

Rule 1200 Health Risk Assessment

Facility Name: Joe Customs
Facility ID: APCD2023-SITE-04362
Application: APCD2023-APP-007867
Project Engineer: John Lee
Modeler: Tony Nguyen
Toxics Risk Analyst: Stephen Amberg
Date Submitted to Toxics: 11/7/2023
Date Completed by Toxics: 11/8/2023
HRA Tools Used: Lakes-AERMOD (Version 22112)/ HARP2 (v22118)

The following estimated risks are valid only for the input data provided by the Project Engineer.

Estimated Risk Levels:

Maximum Individual Cancer Risk (Resident)	19.71 in one million
Maximum Individual Cancer Risk (Worker)	29.93 in one million
Chronic Noncancer Health Hazard Index (Resident)	= 3.40E-04
Chronic Noncancer Health Hazard Index (Worker)	= 1.48E-03
8-Hour Noncancer Health Hazard Index (Worker)	= 1.92E-03
Acute Health Hazard Index (*PMI)	= 0.0823

*Point of Maximum Impact

Input Data Provided by Project Engineer:

Type of Source: Automotive Coating Operation
 Controls Description: Paint Booth

Worst-Case TAC Emissions Increase:

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
Ethyl Benzene	5.07E-02	5.27E+01
Ethylene Glycol Monobutyl Ether	8.84E-03	9.19E+00
n-Hexane	2.62E-03	2.73E+00
Isopropanol	7.89E-02	8.21E+01
Methanol	1.09E-02	1.14E+01
Methyl Ethyl Ketone	1.02E-01	1.06E+02
Propylene Glycol Monomethyl Ether	5.76E-03	5.99E+00
Styrene	3.23E-02	3.36E+01
Toluene	2.71E-01	2.82E+02
Xylenes (mixed)	2.87E-01	2.99E+02
Cobalt	2.88E-08	2.99E-05
Copper	1.44E-08	1.50E-05
Selenium	7.20E-09	7.48E-06
PCBTF	3.00E+00	3.12E+03

Release Parameters:

Source Inputs

Source Type
 Type: POINT Source ID: STCK1 Release Type: Vertical
 Description: (Optional)

Source Location
 X Coordinate: 499559.37 [m]
 Y Coordinate: 3619761.53 [m]
 Base Elevation: 97.42 [m] Platform...
 Release Height: 19.0 [ft]

Source Release Parameters
 Emission Rate: 1 [g/s]
 Gas Exit Temperature: 70.0 [F] Fixed Ambient Above Ambient
 Stack Inside Diameter: 0.671 [m]
 Gas Exit Velocity: 14.286 [m/s]
 Gas Exit Flow Rate: 10690.0 [ft³/min]

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Discussion

The HRA was conducted in accordance with EPA and OEHHA guidance and District standard procedures. A point source were modeled with refined air dispersion modeling using EPA’s AERMOD model, AERMET (Version 22112) processed Lexington Elementary School 2019-2021 sigma theta updated meteorology data, AERMAP terrain processing, and urban dispersion coefficients. Building downwash effects were calculated using the EPA BPIP-Prime model. The receptor grid was sufficiently dense to identify maximum impacts.

These risk results are based on the risk scenario calculations and health data at the time of the review, and should not be scaled with revised emissions rates without consulting with the Toxics Section.

*HARP - HRACalc v22118 11/8/2023 10:21:47 AM - Resident Cancer Risk

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	Risk %	SCENARIO
22436	ALL		499607.4	3619654	0.016322	100414	Ethyl Benz	9.61E-08	0.49%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.002846	111762	EGBE	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.000846	110543	Hexane	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.025428	67630	Isopropyl A	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.003531	67561	Methanol	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.03283	78933	MEK	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.001855	107982	PGME	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.010407	100425	Styrene	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.087341	108883	Toluene	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.092607	1330207	Xylenes	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	9.26E-09	7440484	Cobalt	1.69E-10	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	4.65E-09	7440508	Copper	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	2.32E-09	7782492	Selenium	0.00E+00	0.00%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
22436	ALL		499607.4	3619654	0.966329	98566	PCBTF	1.96E-05	99.51%	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
								1.97E-05		

*HARP - HRACalc v22118 11/8/2023 10:21:47 AM - Resident Chronic Risk

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	EYE	Risk %	SCENARIO
22436	ALL		499607.4	3619654	0.016322	100414	Ethyl Benz	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.002846	111762	EGBE	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.000846	110543	Hexane	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.025428	67630	Isopropyl A	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.003531	67561	Methanol	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.03283	78933	MEK	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.001855	107982	PGME	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.010407	100425	Styrene	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.087341	108883	Toluene	2.08E-04	61.12%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.092607	1330207	Xylenes	1.32E-04	38.88%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	9.26E-09	7440484	Cobalt	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	4.65E-09	7440508	Copper	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	2.32E-09	7782492	Selenium	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
22436	ALL		499607.4	3619654	0.966329	98566	PCBTF	0.00E+00	0.00%	NonCancerChronicDerived_InhSoilDermMMilk
								3.40E-04		

*HARP - HRACalc v22118 11/8/2023 10:28:30 AM - Worker Cancer Risk

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	Risk %	SCENARIO
24204	ALL		499607.4	3619750	0.070953	100414	Ethyl Benz	1.46E-07	0.49%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.012373	111762	EGBE	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.003676	110543	Hexane	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.110536	67630	Isopropyl A	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.015349	67561	Methanol	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.142714	78933	MEK	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.008065	107982	PGME	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.045238	100425	Styrene	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.379674	108883	Toluene	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.402562	1330207	Xylenes	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	4.03E-08	7440484	Cobalt	2.57E-10	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	2.02E-08	7440508	Copper	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	1.01E-08	7782492	Selenium	0.00E+00	0.00%	25YrCancerDerived_InhSoilDerm
24204	ALL		499607.4	3619750	4.200644	98566	PCBTF	2.98E-05	99.51%	25YrCancerDerived_InhSoilDerm
								2.99E-05		

