

## Rule 1200 Health Risk Assessment

Facility Name: Woodman Autobody  
Facility ID: APCD2023-SITE-04408  
Application: APCD2023-APP-007986  
Project Engineer: John Lee  
Modeler: Bill Reeve  
Toxics Risk Analyst: Maria Galvez  
Date Submitted to Toxics: 02/21/2024  
Date Completed by Toxics: 02/22/2024  
HRA Tools Used: Lakes-AERMOD (Version 23132)/HARP (v22118)

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

Because this application requires notification to a school, risk was also assessed for the students while attending the school, as outlined below.

### **Estimated Risk Levels:**

Maximum Individual Cancer Risk (Worker)	= 18.27 in one million
Maximum Individual Cancer Risk (Resident)	= 44.99 in one million
Maximum Individual Cancer Risk (Student)	= 8.89 in one million
Chronic Noncancer Health Hazard Index (Worker)	= 8.90E-04
Chronic Noncancer Health Hazard Index (Resident)	= 7.65E-04
Chronic Noncancer Health Hazard Index (Student)	= 1.61E-04
Acute Health Hazard Index (Worker)	= 0.01
Acute Health Hazard Index (Resident)	= 0.01
Acute Health Hazard Index (Student)	= 0.002

**Input Data Provided by Project Engineer:**

Type of Source: Autobody shop

Controls Description:

T-BACT:

**Worst-Case TAC Emissions Increase:**

<b>Toxic Air Contaminant</b>	<b>Hourly Emission Rate (lb/hr)</b>	<b>Annual Emission Rate (lb/yr)</b>
n-Butanol	0.009	16.1
Ethyl Benzene	0.012	21.3
Ethylene Glycol Monobutyl Ether	0.002	3.71
n-Hexane	0.001	1.10
Isopropanol	0.018	33.1
Methanol	0.003	4.6
Methyl Ethyl Ketone	0.024	42.8
Methyl Isobutyl Ketone	0.017	30.5
Propylene Glycol Monomethyl Ether Acetate	0.025	45.2
Propylene Glycol Monomethyl Ether	0.001	2.4
Styrene	0.007	13.5
Toluene	0.063	113.8
Xylenes (mixed)	0.066	120.4
PCBTF	0.70	1276.6
Aluminum	7.24E-06	0.013
Barium	1.60E-05	0.029
Cobalt	6.63E-09	1.21E-05
Copper	3.32E-09	6.04E-06
Lead	0.00E+00	0
Nickel	0.00E+00	0
Selenium	1.66E-09	3.02E-06
Zinc	5.09E-06	0.009

**Release Parameters:**

Stack Height (ft)	24.75
Stack Diameter (ft)	3.75 x 1.5
Temperature (deg F)	ambient
Exhaust Flow Rate (acfm)	14430

**Discussion**

The HRA was conducted in accordance with EPA and OEHHA guidance and District standard procedures. One 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 2/22/2024 4:13:25 PM - Cancer Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	SCENARIO
20805	ALL		496892	3625587	0.032263	71363	n-Butyl Alc	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.042699	100414	Ethyl Benz	8.78E-08	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.007449	111762	EGBE	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.002209	110543	Hexane	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.066474	67630	Isopropyl A	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.009224	67561	Methanol	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.086048	78933	MEK	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.061321	108101	MIBK	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.090725	108656	PGMEA	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.00485	107982	PGME	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.027196	100425	Styrene	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.22861	108883	Toluene	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0.241862	1330207	Xylenes	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	2.564901	98566	PCBTf	1.82E-05	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	2.65E-05	7429905	Aluminum	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	5.83E-05	7440393	Barium	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	2.43E-08	7440484	Cobalt	1.55E-10	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	1.21E-08	7440508	Copper	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0	7439921	Lead	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	0	7440020	Nickel	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	6.07E-09	7782492	Selenium	0.00E+00	25YrCancerDerived_InhSoilDerm
20805	ALL		496892	3625587	1.86E-05	7440666	Zinc	0.00E+00	25YrCancerDerived_InhSoilDerm
								1.83E-05	

\*HARP - HRACalc v22118 2/22/2024 4:13:25 PM - Chronic Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	EYE	SCENARIO
20805	ALL		496892	3625587	0.032263	71363	n-Butyl Alc	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.042699	100414	Ethyl Benz	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.007449	111762	EGBE	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.002209	110543	Hexane	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.066474	67630	Isopropyl A	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.009224	67561	Methanol	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.086048	78933	MEK	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.061321	108101	MIBK	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.090725	108656	PGMEA	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.00485	107982	PGME	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.027196	100425	Styrene	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.22861	108883	Toluene	5.44E-04	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0.241862	1330207	Xylenes	3.46E-04	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	2.564901	98566	PCBTf	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	2.65E-05	7429905	Aluminum	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	5.83E-05	7440393	Barium	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	2.43E-08	7440484	Cobalt	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	1.21E-08	7440508	Copper	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0	7439921	Lead	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	0	7440020	Nickel	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	6.07E-09	7782492	Selenium	0.00E+00	NonCancerChronicDerived_InhSoilDerm
20805	ALL		496892	3625587	1.86E-05	7440666	Zinc	0.00E+00	NonCancerChronicDerived_InhSoilDerm
								0.00089	

