Adelaide Avenue School - Sub Slab Depressurization System Emissions Calculations
Sample Date - 22 March 2007

Volatile Organic Compounds	ROOFTOP FAN 1 (Measured air flow = 162 cubic feet per minute)				ROOFTOP FAN 2 (Measured air flow = 150 cubic feet per minute)				ROOFTOP FAN 3 (Measured air flow = 118 cubic feet per minute)				CUMULATIVE EMISSIONS (3 fans combined)		
	Concentration (ug/m^3)	Hourly Emission (lbs/hour)	Daily Emission (lbs/day)	Yearly Emission (lbs/year)	Concentration (ug/m^3)	Hourly Emission (lbs/hour)	Daily Emission (lbs/day)	Yearly Emission (lbs/year)	Concentration (ug/m^3)	Hourly Emission (lbs/hour)	Daily Emission (lbs/day)	Yearly Emission (lbs/year)	Hourly Emission (lbs/hour)	Daily Emission (lbs/day)	Yearly Emission (lbs/year)
1,1,1,2-Tetrachloroethane	3.43 U	2.08E-06	4.99E-05	1.82E-02	3.43 U	1.92E-06	4.62E-05	1.68E-02	3.43 U	1.51E-06	3.63E-05	1.33E-02	5.51E-06	1.32E-04	4.83E-02
1,1,1-Trichloroethane	6.32	3.83E-06	9.19E-05	3.35E-02	4.8	2.69E-06	6.46E-05	2.36E-02	2.72 U	1.20E-06	2.88E-05	1.05E-02	7.72E-06	1.85E-04	6.76E-02
1,1,2,2-Tetrachloroethane	3.43 U	2.08E-06	4.99E-05	1.82E-02	3.43 U	1.92E-06	4.62E-05	1.68E-02	3.43 U	1.51E-06	3.63E-05	1.33E-02	5.51E-06	1.32E-04	4.83E-02
1,1,2-Trichloroethane	2.72 U	1.65E-06	3.95E-05	1.44E-02	2.72 U	1.53E-06	3.66E-05	1.34E-02	2.72 U	1.20E-06	2.88E-05	1.05E-02	4.37E-06	1.05E-04	3.83E-02
1,1-Dichloroethane	2.02 U	1.22E-06	2.94E-05	1.07E-02	2.02 U	1.13E-06	2.72E-05	9.92E-03	2.02 U	8.91E-07	2.14E-05	7.81E-03	3.25E-06	7.79E-05	2.84E-02
1,1-Dichloroethene	1.98 U	1.20E-06	2.88E-05	1.05E-02	1.98 U	1.11E-06	2.66E-05	9.73E-03	1.98 U	8.73E-07	2.10E-05	7.65E-03	3.18E-06	7.64E-05	2.79E-02
1,2,4-Trimethylbenzene	2.65	1.60E-06	3.85E-05	1.41E-02	2.46 U	1.38E-06	3.31E-05	1.21E-02	2.46 U	1.09E-06	2.60E-05	9.51E-03	4.07E-06	9.77E-05	3.56E-02
1,2-Dibromoethane	3.84 U	2.33E-06	5.58E-05	2.04E-02	3.84 U	2.15E-06	5.17E-05	1.89E-02	3.84 U	1.69E-06	4.07E-05	1.48E-02	6.17E-06	1.48E-04	5.41E-02
1,2-Dichlorobenzene	3 U	1.82E-06	4.36E-05	1.59E-02	3 U	1.68E-06	4.04E-05	1.47E-02	3 U	1.32E-06	3.18E-05	1.16E-02	4.82E-06	1.16E-04	4.22E-02