*HARP - HRACalc v22118 11/8/2023 10:28:30 AM - Worker Chronic Risk

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE'EYE	Risk %	SCENARIO
24204	ALL		499607.4	3619750	0.070953	100414	Ethyl Benz	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.012373	111762	EGBE	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.003676	110543	Hexane	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.110536	67630	Isopropyl A	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.015349	67561	Methanol	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.142714	78933	MEK	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.008065	107982	PGME	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.045238	100425	Styrene	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.379674	108883	Toluene	9.04E-04	61.12% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	0.402562	1330207	Xylenes	5.75E-04	38.88% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	4.03E-08	7440484	Cobalt	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	2.02E-08	7440508	Copper	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	1.01E-08	7782492	Selenium	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
24204	ALL		499607.4	3619750	4.200644	98566	PCBTF	0.00E+00	0.00% NonCancerChronicDerived_InhSoilDerm
								1.48E-03	

*HARP - HRACalc v22118 11/8/2023 10:36:09 AM - Worker 8-Hour Chronic Risk

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE'EYE	Risk %	SCENARIO
24204	ALL		499607.4	3619750	0.070953	100414	Ethyl Benz	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.012373	111762	EGBE	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.003676	110543	Hexane	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.110536	67630	Isopropyl A	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.015349	67561	Methanol	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.142714	78933	MEK	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.008065	107982	PGME	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.045238	100425	Styrene	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.379674	108883	Toluene	1.92E-03	100.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	0.402562	1330207	Xylenes	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	4.03E-08	7440484	Cobalt	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	2.02E-08	7440508	Copper	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	1.01E-08	7782492	Selenium	0.00E+00	0.00% NonCancer8HrChronic
24204	ALL		499607.4	3619750	4.200644	98566	PCBTF	0.00E+00	0.00% NonCancer8HrChronic
								1.92E-03	

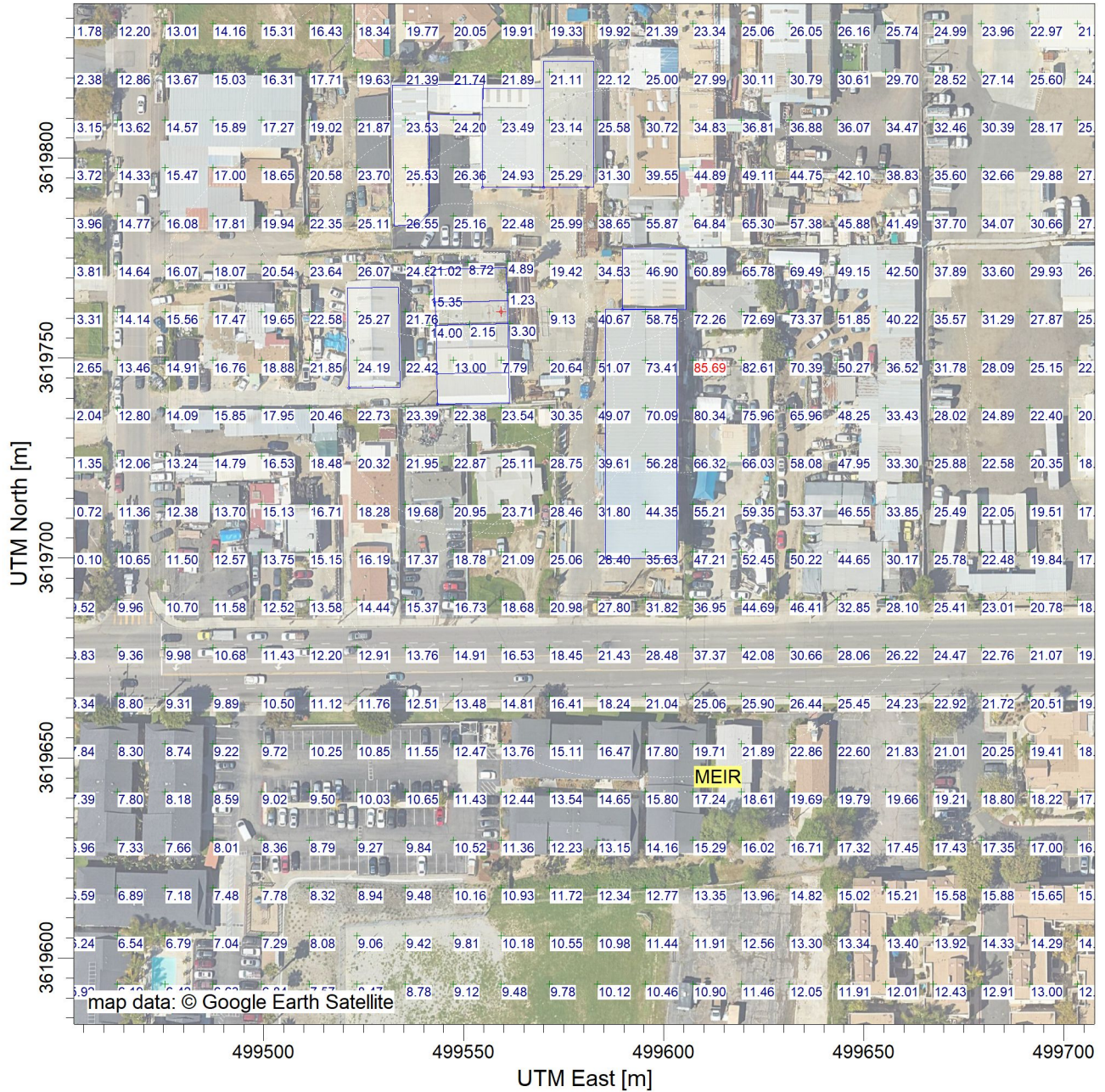
*HARP - HRACalc v22118 11/8/2023 10:28:30 AM - Acute Risk

