

**Table 6-5
Seneca Meadows, Inc.
Landfill Expansion DSEIS
Modeling of Maximum Emissions**

Compound	NAAQS				DAR-1		MAXIMUM CONCENTRATION (µg/m ³) ²					Percent of AGC Limit ⁵	Odor Threshold (µg/m ³) (lowest value)	
	1 hour	8 hour	24 Hour	Annual	SGC ¹	AGC ¹	Screen 3 ³		ISC-ST3					
	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	Total All Sources	Annual	1-hr	8-hr	24-hr			Annual
<i>Criteria Air Contaminants from Point Sources</i>														
NOx	na	na	na	100	na	210						33.07	15.7%	
CO	40,000	10,000	na	na	14,000	na		2,196	1,106				na	
PM-10			150	50	380	50					2.32042	0.37627	0.8%	
SO ₂	na	na	373 ⁴	80 ⁴	910	80		1.34214			0.37361	0.04181	0.1%	
<i>Speciated Compounds</i>														
HCl					2,100	20			10.73711			0.3746	1.9%	380
Freon 12					na	12000		0.12					0.0%	NA
Freon 114					na	17,000		0.01					0.00%	NA
vinyl chloride					180000	0.11		0.03					2.46%	25562.37
Freon 11					560,000	na		0.03					na	NA
methylene chloride					14,000	2.1		0.06					0.29%	4168.34
1,1-dichloroethane					na	0.63		0.02					0.32%	198,325
cis-1,2-dichloroethene					na	1900		0.02					0.00%	317
trichloroethene					54000	0.5		0.04					0.73%	2,687
tetrachloroethene					1,000	1.0		0.08					0.77%	13,565
chlorobenzene					na	110		0.01					0.00%	401
1,4-dichlorobenzene					na	0.09		0.03					3.68%	90,126
1,2-dichlorobenzene					30000	360		0.01					0.00%	120
chloroethane					na	10000		0.01					0.00%	NA
1,1,1-trichloroethane					68000	1,000		0.01					0.00%	87,297
benzene					1,300	0.13		0.04					3.12%	108,619
toluene					37,000	400		1.30					0.03%	603
ethyl benzene					54,000	1000		0.28					0.00%	399
m,p-xylene					4,300	100		0.59					0.06%	352
o-xylene					4,300	100		0.17					0.02%	782
styrene					17,000	1000		0.05					0.00%	7
1,3,5-trimethylbenzene					na	290		0.05					0.00%	182
1,2,4-trimethylbenzene					na	290		0.14					0.00%	29
4 methyl-2-pentanone					31000	3000		0.06					0.00%	1,106
4-ethyltoluene					na	na		0.12					na	NA
heptane					210000	3900		0.08					0.00%	163,943
chlorodifluoromethane					na	50,000		0.06					0.00%	NA
d-limonene					na	0.10		0.62			0.0571		61.57%	NA
alpha-pinene					na	270		0.52					0.02%	NA
cyclohexane					na	6000		0.04					0.00%	1,790
ethanol					na	45,000		0.42					0.00%	92,326
tetrahydrofuran					74000	1,400		0.09					0.00%	271
hexane					na	200		0.07					0.00%	229,108
2-propanol					98000	7000		0.10					0.00%	90,949
acetone					180,000	28,000		0.37					0.00%	8,552
2-Butanone					59,000	5,000		0.67					0.00%	5,899
trichlorofluoromethane					560,000	na		0.02					na	NA
Acrolein					0	0.02		0.01					3.78%	50
Acrylonitrile					na	0.015		0.01					4.78%	3,472
ethyl acetate					na	3400		0.13					0.00%	23,063
ethyl butyrate					na	na		0.44					na	NA
1,2-dichloroethane					na	0.038		0.02					na	NA

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Compound	NAAQS				DAR-1		MAXIMUM CONCENTRATION ($\mu\text{g}/\text{m}^3$) ²					Percent of AGC Limit ⁵	Odor Threshold ($\mu\text{g}/\text{m}^3$) (lowest value)		
	1 hour	8 hour	24 Hour	Annual	SGC ¹	AGC ¹	Screen 3 ³		ISC-ST3						
	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	Total All Sources	Annual	1-hr	8-hr	24-hr			Annual	
<i>Tentatively Identified Compounds</i>															
butanoic acid, ethyl ester					na	na		0.10					na	NA	
butane					na	45,000		0.49					0.00%	2,999,895	
butane, 2-methyl					na	42,000		0.99					0.00%	NA	
2-propanol					98,000	7,000		0.47					0.00%	90,949	
2-butanol					na	na		0.60					na	364	
1-butanol					na	1,500		0.24					0.00%	364	
decane					na	200		0.29					0.01%	NA	
butanoic acid, 1-methylpropyl ester					na	na		0.29					na	NA	
limonene					na	0.1		0.41			0.03758		40.59%	NA	
Isopropanol					98,000	7,000		0.31					0.00%	90,942	
1-propanol					61,000	1,200		0.20					0.00%	76	
octane					na	21		0.20					0.10%	70,080	
propyl butyrate					na	na		0.20					na	NA	
n-nonane					na	25,000		0.31					0.00%	5,246	
1,2,4-trimethylbenzene					na	290		0.10					0.00%	29	
Propane					na	110,000		0.20					0.00%	22,048,100	
Isobutane					na	45,000		0.64					0.00%	NA	
ethanol					na	45,000		0.30					0.00%	92,326	
furan, 2-propyl-					na	na		0.09					na	NA	
<i>Reduced sulfur compounds</i>															
hydrogen sulfide						14		2					1.15	5.76%	1.4
carbonyl sulfide						250		28					0.01	0.00%	NA
methyl mercaptan						14		2.3					0.03	0.15%	81.0
dimethyl sulfide						14		2					0.07	0.37%	NA
carbon disulfide						6,200		700					0.01	0.00%	50
ethyl mercaptan						na		3.1					0.01	0.02%	0.249
isopropyl mercaptan						na		na					0.04	na	NA
tert-butyl mercaptan						na		na					0.01	na	27
ethyl methyl sulfide						na		na					0.01	na	NA
thiophene						na		na					0.01	na	NA
isobutyl mercaptan						na		na					0.02	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 mg/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 two (2) 4,000 CFM flares 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 $\text{g}/\text{s}/\text{m}^2$ 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 mg/m^3 using the following formula: $\text{ppm} * \text{MW} / 0.02404$.

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.