1,2-Dichloroethane	2.02 U	1.22E-06	2.94E-05	1.07E-02	2.02 U	1.13E-06	2.72E-05	9.92E-03	2.02 U	8.91E-07	2.14E-05	7.81E-03	3.25E-06	7.79E-05	2.84E-02
1,2-Dichloropropane	2.31 U	1.40E-06	3.36E-05	1.23E-02	2.31 U	1.30E-06	3.11E-05	1.13E-02	2.31 U	1.02E-06	2.45E-05	8.93E-03	3.71E-06	8.91E-05	3.25E-02
1,3,5-Trimethybenzene	2.46 U	1.49E-06	3.58E-05	1.31E-02	2.46 U	1.38E-06	3.31E-05	1.21E-02	2.46 U	1.09E-06	2.60E-05	9.51E-03	3.95E-06	9.49E-05	3.46E-02
1,3-Dichlorobenzene	3 U	1.82E-06	4.36E-05	1.59E-02	3 U	1.68E-06	4.04E-05	1.47E-02	3 U	1.32E-06	3.18E-05	1.16E-02	4.82E-06	1.16E-04	4.22E-02
1,4-Dichlorobenzene	7.33	4.44E-06	1.07E-04	3.89E-02	6.85	3.84E-06	9.22E-05	3.36E-02	6.19	2.73E-06	6.55E-05	2.39E-02	1.10E-05	2.64E-04	9.65E-02
2-Butanone	1420	8.60E-04	2.06E-02	7.53E+00	80.1	4.49E-05	1.08E-03	3.93E-01	2460	1.09E-03	2.60E-02	9.51E+00	1.99E-03	4.78E-02	1.74E+01
4-Methyl-2-pentanone	2.05 U	1.24E-06	2.98E-05	1.09E-02	2.05 U	1.15E-06	2.76E-05	1.01E-02	2.05 U	9.04E-07	2.17E-05	7.92E-03	3.30E-06	7.91E-05	2.89E-02
Acetone	450	2.73E-04	6.54E-03	2.39E+00	31.1	1.74E-05	4.19E-04	1.53E-01	394	1.74E-04	4.17E-03	1.52E+00	4.64E-04	1.11E-02	4.06E+00
Acrylonitrile	1.08 U	6.54E-07	1.57E-05	5.73E-03	1.08 U	6.06E-07	1.45E-05	5.31E-03	1.08 U	4.76E-07	1.14E-05	4.17E-03	1.74E-06	4.17E-05	1.52E-02
Benzene	1.6 U	9.69E-07	2.33E-05	8.49E-03	1.6 U	8.97E-07	2.15E-05	7.86E-03	1.6 U	7.06E-07	1.69E-05	6.18E-03	2.57E-06	6.17E-05	2.25E-02
Bromodichloromethane	3.35 U	2.03E-06	4.87E-05	1.78E-02	3.35 U	1.88E-06	4.51E-05	1.65E-02	3.35 U	1.48E-06	3.55E-05	1.29E-02	5.38E-06	1.29E-04	4.72E-02
Bromoform	5.16 U	3.12E-06	7.50E-05	2.74E-02	5.16 U	2.89E-06	6.94E-05	2.53E-02	5.16 U	2.28E-06	5.46E-05	1.99E-02	8.29E-06	1.99E-04	7.27E-02
Carbon tetrachloride	3.14 U	1.90E-06	4.56E-05	1.67E-02	3.14 U	1.76E-06	4.23E-05	1.54E-02	3.14 U	1.39E-06	3.32E-05	1.21E-02	5.05E-06	1.21E-04	4.42E-02
Chlorobenzene	2.3 U	1.39E-06	3.34E-05	1.22E-02	2.3 U	1.29E-06	3.10E-05	1.13E-02	2.3 U	1.01E-06	2.43E-05	8.89E-03	3.70E-06	8.87E-05	3.24E-02
Chloroethane	1.32 U	7.99E-07	1.92E-05	7.00E-03	1.32 U	7.40E-07	1.78E-05	6.48E-03	1.32 U	5.82E-07	1.40E-05	5.10E-03	2.12E-06	5.09E-05	1.86E-02
Chloroform	8	4.84E-06	1.16E-04	4.24E-02	2.44 U	1.37E-06	3.28E-05	1.20E-02	2.44 U	1.08E-06	2.58E-05	9.43E-03	7.29E-06	1.75E-04	6.39E-02