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE'RESP	Risk %	SCENARIO
24422	ALL		499595.4	3619762	40.43162	100414	Ethyl Benz	0.00E+00	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	7.049615	111762	EGBE	1.50E-03	1.82% NonCancerAcute
24422	ALL		499595.4	3619762	2.089366	110543	Hexane	0.00E+00	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	62.92021	67630	Isopropyl A	1.97E-02	23.90% NonCancerAcute
24422	ALL		499595.4	3619762	8.692399	67561	Methanol	0.00E+00	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	81.34171	78933	MEK	6.26E-03	7.61% NonCancerAcute
24422	ALL		499595.4	3619762	4.593414	107982	PGME	0.00E+00	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	25.75821	100425	Styrene	1.23E-03	1.49% NonCancerAcute
24422	ALL		499595.4	3619762	216.1138	108883	Toluene	4.32E-02	52.54% NonCancerAcute
24422	ALL		499595.4	3619762	228.8733	1330207	Xylenes	1.04E-02	12.64% NonCancerAcute
24422	ALL		499595.4	3619762	2.30E-05	7440484	Cobalt	0.00E+00	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	1.15E-05	7440508	Copper	1.15E-07	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	5.74E-06	7782492	Selenium	0.00E+00	0.00% NonCancerAcute
24422	ALL		499595.4	3619762	2392.403	98566	PCBTF	0.00E+00	0.00% NonCancerAcute
								8.23E-02	

PROJECT TITLE:

APP007867

Resident Cancer Risk



COMMENTS:

SOURCES:

1

COMPANY NAME:

RECEPTORS:

48845

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:1,605

0 0.05 km

MAX:

85.7 ug/m³

DATE:

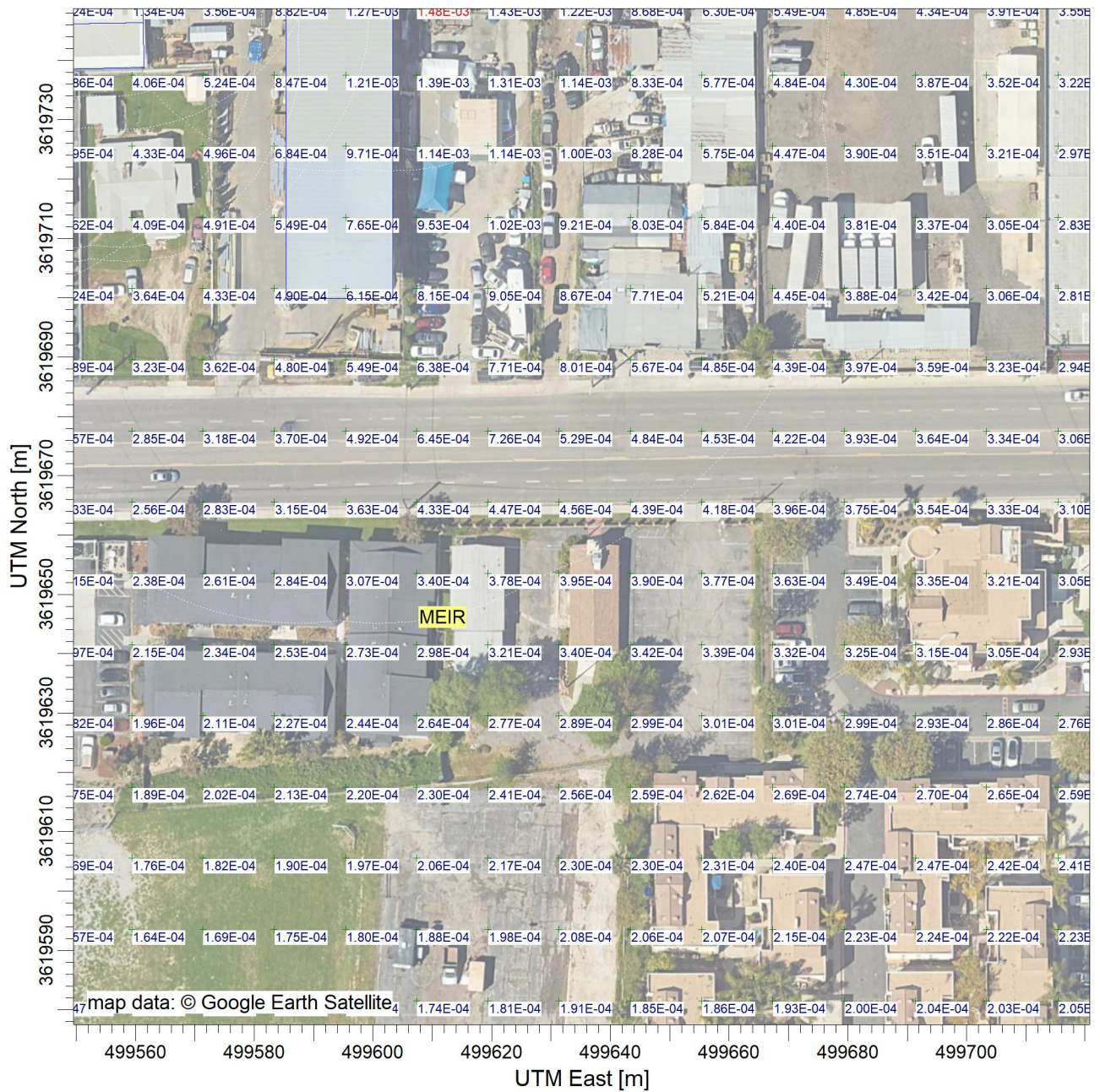
11/8/2023

PROJECT NO.:

PROJECT TITLE:

APP007867

Resident Chronic HHI



COMMENTS:

SOURCES:

1

COMPANY NAME:

RECEPTORS:

48845

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:1,077

0  0.03 km

MAX:

1.5E-03 ug/m^3

DATE:

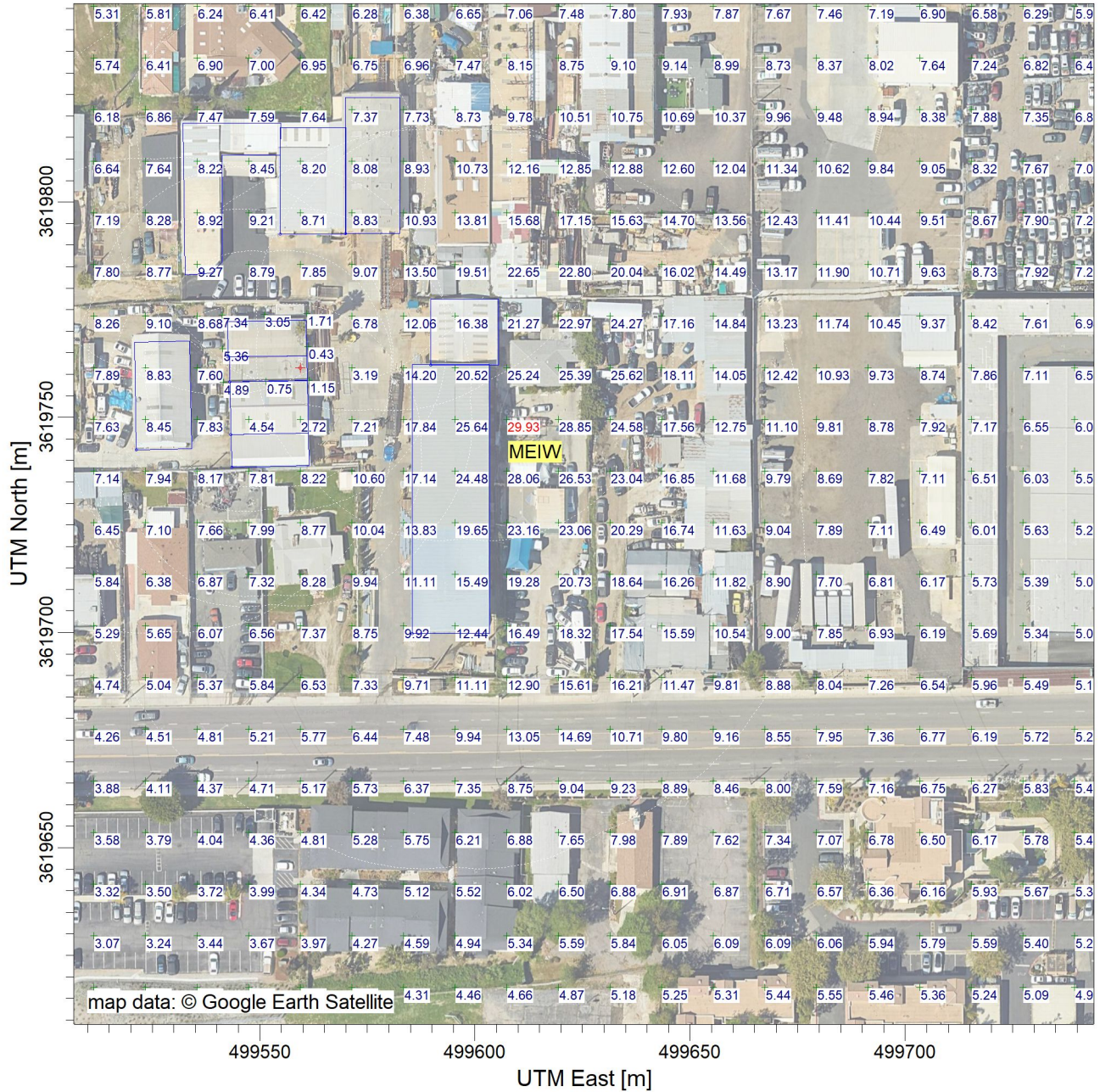
11/8/2023

PROJECT NO.:

PROJECT TITLE:

APP007867

Worker Cancer



COMMENTS:

SOURCES:

1

COMPANY NAME:

RECEPTORS:

48845

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:1,492

0  0.05 km

MAX:

29.9 ug/m^3

DATE:

