



# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY COMPLIANCE SUMMARY REPORT



Date 7/15/22

Wheel Plant Wheelabrator North Andover  
Unit 1 Unit Unit 1  
Outlet Source Outlet

Date	Hour	On-Line Minutes	O2		NOx		SO2					CO			Carbon Feed		FF Temp (deg F)		Steam KLbs/Hr		
			Out Vol % Dry	Status	Outlet ppm 7%O2	Status	Outlet ppm 7%O2	Status	Inlet ppm 7%O2	Status	Removal	Status	Outlet ppm 7%O2	Status	4 Hr Block	Status	Lbs/Hr Avg.	8 Hr Block	1 Hr Avg.	4 Hr Block	1 Hr Avg.
7/15/2022	0	60	9.9		191		9		55		84		4			13		302		166.5	
7/15/2022	1	60	10.0		199		8		71		89		4			13		293		164.5	
7/15/2022	2	60	9.8		198		21		62		66		3			13		311		165.7	
7/15/2022	3	60	11.6		195		19		72		74		14	6		13		309	304	142.0	159.7
7/15/2022	4	60	10.0		198		23		76		69		3			13		315		158.8	
7/15/2022	5	60	9.9		199		19		51		63		3			13		309		164.3	
7/15/2022	6	60	9.9		194		21		47		56		3			13		309		165.7	
7/15/2022	7	60	10.1		193		6		44		85		4	3		13	13	307	310	165.6	163.6
7/15/2022	8	60	10.0		190		10		95		89		3			13		302		165.2	
7/15/2022	9	60	9.9		196		15		64		77		3			13		310		166.2	
7/15/2022	10	60	9.9		191		10		58		83		3			13		315		166.9	
7/15/2022	11	60	10.0		198		18		64		73		4	4		13		316	310	165.9	166.1
7/15/2022	12	60	9.8		190		6		65		91		4			13		307		166.1	
7/15/2022	13	60	10.2		190		12		63		81		2			13		302		165.0	
7/15/2022	14	60	9.8		191		17		66		74		4			13		309		166.2	
7/15/2022	15	60	9.7		193		14		63		78		4	4		13	13	309	307	167.2	166.1
7/15/2022	16	60	10.3		193		5		53		90		4			13		304		165.0	
7/15/2022	17	60	10.0		195		15		65		77		4			13		302		167.2	
7/15/2022	18	60	9.9		197		50		75		34		4			14		312		167.0	
7/15/2022	19	60	9.9		194		19		77		75		4	4		13		310	307	165.2	166.1
7/15/2022	20	60	9.9		194		19		81		77		4			15		307		164.4	
7/15/2022	21	60	9.9		187		21		90		76		3			13		307		167.1	
7/15/2022	22	60	9.9		192		23		85		73		3			13		305		166.3	
7/15/2022	23	60	9.8		190		15		95		84		3	3		14	14	306	306	166.1	166.0

Average:  
Geometric Mean Average:

Limit:

194	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≤ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 klb/hr 4-HR Block Average

**Status Flags**

- I - Invalid
- B - Bad
- C - Calibration
- M - Maintenance
- F - Offline
- P - Purge
- T - Out of Control
- E - Excluded
- ^ - Startup
- \* - Shutdown



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Date 7/15/22

Wheel Plant Wheelabrator North Andover  
Unit 2 Unit Unit 1  
Outlet Source Outlet