\*HARP - HRACalc v22118 2/22/2024 4:13:25 PM - Acute Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RESP	SCENARIO
20205	ALL		496922	3625557	2.353102	71363	n-Butyl Alc	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	3.114306	100414	Ethyl Benz	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	0.543266	111762	EGBE	1.16E-04	NonCancerAcute
20205	ALL		496922	3625557	0.161085	110543	Hexane	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	4.848337	67630	Isopropyl A	1.52E-03	NonCancerAcute
20205	ALL		496922	3625557	0.672766	67561	Methanol	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	6.27599	78933	MEK	4.83E-04	NonCancerAcute
20205	ALL		496922	3625557	4.472473	108101	MIBK	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	6.617112	108656	PGMEA	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	0.353755	107982	PGME	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	1.983554	100425	Styrene	9.45E-05	NonCancerAcute
20205	ALL		496922	3625557	16.67386	108883	Toluene	3.33E-03	NonCancerAcute
20205	ALL		496922	3625557	17.64037	1330207	Xylenes	8.02E-04	NonCancerAcute
20205	ALL		496922	3625557	186.6921	98566	PCBTf	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	0.001931	7429905	Aluminum	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	0.004267	7440393	Barium	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	1.77E-06	7440484	Cobalt	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	8.85E-07	7440508	Copper	8.85E-09	NonCancerAcute
20205	ALL		496922	3625557	0	7439921	Lead	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	0	7440020	Nickel	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	4.43E-07	7782492	Selenium	0.00E+00	NonCancerAcute
20205	ALL		496922	3625557	0.001358	7440666	Zinc	0.00E+00	NonCancerAcute
								0.006345	

\*HARP - HRACalc v22118 2/22/2024 4:08:20 PM - Cancer Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	SCENARIO
19596	ALL			496842	3625527	0.027747	71363 n-Butyl Alc	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.036723	100414 Ethyl Benz	2.16E-07	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.006406	111762 EGBE	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.001899	110543 Hexane	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.057171	67630 Isopropyl A	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.007933	67561 Methanol	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.074005	78933 MEK	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.052739	108101 MIBK	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.078028	108656 PGMEA	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.004171	107982 PGME	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.02339	100425 Styrene	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.196615	108883 Toluene	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0.208012	1330207 Xylenes	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	2.205933	98566 PCBTF	4.48E-05	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	2.28E-05	7429905 Aluminum	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	5.02E-05	7440393 Barium	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	2.09E-08	7440484 Cobalt	3.82E-10	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	1.04E-08	7440508 Copper	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0	7439921 Lead	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	0	7440020 Nickel	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	5.22E-09	7782492 Selenium	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
19596	ALL			496842	3625527	1.60E-05	7440666 Zinc	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
								4.50E-05	

\*HARP - HRACalc v22118 2/22/2024 4:08:20 PM - Chronic Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	EYE	SCENARIO
19596	ALL			496842	3625527	0.027747	71363 n-Butyl Alc	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.036723	100414 Ethyl Benz	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.006406	111762 EGBE	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.001899	110543 Hexane	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.057171	67630 Isopropyl A	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.007933	67561 Methanol	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.074005	78933 MEK	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.052739	108101 MIBK	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.078028	108656 PGMEA	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.004171	107982 PGME	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.02339	100425 Styrene	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.196615	108883 Toluene	4.68E-04	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0.208012	1330207 Xylenes	2.97E-04	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	2.205933	98566 PCBTF	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	2.28E-05	7429905 Aluminum	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	5.02E-05	7440393 Barium	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	2.09E-08	7440484 Cobalt	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	1.04E-08	7440508 Copper	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0	7439921 Lead	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	0	7440020 Nickel	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	5.22E-09	7782492 Selenium	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
19596	ALL			496842	3625527	1.60E-05	7440666 Zinc	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
								0.000765	