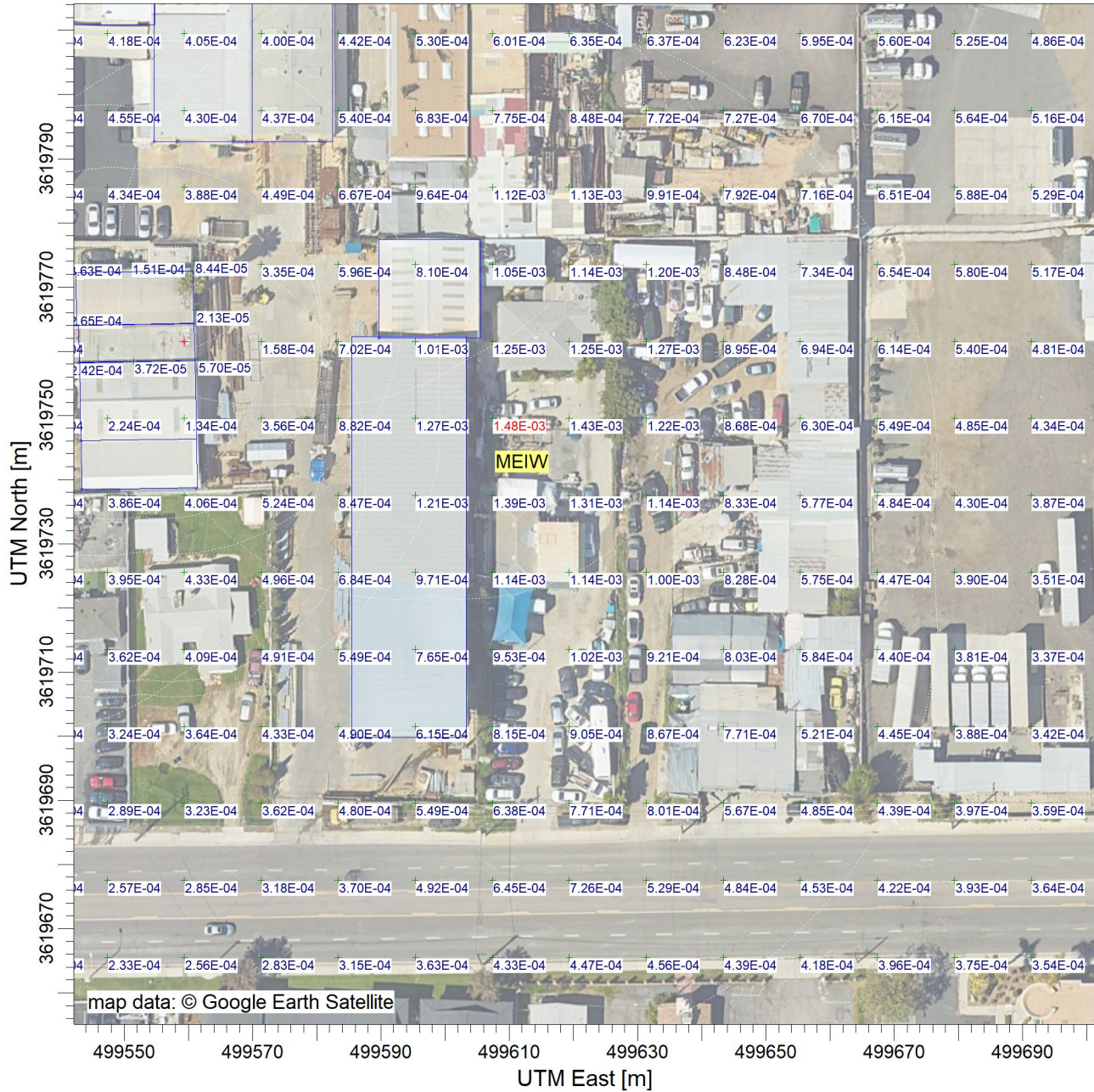
11/8/2023

PROJECT NO.:

PROJECT TITLE:

APP007867

Worker Chronic HHI



COMMENTS:

SOURCES:

1

COMPANY NAME:

RECEPTORS:

48845

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:1,001

0 0.03 km

MAX:

1.5E-03 ug/m^3

DATE:

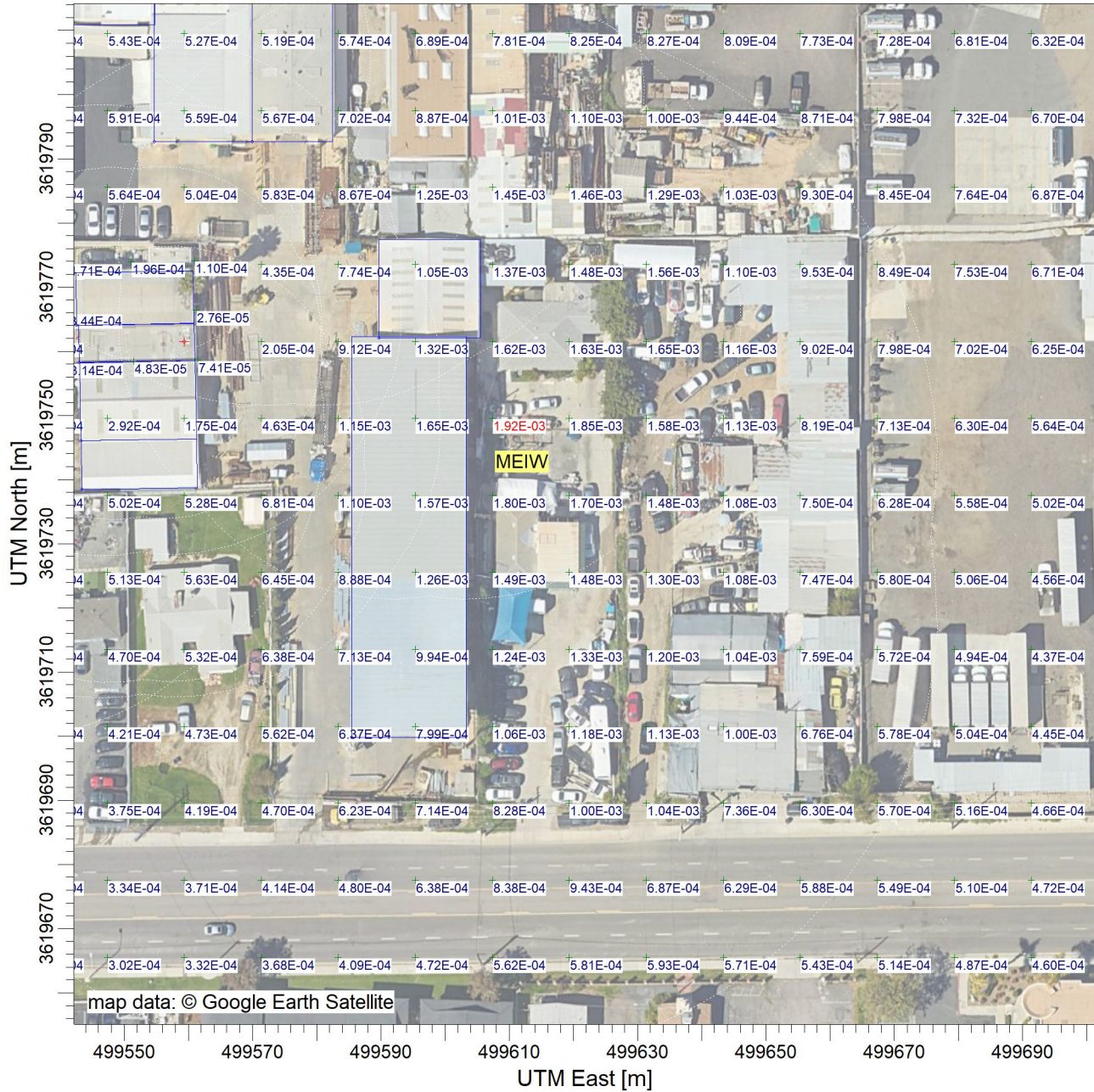
11/8/2023

PROJECT NO.:

PROJECT TITLE:

APP007867

Worker 8hr-Chronic HHI



COMMENTS:

SOURCES:

1

COMPANY NAME:

RECEPTORS:

48845

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:1,001

0 0.03 km

MAX:

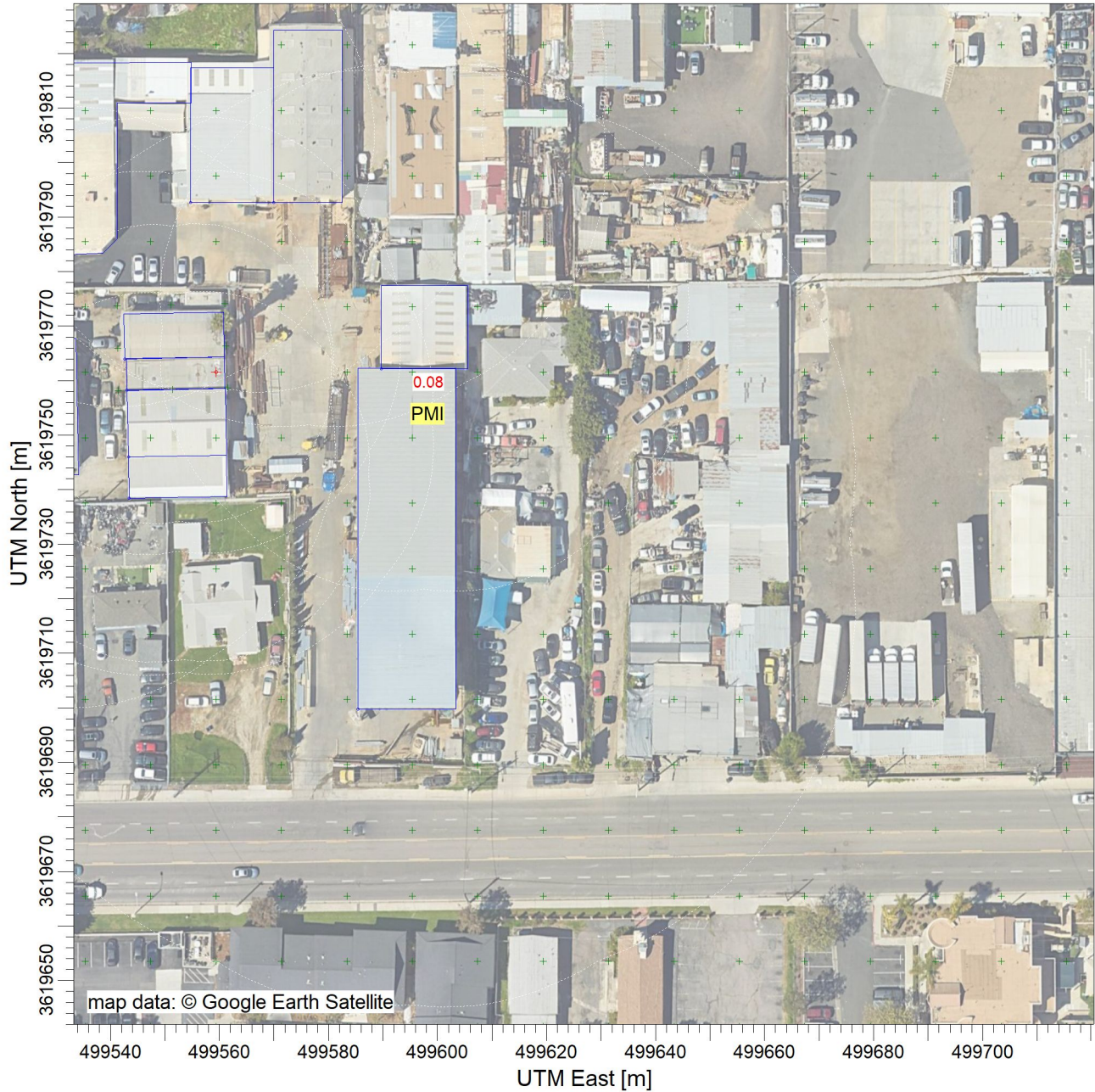
1.9E-03 ug/m^3

DATE:

11/8/2023

PROJECT NO.:

PROJECT TITLE:
APP007867
Acute HHI



COMMENTS:

SOURCES:

1

COMPANY NAME:

RECEPTORS:

48845

MODELER:

OUTPUT TYPE:

Concentration

SCALE:

1:1,177

0  0.04 km

MAX:

8.2E-02 ug/m³

DATE:

11/8/2023

PROJECT NO.:

HARP2 - HRACalc (dated 22118) 11/8/2023 10:21:47 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution

3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: RMP

****Worker Adjustment Factors****
Worker adjustment factors enabled: NO

****Fraction at time at home****
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Warm

TIER 2 SETTINGS
Tier2 not used.

Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
D:\1200\7867_joe\APP007867\hra\Resident_CancerRisk.csv
Cancer risk total by receptor saved to:
D:\1200\7867_joe\APP007867\hra\Resident_CancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
D:\1200\7867_joe\APP007867\hra\Resident_NCChronicRisk.csv
Chronic risk total by receptor saved to:
D:\1200\7867_joe\APP007867\hra\Resident_NCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
D:\1200\7867_joe\APP007867\hra\Resident_NCAcuteRisk.csv
Acute risk total by receptor saved to:
D:\1200\7867_joe\APP007867\hra\Resident_NCAcuteRiskSumByRec.csv
HRA ran successfully

HARP2 - HRACalc (dated 22118) 11/8/2023 10:28:30 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 25

Exposure Duration Bin Distribution

3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 25

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: Moderate8HR

****Worker Adjustment Factors****

NOTE: The worker adjustment factors below are only used for cancer assessments. However, the GLC adjustment factor is also applied to 8-hr noncancer chronic assessments.

