Silver	0.006042845	0.00000252		
S0028	7440224	Silver	0.006042845	0.00000252		
S0029	7440224	Silver	0.006042845	0.00000252		
S0030	7440224	Silver	0.006042845	0.00000252		
S0031	7440224	Silver	0.006042845	0.00000252		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0002	100425	Styrene	351.1811836	0.146325493	351.8308646	0.14659609
S0009	100425	Styrene	0.0000788	8.99E-09		
S0010	100425	Styrene	0.0000788	8.99E-09		
S0011	100425	Styrene	0.0000788	8.99E-09		
S0012	100425	Styrene	0.444408982	0.00018517		
S0012	100425	Styrene	0.205035581	0.0000854		
S0009	79016	TCE	0	0	0	0
S0010	79016	TCE	0	0		
S0011	79016	TCE	0	0		
S0005	7440280	Thallium	0	0	0	0
S0006	7440280	Thallium	0	0		
S0002	108883	Toluene	182.3440761	0.075976698	206.5976691	0.279574027
S0005	108883	Toluene	0.06594536	0.000235519		
S0006	108883	Toluene	3.231322626	0.011540438		
S0007	108883	Toluene	0.06099444	0.000217837		
S0008	108883	Toluene	0.1018602	0.0000117		
S0009	108883	Toluene	0.000904332	0.000000103		
S0010	108883	Toluene	0.000904332	0.000000103		
S0011	108883	Toluene	0.000904332	0.000000103		
S0012	108883	Toluene	5.1024735	0.002126031		
S0012	108883	Toluene	5.89828383	0.002457618		
S0017	108883	Toluene	9.72	0.186923077		
S0018	108883	Toluene	0.07	0.0000848		
S0009	75694	TriClFluorMetha	0	0	0.036513186	0.0000152
S0010	75694	TriClFluorMetha	0	0		
S0011	75694	TriClFluorMetha	0	0		
S0012	75694	TriClFluorMetha	0	0		
S0012	75694	TriClFluorMetha	0.036513186	0.0000152		
S0001	7440622	Vanadium	0.00000517	2.15E-09	2.808486519	0.001170345
S0003	7440622	Vanadium	0.00012	0.00000005		
S0004	7440622	Vanadium	0.0000172	7.17E-09		
S0005	7440622	Vanadium	0	0		
S0006	7440622	Vanadium	0	0		
S0013	7440622	Vanadium	0.013004739	0.00000542		
S0014	7440622	Vanadium	0.0215	0.00000896		
S0015	7440622	Vanadium	0.00541	0.00000225		
S0016	7440622	Vanadium	0.358645358	0.000149436		
S0021	7440622	Vanadium	0.209485309	0.0000873		
S0022	7440622	Vanadium	0.209485309	0.0000873		
S0023	7440622	Vanadium	0.209485309	0.0000873		
S0024	7440622	Vanadium	0.209485309	0.0000873		
S0025	7440622	Vanadium	0.209485309	0.0000873		
S0026	7440622	Vanadium	0.209485309	0.0000873		
S0027	7440622	Vanadium	0.209485309	0.0000873		

Table A2 - Emissions Summed by Substance

Source	CAS	Pollutant	Emission Rate (lb/yr)	Emission Rate (lb/hr)	Emission Rate Summed By Pollutant (lb/yr)	Emission Rate Summed By Pollutant (lb/hr)
S0028	7440622	Vanadium	0.209485309	0.0000873		
S0029	7440622	Vanadium	0.209485309	0.0000873		
S0030	7440622	Vanadium	0.209485309	0.0000873		
S0031	7440622	Vanadium	0.209485309	0.0000873		
S0032	7440622	Vanadium	0.013	0.00000542		
S0033	7440622	Vanadium	0.092445653	0.0000385		
S0002	1330207	Xylenes	74.2883273	0.03095347	83.52952728	0.063695938
S0005	1330207	Xylenes	0.182402059	0.000651436		
S0006	1330207	Xylenes	8.93770088	0.03192036		
S0007	1330207	Xylenes	0.04535484	0.000161982		
S0008	1330207	Xylenes	0.0757422	0.00000869		
S0001	7440666	Zinc	0.00000752	3.13E-09	680.8055533	0.283673883
S0002	7440666	Zinc	675.34843	0.281395179		
S0003	7440666	Zinc	0.000175	7.29E-08		
S0004	7440666	Zinc	0.0000251	1.05E-08		
S0005	7440666	Zinc	0.0000309	0.00000011		
S0006	7440666	Zinc	0.001512534	0.0000054		
S0013	7440666	Zinc	0.054258183	0.0000226		
S0014	7440666	Zinc	0.0897	0.0000374		
S0015	7440666	Zinc	0.00785	0.00000327		
S0016	7440666	Zinc	0.521050803	0.000217105		
S0021	7440666	Zinc	0.417627764	0.000174012		
S0022	7440666	Zinc	0.417627764	0.000174012		
S0023	7440666	Zinc	0.417627764	0.000174012		
S0024	7440666	Zinc	0.417627764	0.000174012		
S0025	7440666	Zinc	0.417627764	0.000174012		
S0026	7440666	Zinc	0.417627764	0.000174012		
S0027	7440666	Zinc	0.417627764	0.000174012		
S0028	7440666	Zinc	0.417627764	0.000174012		
S0029	7440666	Zinc	0.417627764	0.000174012		
S0030	7440666	Zinc	0.417627764	0.000174012		
S0031	7440666	Zinc	0.417627764	0.000174012		
S0032	7440666	Zinc	0.0543	0.0000226		
S0033	7440666	Zinc	0.134307835	0.000056		

Table A4 - Acute Risk Summary of Exposure by Pathway (continued)

REC	GRP	X	Y	POLID	POLABBREV	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEVEL	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	MAXHI
2038	PROPERTY	432879	3732893	198550	Perylene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	85018	Phenanthrene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	7723140	Phosphorus	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	115071	Propylene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	129000	Pyrene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	100425	Styrene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-05	1.63E-05	1.63E-05	1.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-05
2038	PROPERTY	432879	3732893	108883	Toluene	NonCancerAcute	0.00E+00	8.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-03	8.40E-03	8.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-03
2038	PROPERTY	432879	3732893	1330207	Xylenes	NonCancerAcute	0.00E+00	1.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-04	1.81E-04	1.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-04
2038	PROPERTY	432879	3732893	540841	2,2,4TriMePentn	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	7440360	Antimony	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	75456	ClDifluorMethan	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	110827	Cyclohexane	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	75454	DiClFluorMethan	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	108101	MIBK	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	95476	o-Xylene	NonCancerAcute	0.00E+00	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-05	1.31E-05	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-05
2038	PROPERTY	432879	3732893	7440224	Silver	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	7440280	Thallium	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	75003	Ethyl Chloride	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	74839	Methyl Bromide	NonCancerAcute	0.00E+00	6.31E-10	0.00E+00	0.00E+00	0.00E+00	6.31E-10	6.31E-10	6.31E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E-10
2038	PROPERTY	432879	3732893	75092	Methylene Chlor	NonCancerAcute	1.33E-07	1.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-07
2038	PROPERTY	432879	3732893	108383	m-Xylene	NonCancerAcute	0.00E+00	5.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-05	5.43E-05	5.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-05
2038	PROPERTY	432879	3732893	127184	Perc	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	106423	p-Xylene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	79016	TCE	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	75694	TriClFluorMetha	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	98828	Cumene	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	7726956	Bromine	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2038	PROPERTY	432879	3732893	7782505	Chlorine	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-03	4.97E-03	4.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-03