Chloromethane	1.03 U	6.24E-07	1.50E-05	5.46E-03	1.03 U	5.78E-07	1.39E-05	5.06E-03	1.03 U	4.54E-07	1.09E-05	3.98E-03	1.66E-06	3.97E-05	1.45E-02
cis-1,2-Dichloroethene	1.98 U	1.20E-06	2.88E-05	1.05E-02	1.98 U	1.11E-06	2.66E-05	9.73E-03	1.98 U	8.73E-07	2.10E-05	7.65E-03	3.18E-06	7.64E-05	2.79E-02
cis-1,3-Dichloropropene	2.27 U	1.37E-06	3.30E-05	1.20E-02	2.27 U	1.27E-06	3.05E-05	1.12E-02	2.27 U	1.00E-06	2.40E-05	8.77E-03	3.65E-06	8.76E-05	3.20E-02
Dibromochloromethane	4.26 U	2.58E-06	6.19E-05	2.26E-02	4.26 U	2.39E-06	5.73E-05	2.09E-02	4.26 U	1.88E-06	4.51E-05	1.65E-02	6.85E-06	1.64E-04	6.00E-02
Dichlorodifluoromethane	4.94 U	2.99E-06	7.18E-05	2.62E-02	4.94 U	2.77E-06	6.65E-05	2.43E-02	4.94 U	2.18E-06	5.23E-05	1.91E-02	7.94E-06	1.91E-04	6.96E-02
Ethylbenzene	2.17 U	1.31E-06	3.15E-05	1.15E-02	2.17 U	1.22E-06	2.92E-05	1.07E-02	43.8	1.93E-05	4.64E-04	1.69E-01	2.19E-05	5.24E-04	1.91E-01
Isopropylbenzene	2.46 U	1.49E-06	3.58E-05	1.31E-02	2.46 U	1.38E-06	3.31E-05	1.21E-02	2.46 U	1.09E-06	2.60E-05	9.51E-03	3.95E-06	9.49E-05	3.46E-02
Methyl tert butyl ether	1.8 U	1.09E-06	2.62E-05	9.55E-03	1.8 U	1.01E-06	2.42E-05	8.84E-03	1.8 U	7.94E-07	1.91E-05	6.96E-03	2.89E-06	6.94E-05	2.53E-02
Methylene chloride	3.47 U	2.10E-06	5.04E-05	1.84E-02	3.47 U	1.95E-06	4.67E-05	1.70E-02	3.47 U	1.53E-06	3.67E-05	1.34E-02	5.58E-06	1.34E-04	4.89E-02
n-Butylbenzene	2.74 U	1.66E-06	3.98E-05	1.45E-02	2.74 U	1.54E-06	3.69E-05	1.35E-02	2.74 U	1.21E-06	2.90E-05	1.06E-02	4.40E-06	1.06E-04	3.86E-02
o-Xylene	2.17 U	1.31E-06	3.15E-05	1.15E-02	2.17 U	1.22E-06	2.92E-05	1.07E-02	13.9	6.13E-06	1.47E-04	5.37E-02	8.66E-06	2.08E-04	7.59E-02
p-Isopropyltoluene	2.74 U	1.66E-06	3.98E-05	1.45E-02	2.74 U	1.54E-06	3.69E-05	1.35E-02	2.74 U	1.21E-06	2.90E-05	1.06E-02	4.40E-06	1.06E-04	3.86E-02
p/m-Xylene	4.34 U	2.63E-06	6.31E-05	2.30E-02	4.34 U	2.43E-06	5.84E-05	2.13E-02	68.8	3.03E-05	7.28E-04	2.66E-01	3.54E-05	8.50E-04	3.10E-01
sec-Butylbenzene	2.74 U	1.66E-06	3.98E-05	1.45E-02	2.74 U	1.54E-06	3.69E-05	1.35E-02	2.74 U	1.21E-06	2.90E-05	1.06E-02	4.40E-06	1.06E-04	3.86E-02