\*HARP - HRACalc v22118 2/22/2024 4:08:20 PM - Acute Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RESP	SCENARIO
19401	ALL			496902	3625517	1.87978	71363 n-Butyl Alc	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	2.48787	100414 Ethyl Benz	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	0.433989	111762 EGBE	9.23E-05	NonCancerAcute
19401	ALL			496902	3625517	0.128683	110543 Hexane	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	3.873103	67630 Isopropyl A	1.21E-03	NonCancerAcute
19401	ALL			496902	3625517	0.537441	67561 Methanol	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	5.013587	78933 MEK	3.86E-04	NonCancerAcute
19401	ALL			496902	3625517	3.572843	108101 MIBK	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	5.286092	108656 PGMEA	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	0.282598	107982 PGME	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	1.584566	100425 Styrene	7.55E-05	NonCancerAcute
19401	ALL			496902	3625517	13.31994	108883 Toluene	2.66E-03	NonCancerAcute
19401	ALL			496902	3625517	14.09204	1330207 Xylenes	6.41E-04	NonCancerAcute
19401	ALL			496902	3625517	149.1393	98566 PCBTF	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	0.001543	7429905 Aluminum	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	0.003409	7440393 Barium	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	1.41E-06	7440484 Cobalt	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	7.07E-07	7440508 Copper	7.07E-09	NonCancerAcute
19401	ALL			496902	3625517	0	7439921 Lead	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	0	7440020 Nickel	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	3.54E-07	7782492 Selenium	0.00E+00	NonCancerAcute
19401	ALL			496902	3625517	0.001084	7440666 Zinc	0.00E+00	NonCancerAcute
								0.005068	

\*HARP - HRACalc v22118 2/22/2024 4:20:03 PM - Cancer Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RISK_SUM	SCENARIO
23430	ALL		497012	3625717	0.005842	71363	n-Butyl Alc	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.007732	100414	Ethyl Benz	4.27E-08	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.001349	111762	EGBE	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.0004	110543	Hexane	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.012037	67630	Isopropyl A	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.00167	67561	Methanol	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.015581	78933	MEK	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.011104	108101	MIBK	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.016428	108656	PGMEA	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.000878	107982	PGME	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.004924	100425	Styrene	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.041395	108883	Toluene	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.043795	1330207	Xylenes	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0.464436	98566	PCBTF	8.84E-06	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	4.79E-06	7429905	Aluminum	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	1.06E-05	7440393	Barium	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	4.40E-09	7440484	Cobalt	7.54E-11	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	2.20E-09	7440508	Copper	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0	7439921	Lead	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	0	7440020	Nickel	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	1.10E-09	7782492	Selenium	0.00E+00	9YrCancerRMP_InhSoilDerm
23430	ALL		497012	3625717	3.37E-06	7440666	Zinc	0.00E+00	9YrCancerRMP_InhSoilDerm
								8.89E-06	

\*HARP - HRACalc v22118 2/22/2024 4:20:03 PM - Chronic Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	EYE	SCENARIO
23430	ALL		497012	3625717	0.005842	71363	n-Butyl Alc	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.007732	100414	Ethyl Benz	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.001349	111762	EGBE	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.0004	110543	Hexane	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.012037	67630	Isopropyl A	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.00167	67561	Methanol	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.015581	78933	MEK	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.011104	108101	MIBK	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.016428	108656	PGMEA	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.000878	107982	PGME	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.004924	100425	Styrene	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.041395	108883	Toluene	9.86E-05	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.043795	1330207	Xylenes	6.26E-05	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0.464436	98566	PCBTF	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	4.79E-06	7429905	Aluminum	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	1.06E-05	7440393	Barium	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	4.40E-09	7440484	Cobalt	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	2.20E-09	7440508	Copper	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0	7439921	Lead	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	0	7440020	Nickel	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	1.10E-09	7782492	Selenium	0.00E+00	NonCancerChronicDerived_InhSoilDerm
23430	ALL		497012	3625717	3.37E-06	7440666	Zinc	0.00E+00	NonCancerChronicDerived_InhSoilDerm
								0.000161	

\*HARP - HRACalc v22118 2/22/2024 4:20:03 PM - Acute Risk - Input File: D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	RESP	SCENARIO
23430	ALL		497012	3625717	0.742675	71363	n-Butyl Alc	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.982923	100414	Ethyl Benz	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.171463	111762	EGBE	3.65E-05	NonCancerAcute
23430	ALL		497012	3625717	0.050841	110543	Hexane	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	1.530209	67630	Isopropyl A	4.78E-04	NonCancerAcute
23430	ALL		497012	3625717	0.212335	67561	Methanol	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	1.980798	78933	MEK	1.52E-04	NonCancerAcute
23430	ALL		497012	3625717	1.41158	108101	MIBK	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	2.088461	108656	PGMEA	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.11165	107982	PGME	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.62604	100425	Styrene	2.98E-05	NonCancerAcute
23430	ALL		497012	3625717	5.262523	108883	Toluene	1.05E-03	NonCancerAcute
23430	ALL		497012	3625717	5.567568	1330207	Xylenes	2.53E-04	NonCancerAcute
23430	ALL		497012	3625717	58.92287	98566	PCBTF	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.000609	7429905	Aluminum	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.001347	7440393	Barium	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	5.58E-07	7440484	Cobalt	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	2.79E-07	7440508	Copper	2.79E-09	NonCancerAcute
23430	ALL		497012	3625717	0	7439921	Lead	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0	7440020	Nickel	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	1.40E-07	7782492	Selenium	0.00E+00	NonCancerAcute
23430	ALL		497012	3625717	0.000428	7440666	Zinc	0.00E+00	NonCancerAcute
								0.002002	