Table A6 - Residential Cancer Risk Summary of Exposure by Pathway (continued)

REC	GRP	SENSITIV	X	Y	POLID	POLABBREV	SCENARIO	INHAL	SOIL	DERMAL	MMILK	WATER	FISH	CROP	BEEF	DAIRY	RIG	CHICKEN	EGG
							RISK_SUM	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK
1939	SENSITIV		431751	3733062	1151	PAHs-w/o	1.51E-06	4.60E-08	1.71E-07	4.27E-08	4.08E-07	0	0	8.40E-07	0	0	0	0	0
1939	SENSITIV		431751	3733062	198550	Perylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	85018	Phenanthrene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	7723140	Phosphorus	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	115071	Propylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	129000	Pyrene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	100425	Styrene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	108883	Toluene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	1330207	Xylenes	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	540841	2,2,4TriMePentn	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	7440360	Antimony	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	75456	CIDiFluorMethan	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	110827	Cyclohexane	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	75434	DiCiFluorMethan	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	108101	MIBK	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	95476	o-Xylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	7440224	Silver	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	7440280	Thallium	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	75003	Ethyl Chloride	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	74839	Methyl Bromide	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	75092	Methylene Chlor	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	108383	m-Xylene	1.31E-12	1.31E-12	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	127184	Perc	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	106423	p-Xylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	79016	TCE	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	75694	TriCiFluorMetha	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	98828	Cumene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	7726956	Bromine	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1939	SENSITIV		431751	3733062	7782505	Chlorine	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0

Table A7 - Worker Cancer Risk Summary of Exposure by Pathway (continued)

REC	GRP	X	Y	POLID	POLABBREV	SCENARIO	INHAL	SOIL	DERMAL	MMILK	WATER	FISH	CROP	BEEF	DAIRY	RIG	CHICKEN	EGG
						RISK_SUM	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK	_RISK
1940	SENSITIV	433030	3731700	91203	Naphthalene	2.09E-10	2.09E-10	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	1151	PAHs-w/o	1.01E-08	4.83E-09	0	1.63E-09	0	0	0.00E+00	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	198550	Perylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	85018	Phenanthrene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	7723140	Phosphorus	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	115071	Propylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	129000	Styrene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	108883	Toluene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	1330207	Xylenes	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	540841	2,2,4TriMePentn	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	7440360	Antimony	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	75456	DiFluorMethan	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	110827	Cyclohexane	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	75434	DiClFluorMethan	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	108101	MIBK	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	95476	o-Xylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	7440224	Silver	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	7440280	Thallium	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	75003	Ethyl Chloride	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	74839	Methyl Bromide	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	75092	Methylene Chlor	9.71E-14	9.71E-14	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	108383	m-Xylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	127184	Perc	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	106423	p-Xylene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	79016	TCE	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	75694	TriClFluorMetha	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	98828	Cumene	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	7726956	Bromine	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1940	SENSITIV	433030	3731700	7782505	Chlorine	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0

Table A8 - Worker Chronic Risk Summary of Exposure by Pathway (continued)

REC	GRP	X	Y	POLID	POLABREV	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/ DEVEL	RESP	SKIN	EYE	TEETH	ENDO	BLOOD	ODOR	MAXHI
1940	SENSITIV	433030	3731700	1151	PAHs-w/o	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	198550	Perylene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	85018	Phenanthrene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	7723140	Phosphorus	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	115071	Propylene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-07
1940	SENSITIV	433030	3731700	129000	Pyrene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	100425	Styrene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	1.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-07
1940	SENSITIV	433030	3731700	108883	Toluene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-07
1940	SENSITIV	433030	3731700	1330207	Xylenes	NonCancerChronicDerived_InhSoilDerm	0.00E+00	1.84E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-07	0.00E+00	1.84E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-07
1940	SENSITIV	433030	3731700	540841	2,2,4TriMePentn	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	7440360	Antimony	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	110827	Cyclohexane	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	75434	DiCFluorMethan	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	108101	MIBK	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	95476	o-Xylene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	3.30E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-08	0.00E+00	3.30E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-08
1940	SENSITIV	433030	3731700	7440224	Silver	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	7440280	Thallium	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	75003	Ethyl Chloride	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-14	9.01E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-14
1940	SENSITIV	433030	3731700	74839	Methyl Bromide	NonCancerChronicDerived_InhSoilDerm	0.00E+00	6.63E-10	0.00E+00	0.00E+00	6.63E-10	6.63E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-10
1940	SENSITIV	433030	3731700	75092	Methylene Chlor	NonCancerChronicDerived_InhSoilDerm	2.93E-10	2.93E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-10
1940	SENSITIV	433030	3731700	108883	m-Xylene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-07	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-07
1940	SENSITIV	433030	3731700	127184	Perc	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	106423	p-Xylene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	79016	TCE	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	75694	TriCFluorMetha	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	98828	Cumene	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	7726956	Bromine	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1940	SENSITIV	433030	3731700	7782505	Chlorine	NonCancerChronicDerived_InhSoilDerm	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-04	0.00E+00	1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-04

Table A9 - Residential Chronic Risk Summary of Exposure by Pathway

REC	GRP	X	Y	POLID	POLABBREV	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/ DEVEL	RESP	SKIN	EYE	TEETH	ENDO	BLOOD	ODOR	MAXHI
1939	SENSITIV	431751	3733062	7440224	Silver	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	7440280	Thallium	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	75003	Ethyl Chloride	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-13	3.01E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-13
1939	SENSITIV	431751	3733062	74839	Methyl Bromide	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	2.22E-09	0.00E+00	0.00E+00	0.00E+00	2.22E-09	2.22E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-09
1939	SENSITIV	431751	3733062	75092	Methylene Chlor	NonCancerChronicDerived_InhSoilDermMMilkCrops	1.39E-09	1.39E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-09
1939	SENSITIV	431751	3733062	108388	m-Xylene	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	5.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-07	0.00E+00	5.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-07
1939	SENSITIV	431751	3733062	127184	Perc	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	106423	p-Xylene	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	79016	TCE	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	75694	TrIClFluorMetha	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	98828	Cumene	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	7726956	Bromine	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1939	SENSITIV	431751	3733062	7782505	Chlorine	NonCancerChronicDerived_InhSoilDermMMilkCrops	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-03