Worker adjustments factors enabled: YES

GLC adjustment factor: 4.2

Exposure frequency: 250

****Fraction at time at home****

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Warm

TIER 2 SETTINGS

Tier2 not used.

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\1200\7867_joe\APP007867\hra\Worker_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\1200\7867_joe\APP007867\hra\Worker_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\1200\7867_joe\APP007867\hra\Worker_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\1200\7867_joe\APP007867\hra\Worker_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\1200\7867_joe\APP007867\hra\Worker_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\1200\7867_joe\APP007867\hra\Worker_NCAcuteRiskSumByRec.csv

HRA ran successfully

```

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*** MODELOPTs:   RegDEFAULT  CONC  ELEV  URBAN  SigA Data

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*** POINT SOURCE DATA ***

```

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
STCK1	0	0.10000E+01	499559.4	3619761.5	97.4	5.79	294.26	14.29	0.67	YES	YES	NO	

```

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*** MODELOPTs:   RegDEFAULT  CONC  ELEV  URBAN  SigA Data

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*** MODEL SETUP OPTIONS SUMMARY ***

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```

** Model Options Selected:

```

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 1 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 31866.0 ; Urban Roughness Length = 1.000 m

- * Urban Roughness Length of 1.0 Meter Used.
- * TEMP_Sub - Meteorological data includes TEMP substitutions
- * Model Assumes No FLAGPOLE Receptor Heights.
- * The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 1-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 48845 Receptor(s)

with: 1 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 0 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNNING After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 22112

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 141.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 9.0 MB of RAM.

**Input Runstream File: aermod.inp
**Output Print File: aermod.out

**Detailed Error/Message File: 7867_Joe.err
**File for Summary of Results: 7867_Joe.sum

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1			

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN SigA Data

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: \\ustl\snscsd0004\LUEG\APCD\General\Rule 1200\Met Data\Met Data v22112\LES_2019-20 Met Version: 22112
 Profile file: \\ustl\snscsd0004\LUEG\APCD\General\Rule 1200\Met Data\Met Data v22112\LES_2019-20
 Surface format: FREE
 Profile format: FREE
 Surface station no.: 53143 Upper air station no.: 3190
 Name: UNKNOWN Name: UNKNOWN
 Year: 2019 Year: 2019

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
19	01	01	1	01	-1.2	0.036	-9.000	-9.000	-999.	17.	3.4	0.03	1.10	1.00	1.07	109.	10.0	279.8	10.0			
19	01	01	1	02	-0.4	0.018	-9.000	-9.000	-999.	6.	1.5	0.03	1.10	1.00	0.54	221.	10.0	278.4	10.0			
19	01	01	1	03	-0.4	0.020	-9.000	-9.000	-999.	7.	1.7	0.03	1.10	1.00	0.58	120.	10.0	277.3	10.0			
19	01	01	1	04	-0.9	0.029	-9.000	-9.000	-999.	12.	2.3	0.03	1.10	1.00	0.85	74.	10.0	276.5	10.0			
19	01	01	1	05	-0.6	0.024	-9.000	-9.000	-999.	9.	2.0	0.03	1.10	1.00	0.72	108.	10.0	276.0	10.0			
19	01	01	1	06	-1.1	0.032	-9.000	-9.000	-999.	14.	2.6	0.03	1.10	1.00	0.94	44.	10.0	275.4	10.0			
19	01	01	1	07	-0.7	0.024	-9.000	-9.000	-999.	9.	2.0	0.03	1.10	1.00	0.72	288.	10.0	275.5	10.0			
19	01	01	1	08	-0.5	0.024	-9.000	-9.000	-999.	9.	2.5	0.03	1.10	0.49	0.72	231.	10.0	276.0	10.0			
19	01	01	1	09	33.8	-9.000	-9.000	-9.000	154.	-999.	-99999.0	0.03	1.10	0.30	0.00	0.	10.0	279.9	10.0			
19	01	01	1	10	85.0	0.120	0.857	0.005	265.	100.	-1.8	0.03	1.10	0.23	1.16	332.	10.0	283.3	10.0			
19	01	01	1	11	119.9	0.189	1.381	0.005	785.	197.	-5.0	0.03	1.10	0.21	2.10	320.	10.0	285.3	10.0			
19	01	01	1	12	136.4	0.238	1.521	0.005	922.	278.	-8.8	0.03	1.10	0.20	2.82	18.	10.0	286.5	10.0			
19	01	01	1	13	133.6	0.307	1.572	0.005	1039.	409.	-19.4	0.03	1.10	0.20	3.93	12.	10.0	286.8	10.0			
19	01	01	1	14	112.1	0.313	1.524	0.005	1127.	419.	-24.3	0.03	1.10	0.21	4.07	26.	10.0	286.8	10.0			
19	01	01	1	15	72.7	0.324	1.339	0.005	1180.	443.	-41.9	0.03	1.10	0.24	4.38	62.	10.0	286.8	10.0			
19	01	01	1	16	18.5	0.316	0.851	0.005	1191.	426.	-152.4	0.03	1.10	0.33	4.51	44.	10.0	285.8	10.0			
19	01	01	1	17	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	1.10	0.61	4.02	71.	10.0	284.5	10.0			
19	01	01	1	18	-21.6	0.194	-9.000	-9.000	-999.	205.	30.1	0.03	1.10	1.00	3.67	76.	10.0	283.2	10.0			
19	01	01	1	19	-8.3	0.088	-9.000	-9.000	-999.	69.	7.2	0.03	1.10	1.00	2.59	53.	10.0	282.6	10.0			
19	01	01	1	20	-4.6	0.065	-9.000	-9.000	-999.	40.	5.3	0.03	1.10	1.00	1.92	93.	10.0	280.8	10.0			
19	01	01	1	21	-2.7	0.050	-9.000	-9.000	-999.	27.	4.1	0.03	1.10	1.00	1.48	85.	10.0	278.6	10.0			
19	01	01	1	22	-1.2	0.033	-9.000	-9.000	-999.	14.	2.7	0.03	1.10	1.00	0.98	82.	10.0	277.5	10.0			
19	01	01	1	23	-4.0	0.061	-9.000	-9.000	-999.	36.	4.9	0.03	1.10	1.00	1.79	85.	10.0	276.5	10.0			
19	01	01	1	24	-5.3	0.070	-9.000	-9.000	-999.	44.	5.7	0.03	1.10	1.00	2.06	100.	10.0	276.4	10.0			