Date	Hour	On-Line Minutes	O2		NOx		SO2					CO			Carbon Feed		FF Temp (deg F)		Steam KLbs/Hr		
			Out Vol % Dry	Status	Outlet ppm 7%O2	Status	Outlet ppm 7%O2	Status	Inlet ppm 7%O2	Status	Removal	Status	Outlet ppm 7%O2	Status	4 Hr Block	Status	Lbs/Hr Avg.	8 Hr Block	1 Hr Avg.	4 Hr Block	1 Hr Avg.
7/15/2022	0	60	10.8		194		14		34		59		2			13		311		160.9	
7/15/2022	1	60	10.9		187		25		74		66		2			13		312		161.2	
7/15/2022	2	60	10.9		185		23		75		69		1			13		313		161.9	
7/15/2022	3	60	10.9		183		29		93		69		2	2		13		316	313	161.7	161.4
7/15/2022	4	60	10.6		182		24		56		56		3			13		316		160.7	
7/15/2022	5	60	10.7		184		20		37		44		3			14		314		161.6	
7/15/2022	6	60	10.5		189		26		46		44		2			13		318		167.9	
7/15/2022	7	60	10.4		176		11		35		69		3	3		14	13	317	316	171.7	165.5
7/15/2022	8	60	10.5		178		20		81		75		4			14		313		169.1	
7/15/2022	9	60	10.7		168		11		57		80		3			13		309		165.8	
7/15/2022	10	60	10.9		170		5		36		88		4			13		314		170.4	
7/15/2022	11	60	10.7		171		6		46		87		4	4		14		315	313	169.5	168.7
7/15/2022	12	60	10.5		189		4		48		92		4			14		310		168.4	
7/15/2022	13	60	10.7		177		8		59		86		2			13		304		172.8	
7/15/2022	14	60	10.2		177		8		46		83		4			13		310		169.3	
7/15/2022	15	60	10.5		182		3		37		91		4	3		13	13	314	309	163.6	168.5
7/15/2022	16	60	10.6		179		3		33		91		4			14		318		162.5	
7/15/2022	17	60	10.7		172		15		50		69		4			13		315		163.3	
7/15/2022	18	60	10.6		177		30		63		53		3			13		322		165.4	
7/15/2022	19	60	10.7		168		8		47		83		3	3		14		316	318	163.9	163.8
7/15/2022	20	60	10.8		171		7		49		85		3			14		306		161.8	
7/15/2022	21	60	10.6		169		29		81		64		3			13		309		169.9	
7/15/2022	22	60	10.9		183		90		80		0		2			13		311		162.9	
7/15/2022	23	60	10.9		178		15		46		68		3	3		14	14	312	309	160.1	163.7

Average:  
Geometric Mean Average:

Limit:

179	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 15-Jul-2022

Plant Wheelabrator North Andover  
Unit Unit 1  
Source Outlet

Opacity is a measure of how much soot or smoke may be contained in stack emissions. The more smoke that is contained in the emissions the higher the level of opacity. Continuous opacity monitors located after all of the air pollution control equipment measure the opacity of the emissions from each boiler. Typically the human eye can not detect or see smoke that is less than 5% opacity. You won't see smoke from a modern trash-to-energy plant although in colder weather you will see water vapor condensation, similar to seeing your breath on a cold day. This is not considered opacity. We have a permit limit established by the Massachusetts Department of Environmental Protection of 10% opacity averaged every six (6) minutes.

Limit 10 %

Time (hr)	1-6 min	7-12 min	13-18 min	19-24 min	25-30 min	31-36 min	37-42 min	43-48 min	49-54 min	55-60 min	Average
0	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	5	IC	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1

**Status Flags**

I - Invalid                      C - Calibration                      F - Offline                      T - Out of Control                      ^ - Startup  
 B - Bad                            M - Maintenance                      P - Purge                            E - Excluded                            \* - Shutdown



# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 15-Jul-2022

Plant Wheelabrator North Andover  
Unit Unit 2  
Source Outlet

Opacity is a measure of how much soot or smoke may be contained in stack emissions. The more smoke that is contained in the emissions the higher the level of opacity. Continuous opacity monitors located after all of the air pollution control equipment measure the opacity of the emissions from each boiler. Typically the human eye can not detect or see smoke that is less than 5% opacity. You won't see smoke from a modern trash-to-energy plant although in colder weather you will see water vapor condensation, similar to seeing your breath on a cold day. This is not considered opacity. We have a permit limit established by the Massachusetts Department of Environmental Protection of 10% opacity averaged every six (6) minutes.

Limit 10 %

Time (hr)	1-6 min	7-12 min	13-18 min	19-24 min	25-30 min	31-36 min	37-42 min	43-48 min	49-54 min	55-60 min	Average
0	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	2	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	2	2	2	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	2	1	1	1	2	1	1
6	1	IBC	5	IBC	1	1	1	2	1	1	2
7	1	2	1	1	1	1	2	1	1	1	1
8	1	1	2	2	1	2	2	2	2	2	1
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	1	1	1	2	1	2	1	1
11	2	2	1	2	2	2	1	1	1	2	2
12	1	1	1	1	2	2	2	2	1	2	1
13	2	1	1	1	1	1	2	1	1	1	1
14	2	2	1	1	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	1	1	2	2	2	2	2	2	2	2
18	2	2	1	2	2	2	2	2	2	2	2
19	2	2	2	1	1	1	2	2	1	1	1
20	1	1	1	1	2	1	1	1	1	1	1
21	1	2	1	1	1	2	2	2	2	2	2
22	2	2	1	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	1	1	1	2	1

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