ATTACHMENT “B”

ISOPLETHS

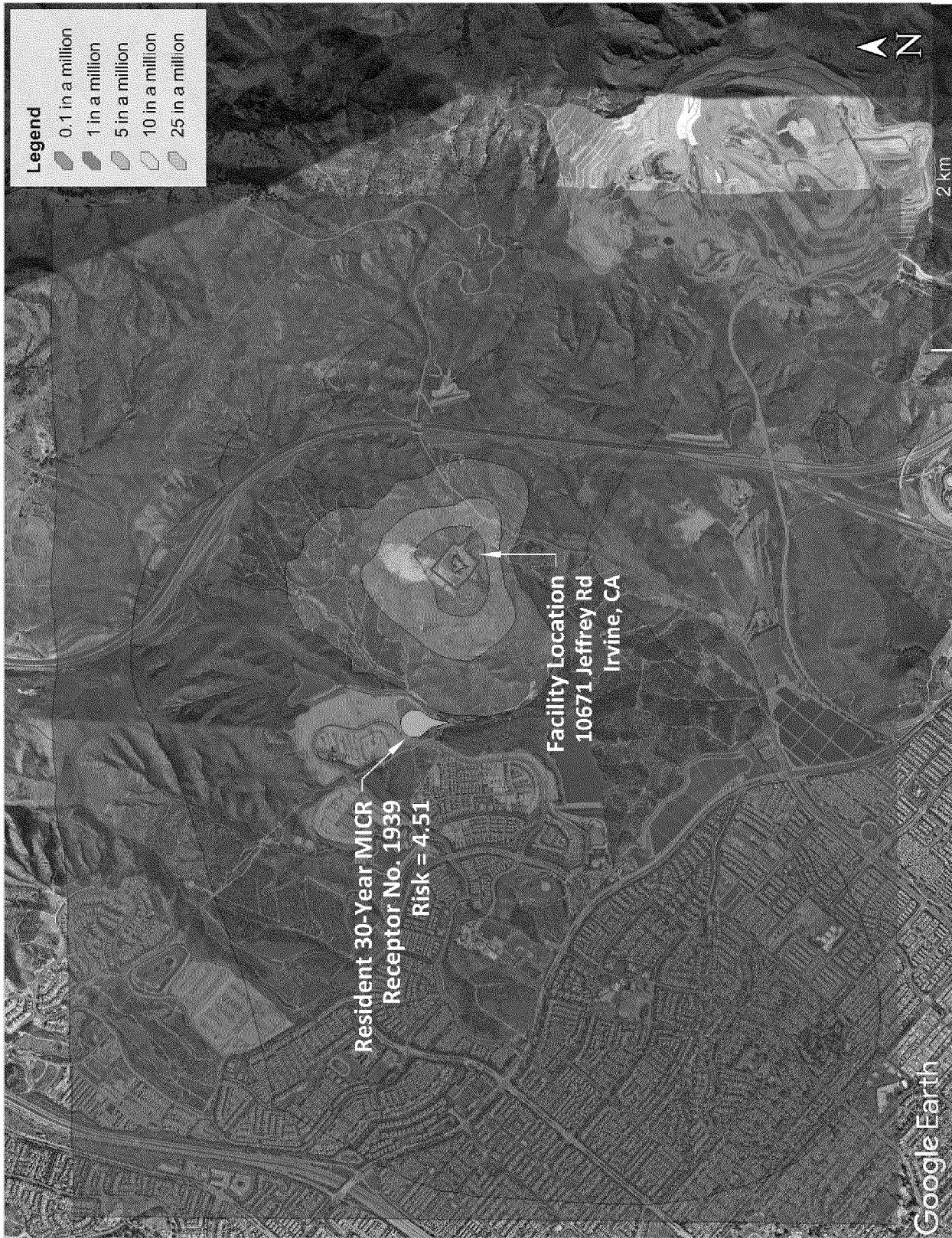


Figure 1 – 30 Year Resident Cancer Risk (in a Million)