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV

19 01 01 01 10.0 1 109. 1.07 279.9 38.0 -99.00 0.58

F indicates top of profile (=1) or below (=0)

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN SigA Data

*** THE SUMMARY OF MAXIMUM PERIOD (26304 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	93.60617 AT (499607.37, 3619749.53,	97.64, 325.23, 0.00)	DC
	2ND HIGHEST VALUE IS	90.24216 AT (499619.37, 3619749.53,	97.95, 325.23, 0.00)	DC
	3RD HIGHEST VALUE IS	87.76369 AT (499607.37, 3619737.53,	96.81, 325.23, 0.00)	DC
	4TH HIGHEST VALUE IS	82.97944 AT (499619.37, 3619737.53,	96.91, 325.23, 0.00)	DC
	5TH HIGHEST VALUE IS	80.19139 AT (499595.37, 3619749.53,	97.46, 325.23, 0.00)	DC
	6TH HIGHEST VALUE IS	80.14749 AT (499631.37, 3619761.53,	99.28, 325.23, 0.00)	DC
	7TH HIGHEST VALUE IS	79.40654 AT (499619.37, 3619761.53,	98.62, 325.23, 0.00)	DC
	8TH HIGHEST VALUE IS	78.93533 AT (499607.37, 3619761.53,	98.28, 325.23, 0.00)	DC
	9TH HIGHEST VALUE IS	76.89954 AT (499631.37, 3619749.53,	98.66, 325.23, 0.00)	DC
	10TH HIGHEST VALUE IS	76.56459 AT (499595.37, 3619737.53,	96.83, 325.23, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN SigA Data

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH	1ST HIGH VALUE IS 6329.24878	ON 20082304	AT (499595.37, 3619761.53, 98.15, 325.23,	0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN SigA Data

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 5244 Informational Message(s)

A Total of 26304 Hours Were Processed

A Total of 4177 Calm Hours Identified

A Total of 1067 Missing Hours Identified (4.06 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****

MX W403 101 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data

CAS	Compound	lbs/hr	lbs/yr
100414	Ethyl Benzene	5.07E-02	5.27E+01
111762	Ethylene Glycol Mor	8.84E-03	9.19E+00
110543	n-Hexane	2.62E-03	2.73E+00
67630	Isopropanol	7.89E-02	8.21E+01
67561	Methanol	1.09E-02	1.14E+01
78933	Methyl Ethyl Ketone	1.02E-01	1.06E+02
107982	Propylene Glycol Mo	5.76E-03	5.99E+00
100425	Styrene	3.23E-02	3.36E+01
108883	Toluene	2.71E-01	2.82E+02
1330207	Xylenes (mixed)	2.87E-01	2.99E+02
7440484	Cobalt	2.88E-08	2.99E-05
7440508	Copper	1.44E-08	1.50E-05
7782492	Selenium	7.2E-09	7.48E-06
98566	pcbt	3	3121

HRA info

Operation Autobody shop applying coatings containing PCBTF
Equipment Address 1121 Sweetwater Ln Space 2, San Diego, CA 91977
Property line outlined with redline in the aerial photo to the right.
Source
exhaust flow [cfm] 10690
exhaust temp [F] 70 (room temp)
exhaust height [ft] 19
stack diameter [ft] 2.2
exhaust vertical yes
exhaust type flapper



Amberg, Stephen

From: Nguyen, Tony
Sent: Tuesday, November 7, 2023 4:20 PM
To: Lee, John
Cc: Amberg, Stephen; Bernabe, Andrew; Canter, Adam; DiFulvio, Jaime; Galvez, Maria; Nguyen, Tony; Ossowski, Peter; Reeve, Bill; Swaney, Jim; Wong, Benjamin
Subject: RE: HRA request: APCD2023-APP-007867

Hello,

I've completed modeling for APP 7867_joe. The modeling files are in the project folder, [7867_joe](#).

Thank you.



San Diego County
Air Pollution
Control District

Tony Nguyen

Associate Meteorologist
San Diego County Air Pollution Control District



www.sdapcd.org

Telework: Mon - Tue | In-Office: Wed - Thu
10124 Old Grove Rd, San Diego, CA 92131
Phone: (858) 586-2768

#

From: Lee, John <John.Lee@sdapcd.org>
Sent: Tuesday, 7 November, 2023 11:03
To: Reeve, Bill <Bill.Reeve@sdapcd.org>; Nguyen, Tony <Tony.Nguyen2@sdapcd.org>
Cc: Canter, Adam <Adam.Canter@sdapcd.org>; DiFulvio, Jaime <Jaime.DiFulvio@sdapcd.org>; Swaney, Jim <Jim.Swaney@sdapcd.org>
Subject: RE: HRA request: APCD2023-APP-007831

Hello Bill and Tony,

Here is an HRA request for autobody shop using PCBTF coatings. Please have the modeler post the results in [7867_joe](#).

For HRA, could you please include risk per pollutant?

Let me know if you need more information.

Thank you,

John L.