PROJECT TITLE:

**APP007986\_cancer risk  
MEIW 20805**

COMMENTS:

SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**19.3 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

**2/22/2024**

SCALE:

1:831

0  0.02 km

PROJECT NO.:







PROJECT TITLE:

**APP007986\_acute HHI  
MEIW 2025**

COMMENTS:

SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**7.1E-03 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

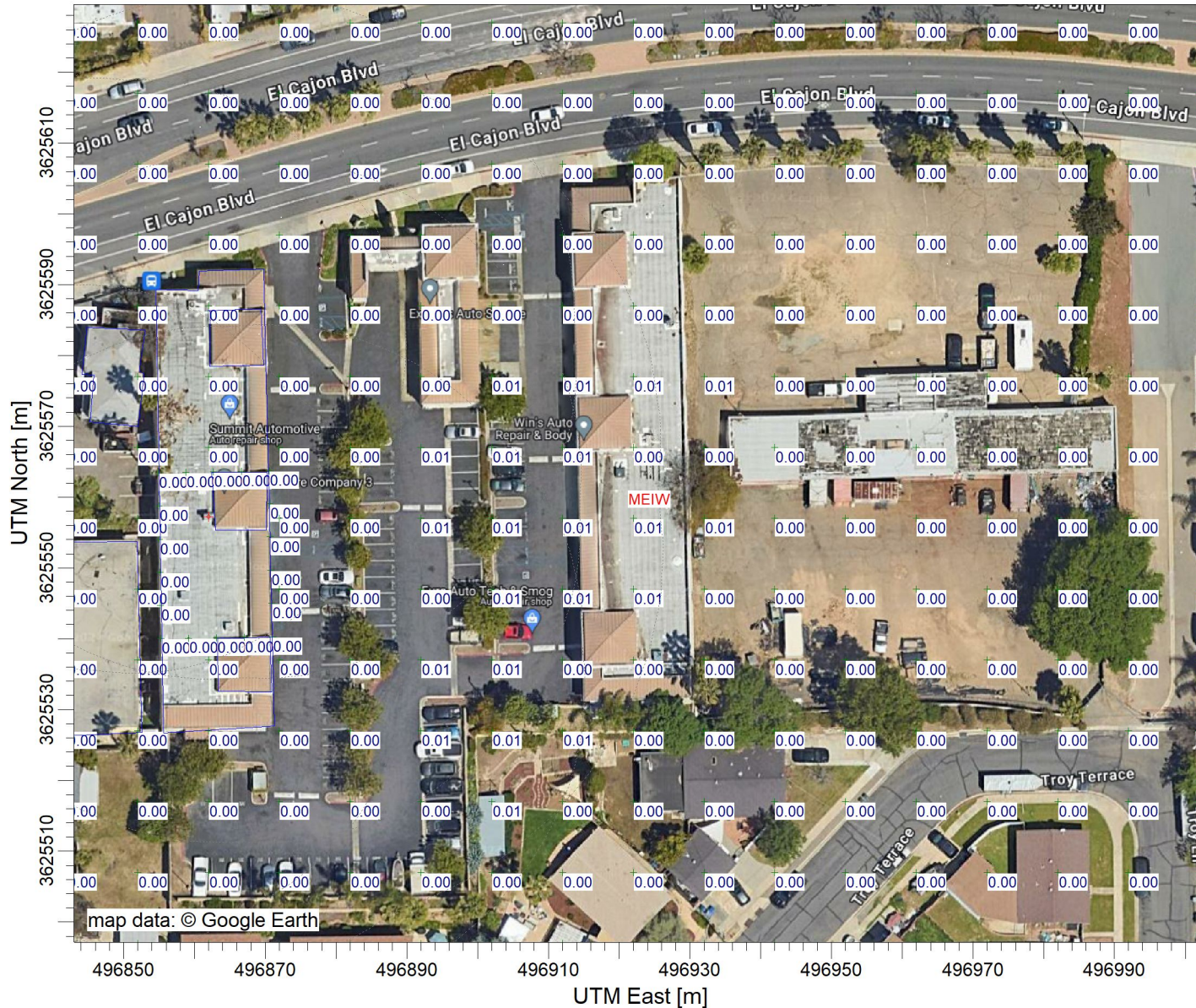
**2/22/2024**

SCALE:

1:902

0  0.02 km

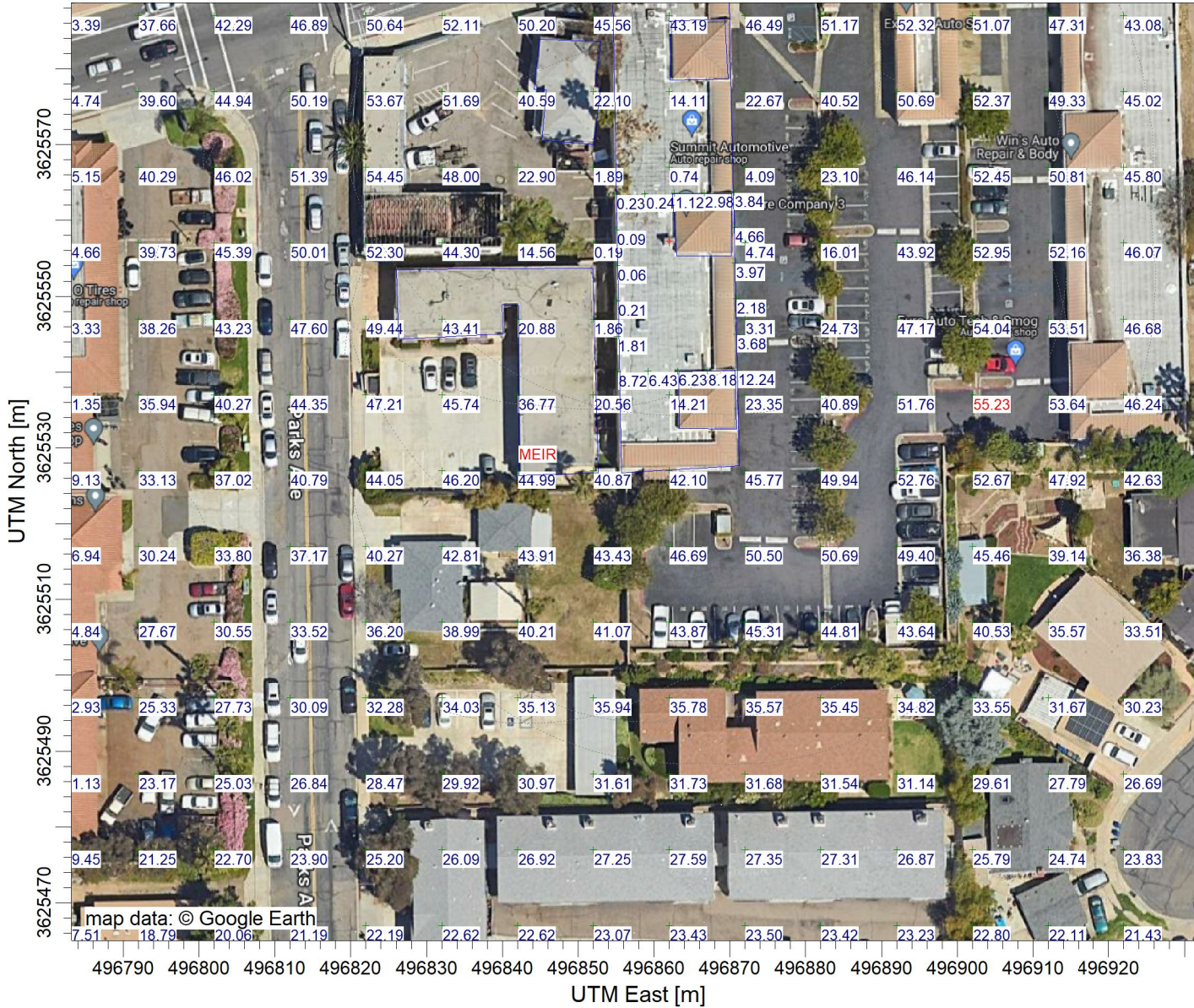
PROJECT NO.:



PROJECT TITLE:

**APP007986\_cancer risk  
MEIR 19596**

COMMENTS:



SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**55.2 ug/m<sup>3</sup>**

COMPANY NAME:

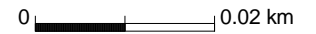
MODELER:

DATE:

**2/22/2024**

SCALE:

1:842



PROJECT NO.:

PROJECT TITLE:

**APP007986\_chronic HHI  
MEIR 19596**

COMMENTS:



SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**9.4E-04 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

**2/22/2024**

SCALE:

1:842

0  0.02 km

PROJECT NO.:

PROJECT TITLE:

**APP007986\_acute HHI  
MEIR 19401**

COMMENTS:

SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**7.1E-03 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

**2/22/2024**

SCALE:

1:660

0  0.01 km

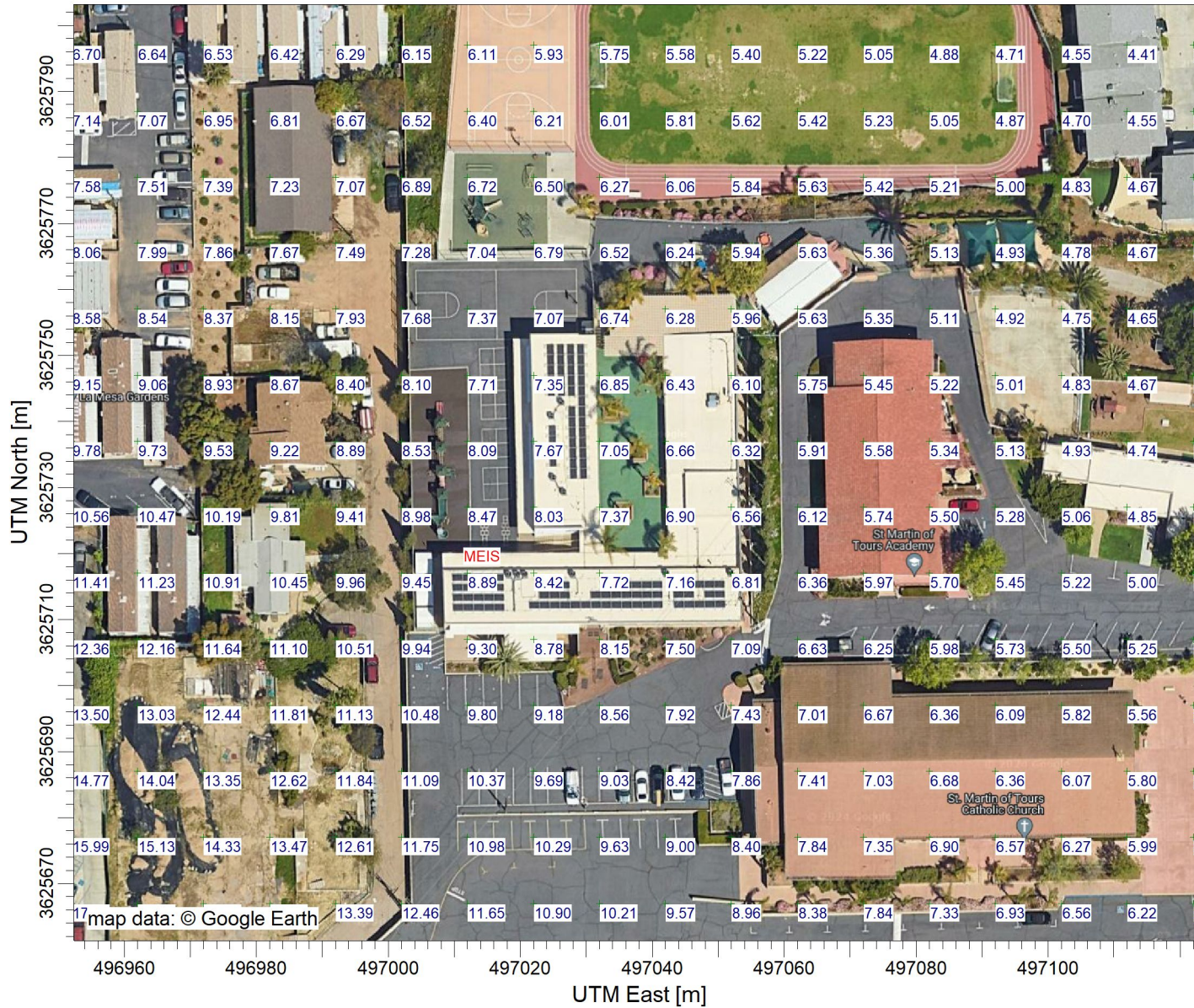
PROJECT NO.:



PROJECT TITLE:

**APP007986\_cancer risk (student)**  
**MEIS 23430**

COMMENTS:



SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**51.8 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

**2/22/2024**

SCALE:

1:966

0  0.02 km

PROJECT NO.:

PROJECT TITLE:

**APP007986\_chronic HHI (student)  
MEIS 23430**

COMMENTS:

SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**9.4E-04 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

**2/22/2024**

SCALE:

1:698

0

0.02 km

PROJECT NO.:



PROJECT TITLE:

**APP007986\_acute HHI (student)**  
**MEIS 23430**

COMMENTS:

SOURCES:

**1**

RECEPTORS:

**40417**

OUTPUT TYPE:

**Concentration**

MAX:

**7.1E-03 ug/m<sup>3</sup>**

COMPANY NAME:

MODELER:

DATE:

**2/22/2024**

SCALE:

1:757

0  0.02 km

PROJECT NO.:



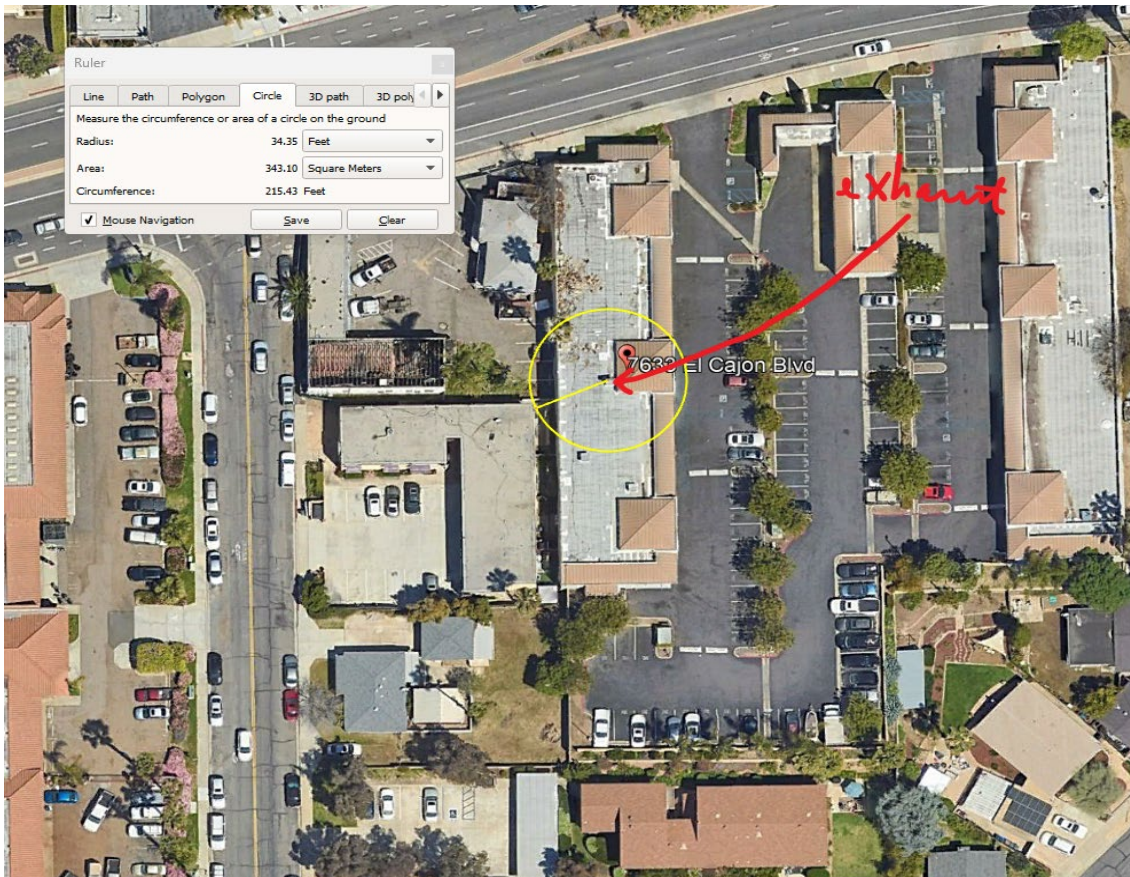
Toxics		
Material Name	SITE	SITE
Criteria Pollutants	lbs/hour	lbs/year
TOG	0.7	1263
VOC	0.6	1045
TSP	0.00003	0.05
PM-10	0.00003	0.05
Toxic Pollutants - VOC's	lbs/hour	lbs/year
n-Butanol	0.009	16.1
Ethyl Benzene	0.012	21.3
Ethylene Glycol Monobutyl Ether	0.002	3.71
n-Hexane	0.001	1.10
Isopropanol	0.018	33.1
Methanol	0.003	4.6
Methyl Ethyl Ketone	0.024	42.8
Methyl Isobutyl Ketone	0.017	30.5
Propylene Glycol Monomethyl Ether Acetate	0.025	45.2
Propylene Glycol Monomethyl Ether	0.001	2.4
Styrene	0.007	13.5
Toluene	0.063	113.8
Xylenes (mixed)	0.066	120.4
Any other toxic VOCs	0	0
PCBTF	0.70	1276.6
Toxic Pollutants - Exempt Compounds	lbs/hour	lbs/year
Acetone	0.12	218.1
Any other toxic exempt compounds	0	0
Toxic Pollutants - Particulates	lbs/hour	lbs/year
Aluminum	7.24E-06	0.013
Barium	1.60E-05	0.029
Cobalt	6.63E-09	1.21E-05
Copper	3.32E-09	6.04E-06
Lead	0.00E+00	0
Nickel	0.00E+00	0
Selenium	1.66E-09	3.02E-06
Zinc	5.09E-06	0.009
Any other toxic particulate matter	0	0