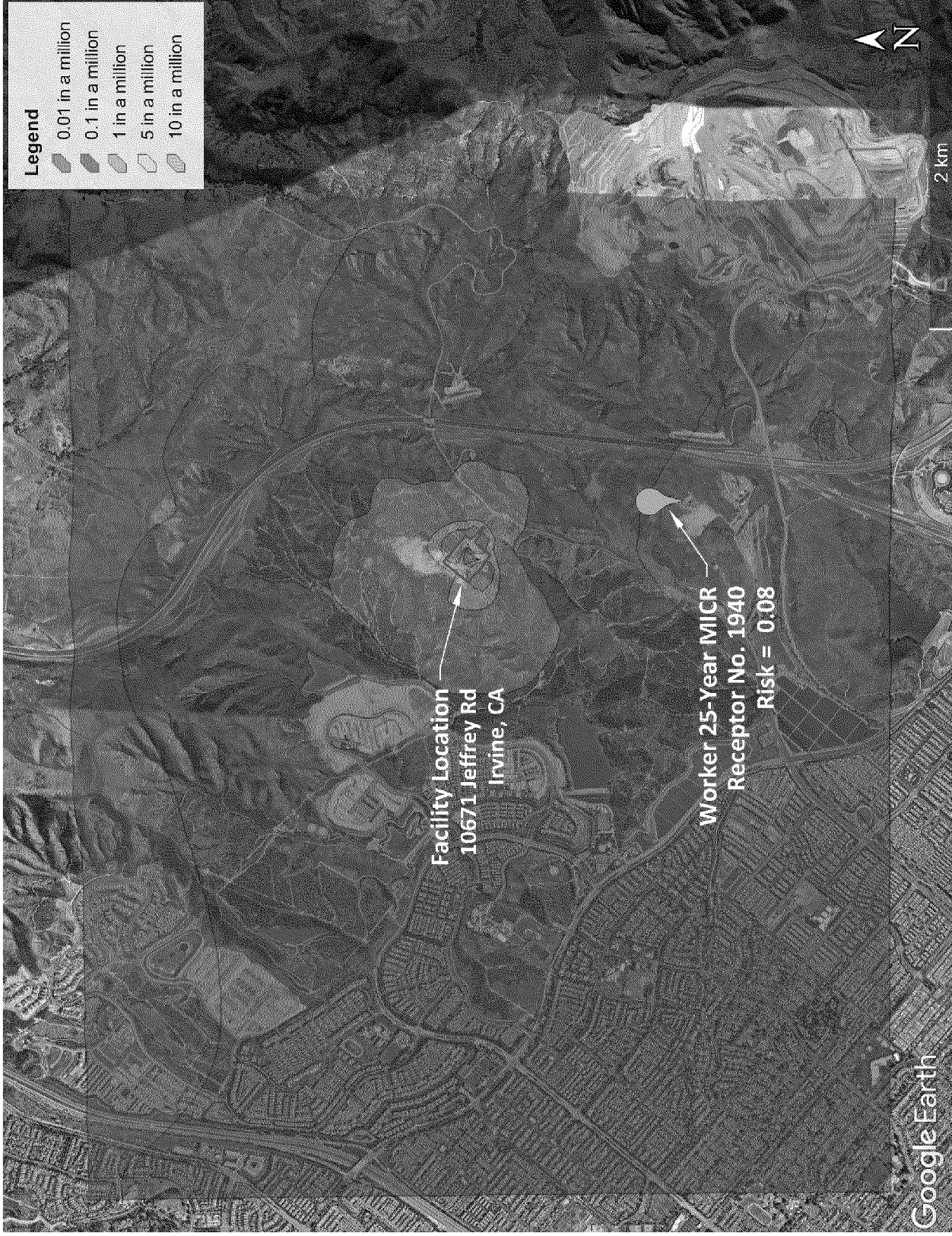


Figure 2 – 25 Year Worker Cancer Risk (in a Million)