Styrene	2.13 U	1.29E-06	3.10E-05	1.13E-02	2.13 U	1.19E-06	2.87E-05	1.05E-02	2.13 U	9.40E-07	2.25E-05	8.23E-03	3.42E-06	8.22E-05	3.00E-02
Tetrachloroethene	12.2	7.39E-06	1.77E-04	6.47E-02	9.56	5.36E-06	1.29E-04	4.70E-02	5.62	2.48E-06	5.95E-05	2.17E-02	1.52E-05	3.65E-04	1.33E-01
Toluene	22.4	1.36E-05	3.26E-04	1.19E-01	15.6	8.75E-06	2.10E-04	7.66E-02	1030	4.54E-04	1.09E-02	3.98E+00	4.77E-04	1.14E-02	4.18E+00
trans-1,2-Dichloroethene	1.98 U	1.20E-06	2.88E-05	1.05E-02	1.98 U	1.11E-06	2.66E-05	9.73E-03	1.98 U	8.73E-07	2.10E-05	7.65E-03	3.18E-06	7.64E-05	2.79E-02
trans-1,3-Dichloropropene	2.27 U	1.37E-06	3.30E-05	1.20E-02	2.27 U	1.27E-06	3.05E-05	1.12E-02	2.27 U	1.00E-06	2.40E-05	8.77E-03	3.65E-06	8.76E-05	3.20E-02
Trichloroethene	115	6.96E-05	1.67E-03	6.10E-01	79.7	4.47E-05	1.07E-03	3.91E-01	2.68 U	1.18E-06	2.84E-05	1.04E-02	1.16E-04	2.77E-03	1.01E+00
Trichlorofluoromethane	725	4.39E-04	1.05E-02	3.85E+00	282	1.58E-04	3.80E-03	1.39E+00	117	5.16E-05	1.24E-03	4.52E-01	6.49E-04	1.56E-02	5.68E+00
Vinyl chloride	1.28 U	7.75E-07	1.86E-05	6.79E-03	1.28 U	7.18E-07	1.72E-05	6.29E-03	1.28 U	5.65E-07	1.36E-05	4.95E-03	2.06E-06	4.94E-05	1.80E-02
Total VOCs	2.87E+03	Not Applicable	Not Applicable	1.52E+01	612	Not Applicable	Not Applicable	3.00E+00	4.24E+03	Not Applicable	Not Applicable	1.64E+01	Not Applicable	Not Applicable	3.46E+01
RIDEM Air Pollution Control Permit Applicability Thresholds (lbs) *		**10**	**100**	**20,000 (Individual VOCs) 50,000 (Total VOCs)**		**10**	**100**	**20,000 (Individual VOCs) 50,000 (Total VOCs)**		**10**	**100**	**20,000 (Individual VOCs) 50,000 (Total VOCs)**	**10**	**100**	**20,000 (Individual VOCs) 50,000 (Total VOCs)**

U : indicates that chemical was not detected by the laboratory. To be conservative, the reporting limit shown in the concentration column was used in the emissions calculations.

Hourly Emissions (lbs/hour) = VOC concentration (ug/m^3) x measured flow rate (cfm) x 0.02832 m^3/ft^3 x 60 min/hour x 0.001 mg/ug x 0.001 g/mg x 0.0022 lb/g.

Daily Emissions (lbs/day) = Hourly Emissions x 24 hours/day.

Yearly Emissions (lbs/year) = Daily Emissions x 365 days/year.

* RIDEM Air Pollution Control Regulation No. 9 [August 1971, Amended April 2004].