Table 4-3
Seneca Meadows, Inc.
Landfill Expansion DGEIS
Modeling of Maximum Emissions

June 17, 2005 Results	NAAQS				DAR-1		MAXIMUM CONCENTRATION ($\mu g/m^3$) [2]						
	1 hour $\mu g/m^3$	8 hour $\mu g/m^3$	24 Hour $\mu g/m^3$	Annual $\mu g/m^3$	SGC [1] $\mu g/m^3$	AGC [1] $\mu g/m^3$	Screen 3 [3] Total All Sources Annual	ISC-ST3 1-hr	ISC-ST3 8-hr	ISC-ST3 24-hr	ISC-ST3 Annual	Percent of AGC Limit [5]	Odor Threshold ($\mu g/m^3$) (lowest value)
Compound													
Criteria Air Contaminants													
NO_x	na	na	na	100	na	210					34.20	16.3%	
CO	40,000	10,000	na	na	14,000	na		2,215	1,113			na	
PM-10			150	50	380	50				2.341	0.389	0.8%	
SO_2	na	na	371[4]	80[4]	910	80		1.354		0.376	0.0432	0.1%	
HCl					2,100	20		10.832			0.3474	1.7%	380.26
PM-2.5[6]			65	15	380	50				2.341	0.389	0.8%	
Freon 12					na	12,000	0.05					0.00%	NA
Freon 114					na	17,000	0.00					0.00%	NA
vinyl chloride					180,000	0.11	0.03					1.09%	25362.37
Freon 11					560,000	na	0.01					na	NA
methylene chloride					14,000	2.1	0.01					0.07%	4,168
1,1-dichloroethane					na	0.63	0.01					0.14%	198,325
cis-1,2-dichloroethene					na	1,900	0.01					0.00%	317
trichloroethene					54,000	0.5	0.02					0.36%	2,687
tetrachloroethene					1,000	1	0.03					0.28%	13,565
chlorobenzene					na	110	0.00					0.00%	401
1,4-dichlorobenzene					na	0.09	0.02					1.83%	90,126
1,2-dichlorobenzene					30,000	360	0.00					0.00%	120
chloroethane					na	10,000	0.00					0.00%	NA
1,1,1- trichloroethane					68,000	1,000	0.00					0.00%	87,297
benzene					1,300	0.13	0.02					1.23%	108,619
toluene					37,000	400	0.65					0.02%	603
ethyl benzene					54,000	1,000	0.15					0.00%	399
m,p-xylene					4,300	100	0.32					0.03%	352
o-xylene					4,300	100	0.09					0.01%	782
styrene					17,000	1,000	0.02					0.00%	7
1,3,5-trimethylbenzene					na	290	0.03					0.00%	182
1,2,4-trimethylbenzene					na	290	0.07					0.00%	29
4 methyl-2-pentanone					31,000	3,000	0.03					0.00%	1,106
4-ethyltoluene					na	na	0.06					na	NA
heptane					210,000	3,900	0.04					0.00%	163,943
chlorodifluoromethane					na	50,000	0.03					0.00%	NA
d-limonene					na	0.1	0.31				0.0155	30.79%	NA
alpha-pinene					na	270	0.58					0.02%	NA
cyclohexane					na	6,000	0.02					0.00%	1,790
ethanol					na	45,000	0.21					0.00%	92,326
tetrahydrofuran					74,000	1,400	0.05					0.00%	271
hexane					na	200	0.03					0.00%	229,108
2-propanol					98,000	7,000	0.05					0.00%	90,949
acetone					180,000	28,000	0.15					0.00%	8,552
2-Butanone					59,000	5,000	0.28					0.00%	5,899
trichlorofluoromethane					560,000	na	0.01					na	NA
Acrolein					0.19	0.02	0.00					2.03%	30
Acrylonitrile					na	0.015	0.00					2.57%	3,472
ethyl acetate					na	3,400	0.06					0.00%	23,063
ethyl butyrate					na	na	0.22					na	NA

Table 4-3
Seneca Meadows, Inc.
Landfill Expansion DGEIS
Modeling of Maximum Emissions