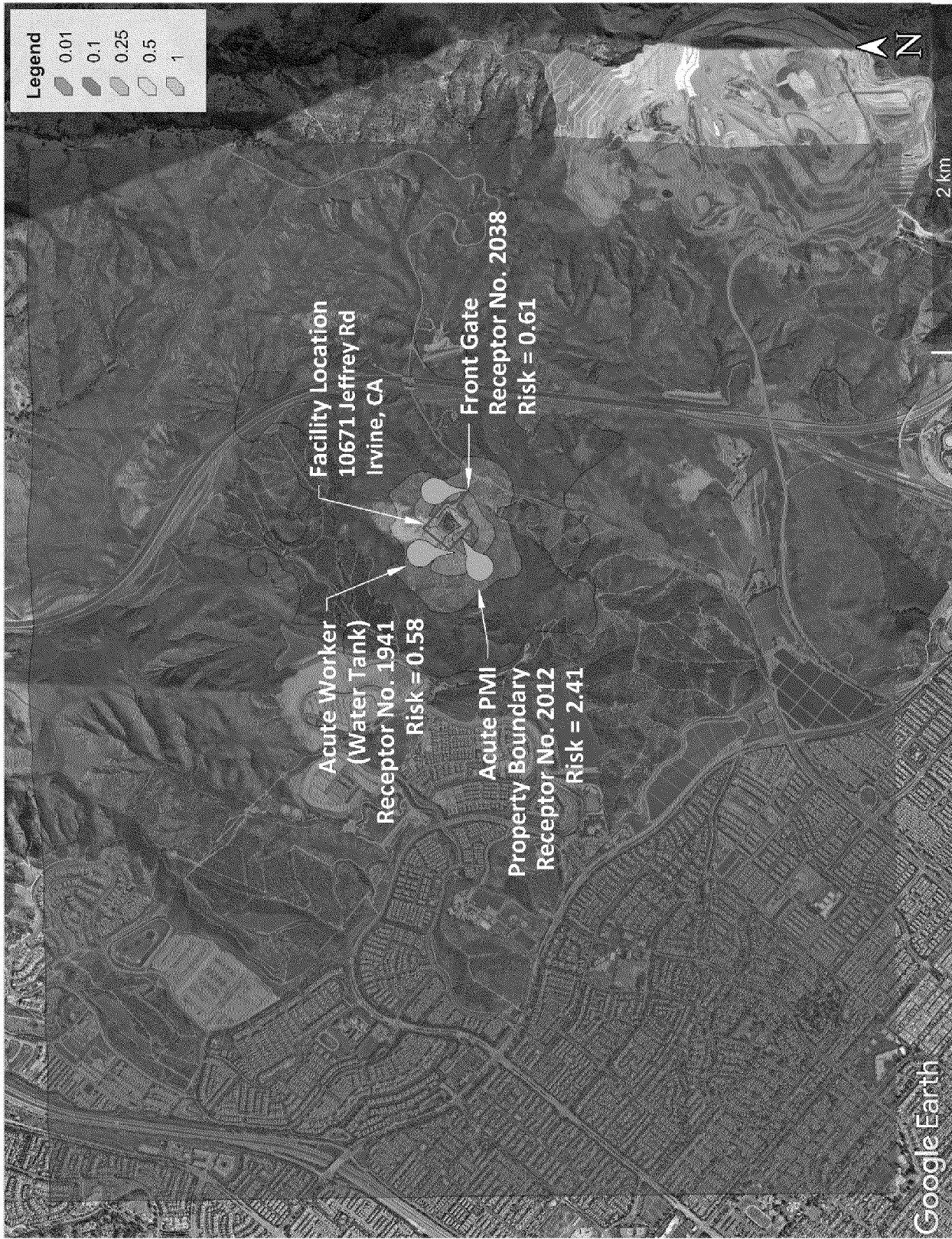


Figure 3 – Acute Risk

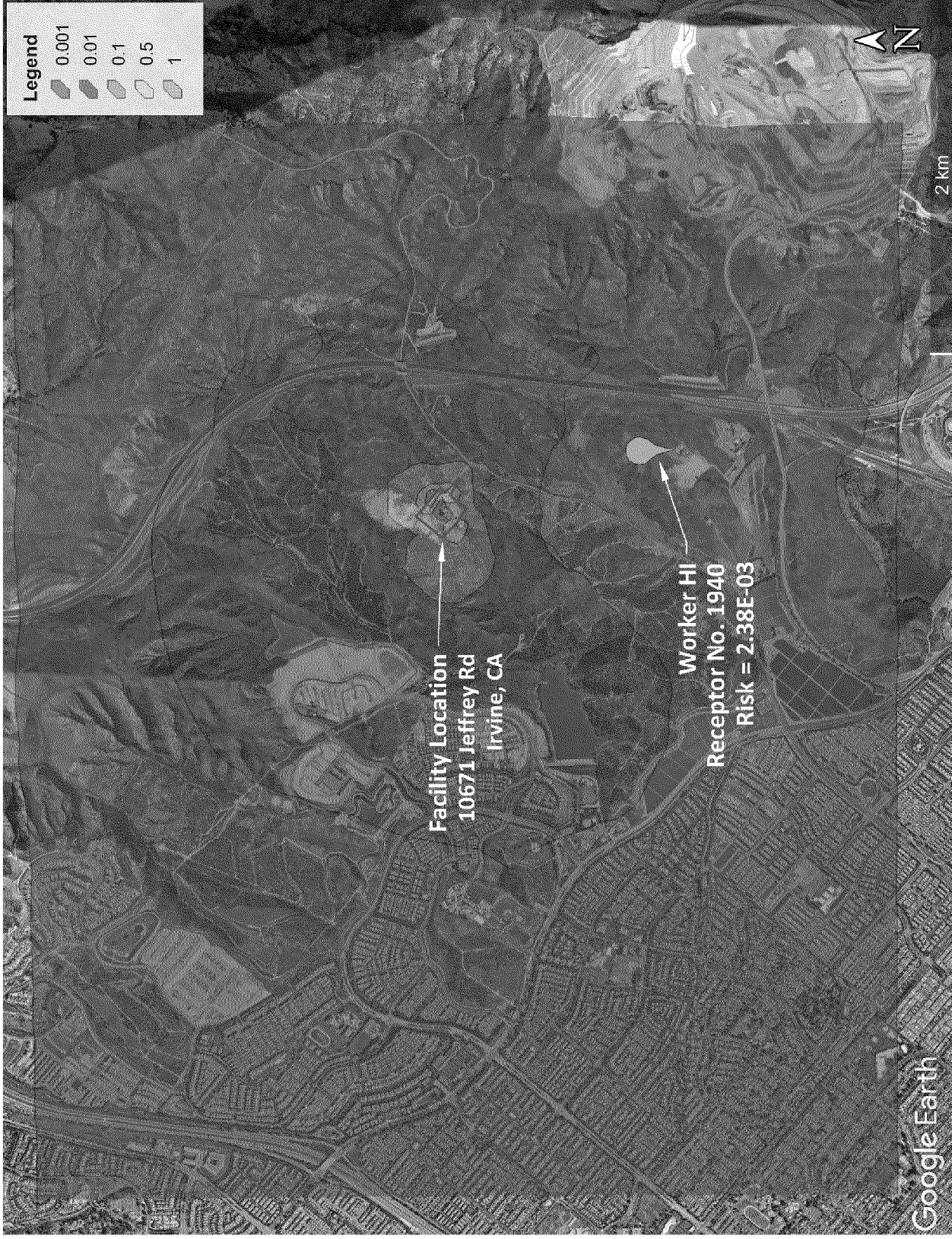


Figure 4 – Chronic Worker

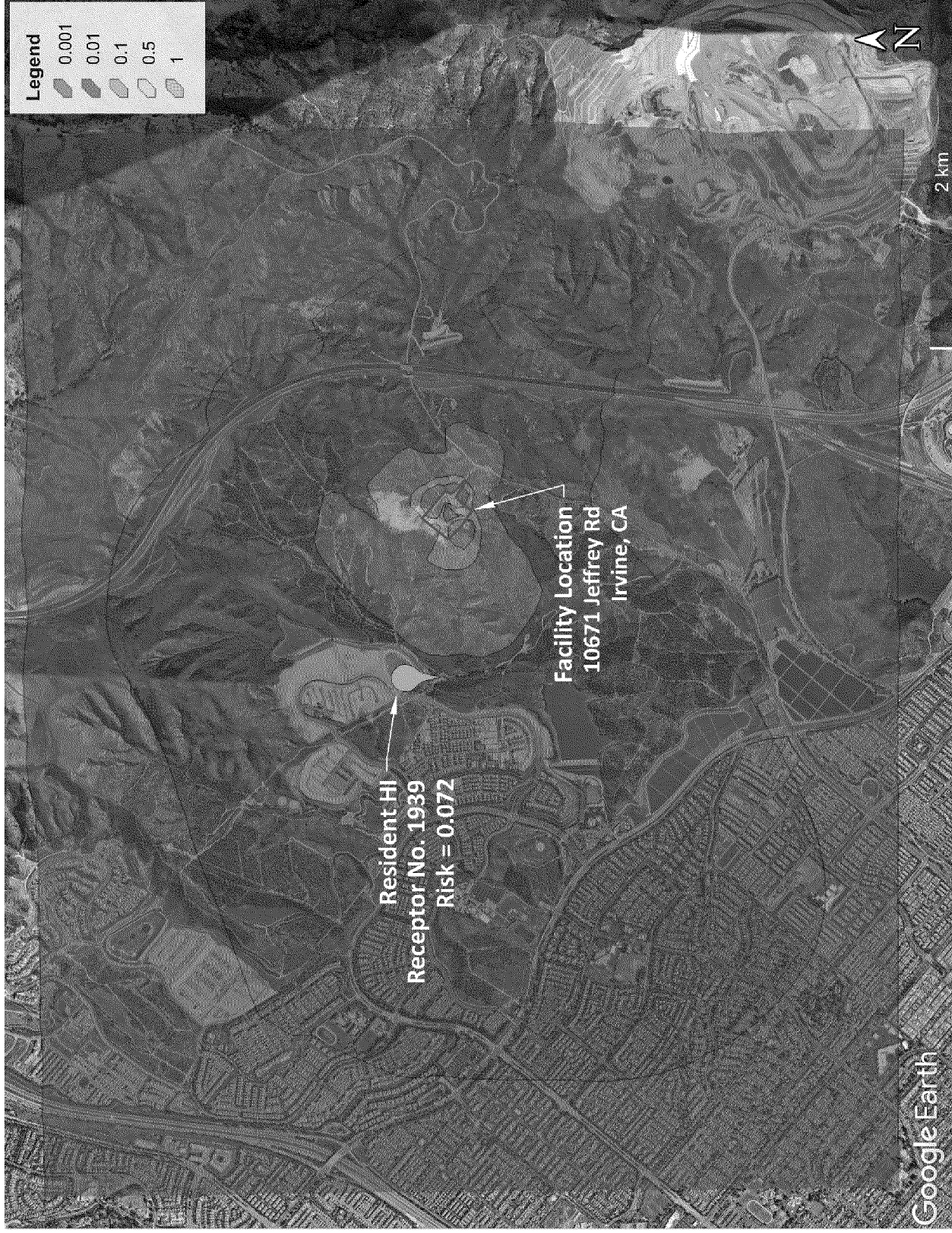


Figure 5 – Chronic Resident

ATTACHMENT “C” HEALTH DATA TABLES

(SEE PROVIDED ELECTRONIC COPY)

ATTACHMENT “D” OEHHA ANALYSIS

OEHHA RISK ANALYSIS

This following attachment details the risk assessment analysis required by the Office of Environmental Health Hazard Assessment. The results will not be used for risk management decisions.

A. Risk Characterization

1. HARP 2 Modeling Parameters

The HARP 2 model was prepared using Office of Environmental Health Hazard Assessment Air Toxic Hot Spots Program Risk Assessment Guidelines “Guidance Manual for Preparation of Health Risk Assessments”, dated February 2015. Table D1 and D2 lists the parameters for both the residential and worker analysis.