**Stack information**

CFM 14430  
 stack diameter [ft] 3.0  
 Residential distance [ft] 34  
 worker distance [ft] 34

**PCBTF, based on 80-121 Valspar clearcoat**

w/w 0.5  
 Density [lbs/gal] 9.82  
  
 Daily rate [lbs/day] 4.9  
 Hourly rate [lbs/hr] 0.7  
 annual rate[lbs/yr] 1277





HARP2 - HRACalc (dated 22118) 2/22/2024 4:13:25 PM - 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:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_CancerRiskSumByRec.csv

**Calculating chronic risk**

Chronic risk breakdown by pollutant and receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_NCChronicRiskSumByRec.csv

**Calculating acute risk**

Acute risk breakdown by pollutant and receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\worker\_NCAcuteRiskSumByRec.csv

HRA ran successfully

HARP2 - HRACalc (dated 22118) 2/22/2024 4:08:20 PM - 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:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_CancerRisk.csv  
Cancer risk total by receptor saved to:  
D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_CancerRiskSumByRec.csv  
Calculating chronic risk  
Chronic risk breakdown by pollutant and receptor saved to:  
D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_NCChronicRisk.csv  
Chronic risk total by receptor saved to:  
D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_NCChronicRiskSumByRec.csv  
Calculating acute risk  
Acute risk breakdown by pollutant and receptor saved to:  
D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_NCAcuteRisk.csv  
Acute risk total by receptor saved to:  
D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\resident\_NCAcuteRiskSumByRec.csv  
HRA ran successfully

HARP2 - HRACalc (dated 22118) 2/22/2024 4:20:03 PM - 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: 5  
Total Exposure Duration: 9

Exposure Duration Bin Distribution

3rd Trimester Bin: 0

0<2 Years Bin: 0

2<9 Years Bin: 0

2<16 Years Bin: 9

16<30 Years Bin: 0

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: False  
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\*\***

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 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\7986\_woodman\_THREE\7986\_HARP\_3\hra\student\_NCAcuteRiskSumByRec.csv

HRA ran successfully

\*\*\* MODELOPTs:    RegDEFAULT    CONC    ELEV    URBAN    SigA Data

\*\*\* 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	496862.0	3625557.3	162.1	7.54	-0.00	12.80	0.82	YES	YES	NO	

\*\*\* MODELOPTs:    RegDEFAULT    CONC    ELEV    URBAN    SigA Data

\*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

\*\* 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 = 1394518.0 ; 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 40417 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 = 8.1 MB of RAM.







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

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\*\*\* AERMET - VERSION 22112 \*\*\* \*\*\*

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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 147.45757	AT ( 496902.00, 3625537.00,	161.88, 161.88, 0.00)	DC
	2ND HIGHEST VALUE IS 145.39173	AT ( 496822.00, 3625567.00,	162.10, 162.10, 0.00)	DC
	3RD HIGHEST VALUE IS 144.29851	AT ( 496902.00, 3625547.00,	161.97, 161.97, 0.00)	DC
	4TH HIGHEST VALUE IS 143.29381	AT ( 496822.00, 3625577.00,	162.33, 162.33, 0.00)	DC
	5TH HIGHEST VALUE IS 143.21388	AT ( 496912.00, 3625537.00,	162.02, 162.02, 0.00)	DC
	6TH HIGHEST VALUE IS 142.88060	AT ( 496912.00, 3625547.00,	162.14, 162.14, 0.00)	DC
	7TH HIGHEST VALUE IS 141.36607	AT ( 496902.00, 3625557.00,	162.17, 162.17, 0.00)	DC
	8TH HIGHEST VALUE IS 140.88281	AT ( 496892.00, 3625527.00,	161.73, 161.73, 0.00)	DC
	9TH HIGHEST VALUE IS 140.64510	AT ( 496902.00, 3625527.00,	161.58, 161.58, 0.00)	DC
	10TH HIGHEST VALUE IS 140.05328	AT ( 496902.00, 3625567.00,	162.37, 162.37, 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	2365.23315 ON 21011719: AT ( 496822.00, 3625577.00, 162.33, 162.33, 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

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PFLCNV: Turbulence data is being used w/o ADJ\_U\* option

SigA Data