June 17, 2005 Results	NAAQS				DAR-1		MAXIMUM CONCENTRATION ($\mu g/m^3$) [2]						
	1 hour $\mu g/m^3$	8 hour $\mu g/m^3$	24 Hour $\mu g/m^3$	Annual $\mu g/m^3$	SGC [1] $\mu g/m^3$	AGC [1] $\mu g/m^3$	Screen 3 [3] Total All Sources Annual	ISC-ST3 1-hr	ISC-ST3 8-hr	ISC-ST3 24-hr	ISC-ST3 Annual	Percent of AGC Limit [6]	Odor Threshold ($\mu g/m^3$) (lowest value)
Compound													
Tentatively Identified Compounds [7]													
butanoic acid, ethyl ester					na	na	0.06					na	NA
butane					na	45,000	0.07					0.00%	2,999,890
butane, 2-methyl					na	42,000	0.07					0.00%	NA
2-propanol					98,000	7,000	0.09					0.00%	90,949
2-butanol					na	na	0.13					na	364
1-butanol					na	1,500	0.12					0.00%	364
decane					na	200	0.17					0.01%	NA
butanoic acid, 1-methylpropyl ester					na	na	0.15					na	NA
limonene					na	0.1	0.34				0.0168	33.98%	NA
Isopropanol					98,000	7,000	0.15					0.00%	90,942
1-propanol					61,000	1,200	0.10					0.00%	76
octane					na	21	0.10					0.05%	70,080
propyl butyrate					na	na	0.10					na	NA
n-nonane					na	25,000	0.15					0.00%	5,246
1,2,4-trimethylbenzene					na	290	0.05					0.00%	29
Propane					na	110,000	0.10					0.00%	22,048,100
Isobutane					na	45,000	0.15					0.00%	NA
ethanol					na	45,000	0.08					0.00%	92,326
furan, 2-propyl-					na	na	0.04					na	NA
Reduced sulfur compounds													
hydrogen sulfide					14	2	0.47					2.33%	1.4
carbonyl sulfide					250	28	0.01					0.00%	NA
methyl mercaptan					14	2.3	0.01					0.06%	81.0
dimethyl sulfide					14	2	0.03					0.15%	NA
carbon disulfide					6,200	700	0.01					0.00%	50
ethyl mercaptan					na	3.1	0.00					0.01%	0.249
isopropyl mercaptan					na	na	0.02					na	NA
tert-butyl mercaptan					na	na	0.01					na	27
ethyl methyl sulfide					na	na	0.00					na	NA
thiophene					na	na	0.01					na	NA
isobutyl mercaptan					na	na	0.01					na	NA
2,5-dimethylthiophene					na	na	0.01					na	NA

Notes:

[1] SGC is the Short-term (1-hour) Guideline Concentration and AGC is the Annual Guideline Concentration. Where no AGC was available Diminimis concentrations of either 0.1 of 1 $\mu g/m^3$ were used.

[2] Maximum concentrations for all compounds were modeled based on emissions from the Existing Landfill, Southeast Landfill, Expansion Landfill, (2) 2,000 CFM flares, (1) 4,000 CFM flare, the relocated 14 engines, 4 additional engines and the excess gas collected. The excess gas collected was modeled as one (1) 4,000 CFM flare and one (1) 2,000 CFM flare using emission factors from the internal combustion engines. The models were run with elevated terrain.

[3] Screen 3 maximum concentration was modeled with an emission rate of 1 g/s (or 1 $g/s/m^2$ for area sources), and scaled accordingly.

[4] The 1-hour NAAQS limit for SO_2 is equivalent to 0.14 ppm. The Annual NAAQS limit for SO_2 is equivalent to 0.03ppm. These were converted to $\mu g/m^3$ using the following formula: ppm * MW / 0.02404.

[5] As per NYS DAR-1 Guidelines, the Screen 3 short term impacts were converted to annual impacts by multiplying by a factor of 0.1.

[6] As a conservative estimate, in accordance with CF-33, PM-2.5 was assumed to be the same as PM-10.