Table D1 Residential Risk HARP Parameters

Population Wide Cancer Risk 70-year Lifetime Exposure Period
RMP Derived Method
Exposure Pathways: Inhalation, soil, dermal, mothers’ milk Dermal climate: Warm Deposition of 0.02 m/s Fraction at Time at Home: Disabled Daily Breathing Rates: RMP Tier 1 Analysis Completed for all Pathways

Table D2 Worker Risk HARP Parameters

40-year Cancer Worker Lifetime Exposure Period
OEHHA Derived Method
Worker Exposure Pathways: Inhalation, soil, dermal Dermal Climate: Warm Deposition of 0.02 m/s Worker Adjustment Factor: Assume Facility operates 8 hours, 5 days/week, with Worker Adjustment Factor of 4.2 (24 hours per day/8 hours per shift) x (7 days in a week/5 day in a work week) and Exposure Frequency is 250 days/yr. Daily Breathing Rate: 8-hour Moderate Intensity Tier 2 Adjustments: Start age changed to 16

Table D2 Worker Risk HARP Parameters (Continued)

Chronic 8-hour HI
OEHHA Derived Method
Worker Exposure Pathways: Inhalation Dermal Climate: Warm Deposition of 0.02 m/s Fraction of Time at Home: Disabled Worker Adjustment Factor: Assume Facility operates 8 hours, 5 days/week, with Worker Adjustment Factor of 4.2 (24 hours per day/8 hours per shift) x (7 days in a week/5 day in a work week) and Exposure Frequency is 250 days/yr. Daily Breathing Rate: 8-hour Moderate Intensity Tier 1 Analysis Completed for all Pathways

2. Summary of Risk Results

Table D3 below details the facility Health Risk Assessment for residential and worker receptors. As you will find the worker and resident cancer risk are less than 10 in a million as well as chronic, chronic 8-hr, and Acute Hazard Index for worker and resident is below 1. Refer to Figures D1-D3 for the resulting isopleths.

Table D3 Summary of Worker and Resident Health Risk Assessment Results

Receptor No.	Name	UTM Coordinates		70 Year Cancer Risk in a million (MEIR)	40 Year Cancer Risk in a million (MEIW)	8-hr Chronic HI
		X (m)	Y (m)			
1939	Resident	431751	3733062	3.80	--	--
1940	Worker	433030	3731700	--	0.13	2.72E-03

3. Cancer Burden

The HARP 2 software was utilized to determine the population exposure estimates as cancer burden or the number of persons exposed to selected health risk. The 70-year exposure duration in the HARP model run was completed to estimate the cancer burden. The census tract data was obtained from the HARP 2 model.

The cancer burden was calculated by multiplying the cancer risk at the census receptors by the number of people who live in the census block and adding up the estimated number of potential cancer cases across the zone of impact. The result of this calculation is a single number that is intended to estimate the number of potential cancer cases within the population that is exposed to the emissions for a lifetime (70 years). As you will find the total resulting Cancer Burden is less than 0.5. Table D5 below details the cancer burden results.

Table D5 Cancer Burden

Track No.	Block No.	Coordinates X (m)	Coordinates Y (m)	Elevation (m)	Receptor No.	Population	Cancer Risk	Cancer Burden
52420	1045	434091.1	3734534.5	0	1942	0	2.24E-07	0
52420	1047	432960.2	3734775.4	0	1943	0	2.91E-07	0
52420	1049	432296.6	3735349.4	0	1944	0	1.65E-07	0
52420	1051	433923.1	3733934.7	0	1945	0	3.09E-07	0
52420	1052	434488.9	3734158.6	0	1946	0	1.83E-07	0
52420	1053	433527.0	3733601.3	0	1947	0	2.35E-06	0
52420	1054	433145.4	3734351.3	0	1948	0	9.77E-07	0
52420	1068	431898.5	3733906.0	0	1949	0	2.80E-06	0
52420	1069	430724.9	3732576.1	0	1950	0	1.66E-06	0
52420	1070	431514.1	3731211.5	0	1951	0	7.82E-07	0
52420	1071	431457.7	3731184.5	0	1952	0	7.95E-07	0
52420	1072	431028.6	3731837.5	0	1953	0	1.60E-06	0
52420	1073	432863.5	3734309.4	0	1954	0	2.93E-06	0
52420	1074	431909.3	3735165.5	0	1955	0	1.51E-07	0
52420	1075	431448.9	3731104.1	0	1956	0	7.21E-07	0
52420	1076	431423.4	3731184.5	0	1957	0	8.17E-07	0
52420	1077	431402.4	3731240.1	0	1958	0	8.92E-07	0
52420	1078	431093.9	3731659.6	0	1959	3	1.45E-06	4.353E-06
52420	1079	430567.9	3732389.8	0	1960	0	1.45E-06	0
52420	1080	430406.9	3732722.2	0	1961	0	1.32E-06	0
52420	1081	430475.6	3732614.2	0	1962	0	1.37E-06	0
52420	1082	430436.7	3733088.4	0	1963	0	1.33E-06	0
52420	1084	430580.5	3732764.5	0	1964	0	1.46E-06	0
52420	1088	430275.5	3732446.6	0	1965	0	1.24E-06	0
52420	1110	430733.6	3732127.9	0	1966	0	1.53E-06	0

Track No.	Block No.	Coordinates		Elevation (m)	Receptor No.	Population	Cancer Risk	Cancer Burden
		X (m)	Y (m)	(m)	No.	x	=	
52420	1111	430536.0	3732306.2	0	1967	0	1.41E-06	0
52420	1112	431456.6	3731223.0	0	1968	0	8.34E-07	0
52420	1122	433366.1	3734945.5	0	1969	0	2.40E-07	0
52420	1123	432931.7	3734994.5	0	1970	0	2.25E-07	0
52420	1124	434509.3	3733265.6	0	1971	0	5.92E-07	0
52420	1125	430417.8	3731912.7	0	1972	280	1.26E-06	3.539E-04
52420	1126	433353.7	3733695.2	0	1973	0	2.82E-06	0
52420	4000	430681.0	3732011.1	0	1974	553	1.45E-06	8.014E-04
52420	4001	431179.6	3731520.0	0	1975	0	1.32E-06	0
52420	4002	430430.4	3732181.5	0	1976	77	1.32E-06	1.019E-04
52420	4003	430606.1	3731976.4	0	1977	0	1.39E-06	0
52420	4004	430884.9	3731615.2	0	1978	496	1.35E-06	6.714E-04
52420	4018	430599.5	3731601.2	0	1979	24	1.24E-06	2.977E-05
52420	4019	430754.5	3731502.2	0	1980	0	1.24E-06	0
52420	4020	431065.4	3731457.9	0	1981	0	1.26E-06	0
52421	3002	431387.4	3731217.0	0	1982	0	8.77E-07	0
52421	3004	431179.2	3731229.7	0	1983	0	1.01E-06	0
52426	2002	434829.7	3733993.0	0	1984	0	1.61E-07	0
52426	2013	433991.4	3733127.7	0	1985	0	1.58E-06	0
52426	2014	433641.2	3733153.1	0	1986	0	2.12E-06	0
52426	2015	433534.1	3733190.3	0	1987	0	2.53E-06	0
52426	2016	433502.0	3733207.3	0	1988	0	2.50E-06	0
52426	2017	432990.3	3731972.1	0	1989	0	5.30E-07	0
52426	2018	433289.0	3731361.6	0	1990	0	3.15E-07	0
52426	2019	432455.8	3731256.7	0	1991	0	2.94E-07	0

