

**Air Quality Health Risk Calculations (Worst-Case)
Collinsville Uncontrolled R4**

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.055				
	Construction Start	5/1/2027				
	Construction Complete	5/31/2028				
	Days	396				
	Construction Emission per day (lb/day)	0.277777778				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	0.001456404				
	Project Site Size (Acres)	29.08				
	Project Site Size (meters^2)	117682.5848				
	Length of Smalles Side (meters)	343.0489539				
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	1.24E-08				
From AERMOD	Concentration Annual (Ug/M^3)	0.034				
	Days	Days to years				
Duration	396	1.084931507				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.034	0.034	0.034	0.034	0.034	0.034
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00001178	0.00003558	0.00002810	0.00002432	0.00001093	0.00000947
Construction Days	396	1.084931507				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.084931507	0	0	0	0
AT	70	70	70	70	70	70
FAH	1	1	0.72	0.72	0.73	0.73
Risk for Each Age Group	4.62905E-07	6.0656E-06	0	0	0	0
Risk per million Exposed	0.462905143	6.065597871	0	0	0	0
Cancer Risk Per Million Construction Duration	6.53					

Air Quality Health Risk Calculations (Worst-Case)
Collinsville Controlled R4

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.036				
	Construction Start	5/1/2027				
	Construction Complete	5/31/2028				
	Days	396				
	Construction Emission per day (lb/day)	0.181818182				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	0.000953283				
	Project Site Size (Acres)	29.08				
	Project Site Size (meters^2)	117682.5848				
	Length of Smalles Side (meters)	343.0489539				
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	8.10E-09				
From AERMOD	Concentration Annual (Ug/M^3)	0.022				
	Days	Days to years				
Duration	396	1.084931507				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.022	0.022	0.022	0.022	0.022	0.022
Breathing Rate per agegroup BR/BW (Page S-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000762	0.00002302	0.00001818	0.00001573	0.00000708	0.00000612
Construction Days	396	1.084931507				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.084931507	1.084931507	1.084931507	1.084931507	1.084931507
AT	70	70	70	70	70	70
FAH	1	1	0.72	0.72	0.73	0.73
Risk for Each Age Group	2.99527E-07	3.9248E-06	6.6965E-07	5.7943E-07	8.80559E-08	7.62275E-08
Risk per million Exposed	0.299526857	3.924798622	0			
Cancer Risk Per Million - Construction Duration	4.22					

**Air Quality Health Risk Calculations (Worst-Case)
Collinsville Uncontrolled R5**

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.055				
	Construction Start	5/1/2027				
	Construction Complete	5/31/2028				
	Days	396				
	Construction Emission per day (lb/day)	0.277777778				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	0.001456404				
	Project Site Size (Acres)	29.08				
	Project Site Size (meters^2)	117682.5848				
	Length of Smalles Side (meters)	343.0489539				
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	1.24E-08				
From AERMOD	Concentration Annual (Ug/M^3)	0.032				
	Days	Days to years				
Duration	396	1.084931507				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.032	0.032	0.032	0.032	0.032	0.032
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00001109	0.00003348	0.00002645	0.00002289	0.00001029	0.00000891
Construction Days	396	1.084931507				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.084931507	0	0	0	0
AT	70	70	70	70	70	70
FAH	1	1	0.72	0.72	0.73	0.73
Risk for Each Age Group	4.35675E-07	5.7088E-06	0	0	0	0
Risk per million Exposed	0.435675429	5.708797996	0	0	0	0
Cancer Risk Per Million Construction Duration	6.14					

Air Quality Health Risk Calculations (Worst-Case)
Collinsville Controlled R5

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.036				
	Construction Start	5/1/2027				
	Construction Complete	5/31/2028				
	Days	396				
	Construction Emission per day (lb/day)	0.181818182				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	0.000953283				
	Project Site Size (Acres)	29.08				
	Project Site Size (meters^2)	117682.5848				
	Length of Smalles Side (meters)	343.0489539				
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	8.10E-09				
From AERMOD	Concentration Annual (Ug/M^3)	0.021				
	Days	Days to years				
Duration	651	1.783561644				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.021	0.021	0.021	0.021	0.021	0.021
Breathing Rate per agegroup BR/BW (Page S-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000728	0.00002197	0.00001736	0.00001502	0.00000675	0.00000585
Construction Days	396	1.084931507				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.084931507	1.084931507	1.084931507	1.084931507	1.084931507
AT	70	70	70	70	70	70
FAH	1	1	0.72	0.72	0.73	0.73
Risk for Each Age Group	2.85912E-07	3.7464E-06	6.39211E-07	5.53092E-07	8.40534E-08	7.27626E-08
Risk per million Exposed	0.285912	3.746398685	0			
Cancer Risk Per Million - Construction Duration	4.03					