

Appendix A

*1996 NATA Data Comparison –
Average Annual Monitored Concentrations vs.
US EPA Modeled Average Ambient Concentrations*

Pollutant	CAS #	BRAT ($\mu\text{g}/\text{m}^3$)	BURL ($\mu\text{g}/\text{m}^3$)	RUTL ($\mu\text{g}/\text{m}^3$)	UND ($\mu\text{g}/\text{m}^3$)	WIN ($\mu\text{g}/\text{m}^3$)	Current HAAS ($\mu\text{g}/\text{m}^3$)	Proposed HAAS ($\mu\text{g}/\text{m}^3$)
Acrolein (1) (mon)	107-02-8						2.5	0.002
Acrolein (1) (model)	107-02-8						2.5	0.002
Acetaldehyde (mon)	75-07-0	3.17	5.61	5.28	1.12	5.55	1,800	0.45
Acetaldehyde (model)	75-07-0	0.19	0.65	0.24	0.26	0.59	1,800	0.45
Acrylonitrile (2) (mon)	107-13-1						0.015	0.015
Acrylonitrile (2) (model)	107-13-1						0.015	0.015
Arsenic Cmpds (mon)		0.00164	0.00091	0.00053	0.00058	No data	0.00023	0.00023
Arsenic Cmpds (model)		0.000015	0.00013	0.000074	0.0000062	0.000089	0.00023	0.00023
Benzene (mon)	71-43-2	1.57	2.15	1.77	0.64	0.88	0.12	0.12
Benzene (model)	71-43-2	0.69	2.10	1.30	0.92	1.47	0.12	0.12
Beryllium Cmpds (mon)		2.21e-5 to 2.59e-5	8.83e-6 to 1.93e-5	8.28e-6 to 2.34e-5	ND	No data	0.0013 1.3e-3	0.00042 4.2e-4
Beryllium Cmpds (model)		0.0000041	0.0000299	0.0000152	0.0000010	0.0000152		
1,3-butadiene (3)	106-99-0	ND (0.25)	0.30 (0.30)	ND (0.28)	ND (ND)	ND (ND)	0.035	0.0019
1,3-butadiene (3)	106-99-0	0.022	0.19	0.084	0.031	0.096	0.035	0.0019
Cadmium Cmpds (mon)		ND	ND	ND	ND	ND	0.00057	0.00056
Cadmium Cmpds (model)							0.00057	0.00056
Carbon tetrachloride (mon)	56-23-5	0.54	0.53	0.54	0.53	0.58	0.067	0.066
Carbon tetrachloride (model)	56-23-5	0.8800	0.8801	0.8800	0.8801	0.8801	0.067	0.066
Chloroform (mon)	67-66-3	ND	0.41	0.35	ND	0.38	0.043	0.043
Chloroform (model)	67-66-3	0.083	0.085	0.084	0.084	0.084	0.043	0.043

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Chromium Cmpds (mon)		0.00061	0.0046	0.0028	0.0010	No data	0.12/8.5e-5	0.12/8.5e-5
Chromium Cmpds (model)		0.000111	0.00022	0.000232	0.0000284	0.000163	0.12/8.5e-5	0.12/8.5e-5
Diesel PM (4) (mon)			0.36 (n=67)					
Diesel PM (4) (model)								
Formaldehyde (mon)	50-00-0	2.33	8.40	7.37	1.08	4.68	0.08	0.08
Formaldehyde (model)	50-00-0	0.59	1.08	0.74	0.55	0.94	0.08	0.08
Lead Cmpds (mon) (5)		0.0066	0.01	0.0084	0.0026	No Data	0.25	0.01
Lead Cmpds (model)		1.64e-4	4.09e-3	7.02e-4	3.35e-4	5.16e-3	0.25	0.01
Manganese Cmpds (mon) (5)		0.045	0.023	0.022	0.0019 to 0.0033	No Data	119	0.05
Manganese Cmpds (model)		6.35e-4	8.17e-3	6.19e-3	5.85e-4	5.62e-3	119	0.05
Mercury Cmpds (mon)					0.00157		0.12	0.3
Mercury Cmpds (model)					0.000095		0.12	0.3
Methylene Chloride (mon)	75-09-2	0.60	ND	0.53	0.32	0.68	2.0	2.0
Methylene Chloride (model)	75-09-2	0.26	0.59	0.35	0.17	0.43	2.0	2.0
Nickel Cmpds (mon)		0.012	0.0027	0.0058	ND	No Data	0.0033	0.0042
Nickel Cmpds (model)		1.71e-4	1.79e-3	4.3e-4	5.82e-5	1.59e-3	0.0033	0.0042
Perchloroethylene (mon)	127-18-4	ND	0.53	0.8	ND	ND	0.41	1.75
Perchloroethylene (model)	127-18-4	0.17	0.48	0.25	0.15	0.28	0.41	1.75
1,1,2,2-Tetrachloroethane (mon)	79-34-5	ND	ND	ND	ND	ND	0.0170	0.0175
1,1,2,2-Tetrachloroethane (model)	79-34-5						0.0170	0.0175
Trichloroethylene (mon)	79-01-6	ND	ND	ND	ND	0.37	0.42	0.58
Trichloroethylene (model)	79-01-6					0.156	0.42	0.58

ND = Non-detect

- (1) Acrolein ambient monitoring data are not reliable or credible.
- (2) Acrylonitrile monitored from 1997 on. All 1997 data below MDL.
- (3) 1,3-butadiene concentrations were all non-detect in 1996. 1997 measured values listed in table.
- (4) Diesel PM comparison to Elemental Carbon value for Burlington from 2001 data. Should be ~ 10 to 30% lower than true Diesel PM.
- (5) Metals monitoring data are from 1/99 thru 5/99
- (6) Underhill mercury data is mean annual gaseous elemental mercury plus mean annual particulate mercury = total annual average mercury concentration