Track No.	Block No.	Coordinates X (m)	Coordinates Y (m)	Elevation (m)	Receptor No.	Population	Cancer Risk	Cancer Burden
52426	2020	433674.4	3733023.7	0	1992	0	2.06E-06	0
52426	2021	433727.0	3733029.3	0	1993	0	1.99E-06	0
52426	2023	433701.3	3732934.5	0	1994	0	2.04E-06	0
52426	2026	433486.3	3732028.9	0	1995	0	1.17E-06	0
52426	2027	433324.8	3731354.4	0	1996	0	3.21E-07	0
52426	2028	433526.5	3731299.9	0	1997	0	3.52E-07	0
52426	2029	433441.7	3732378.4	0	1998	0	2.26E-06	0
52426	2040	434244.6	3731121.6	0	1999	0	5.45E-07	0
52426	2042	433270.4	3731135.9	0	2000	0	2.62E-07	0
52426	2044	433241.6	3731095.9	0	2001	0	2.71E-07	0
52426	2046	432502.8	3730524.1	0	2002	0	1.82E-07	0
52426	2047	432233.4	3731190.3	0	2003	0	3.23E-07	0
52426	2048	431920.4	3731070.9	0	2004	0	3.95E-07	0
52426	2049	431654.7	3730814.1	0	2005	0	4.04E-07	0

Total Cancer Burden = 1.96E-03

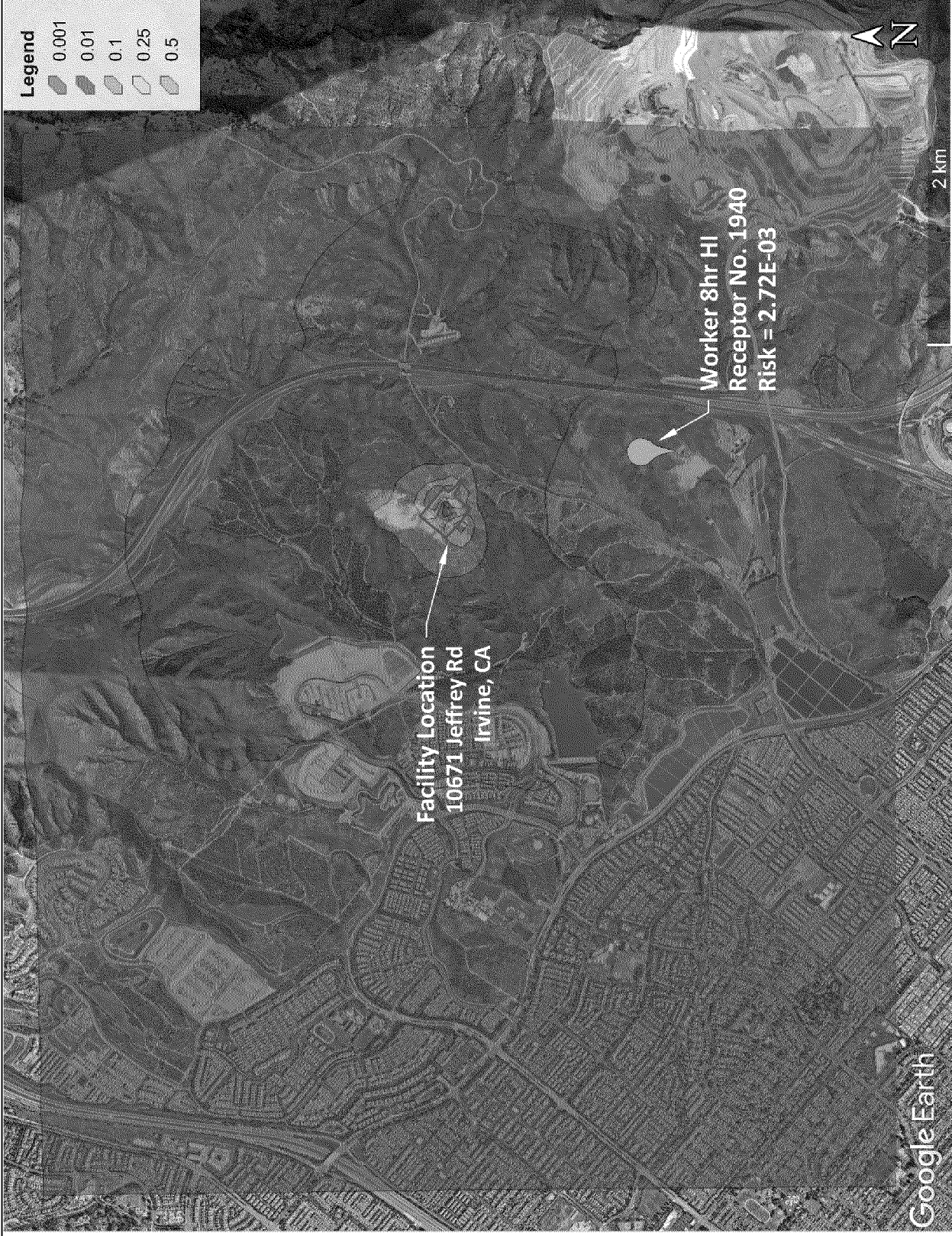


Figure D1 – 8-Hr Worker Chronic Risk

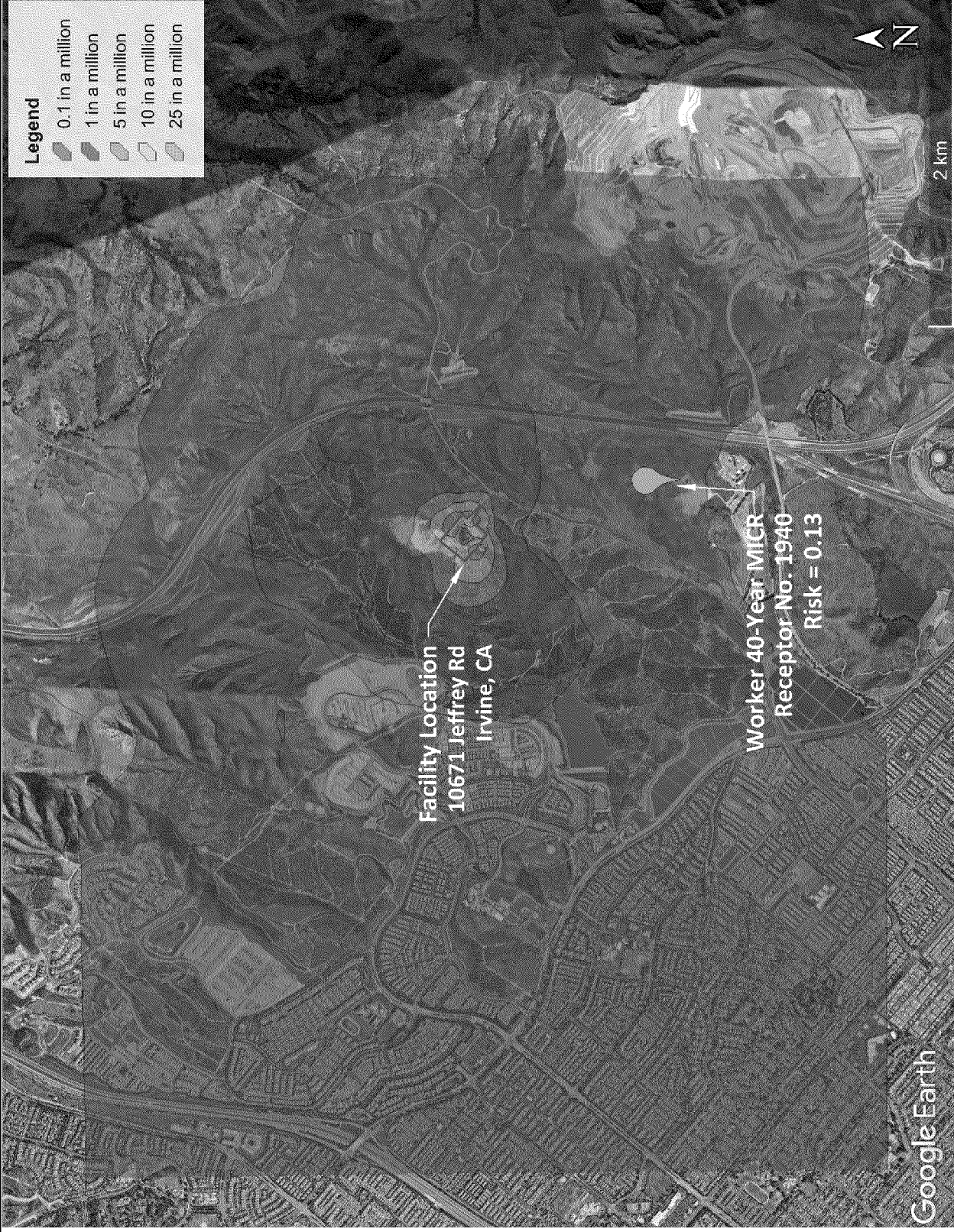


Figure D2 – 40 Year Worker Cancer Risk (in a Million)

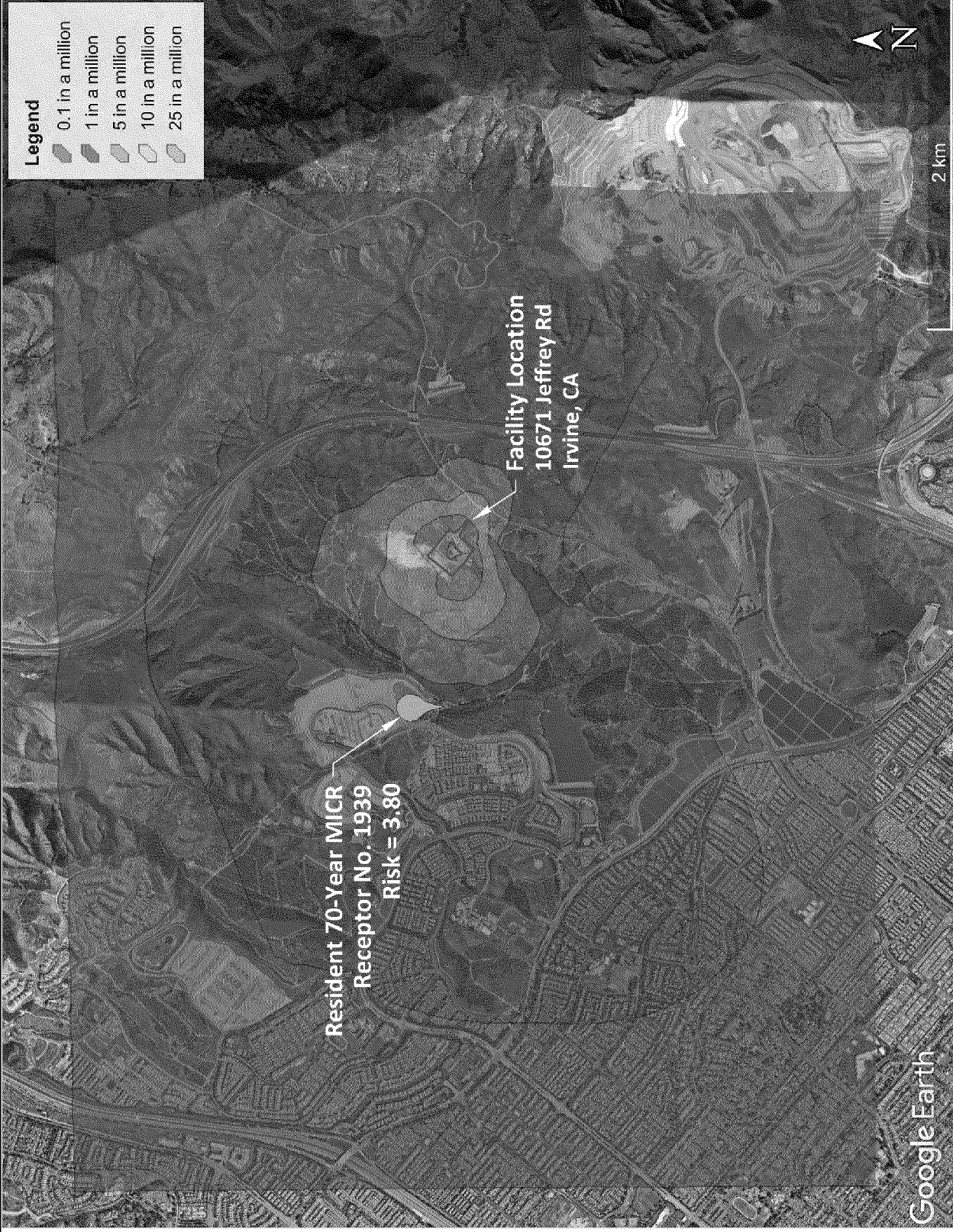


Figure D3 – 70 Year Resident Cancer Risk (in a Million)