



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



Date 4/8/22

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.
4/8/2022	0	60	9.8		175		4		31		87		6			13		304		166.1	
4/8/2022	1	60	9.9		185		9		46		82		5			13		299		166.3	
4/8/2022	2	60	10.0		192		11		24		55		5			13		307		166.7	
4/8/2022	3	60	9.7		186		14		35		60		5	6		13		312	305	167.8	166.7
4/8/2022	4	60	10.1		181		10		45		77		6			13		308		166.8	
4/8/2022	5	60	10.1		179		6		28		77		6			13		303		165.1	
4/8/2022	6	60	10.0		181		20		50		60		7			13		309		165.8	
4/8/2022	7	60	10.2		181		16		31		47		7	6		13	13	311	308	166.5	166.0
4/8/2022	8	60	10.4		187		23		34		32		6			13		309		167.8	
4/8/2022	9	60	10.3		182		10		22		53		7			13		302		165.5	
4/8/2022	10	60	9.9		186		12		31		63		7			13		303		166.7	
4/8/2022	11	60	9.6		190		19		36		48		7	7		13		308	306	170.7	167.7
4/8/2022	12	60	10.0		193		21		53		60		7			13		307		169.1	
4/8/2022	13	60	9.9		190		18		70		75		7			13		310		169.6	
4/8/2022	14	60	9.5		185		4		32		86		7			13		309		168.4	
4/8/2022	15	60	9.9		176		9		58		85		7	7		13	13	304	307	164.5	167.9
4/8/2022	16	60	9.6		189		12		80		85		6			13		304		167.2	
4/8/2022	17	60	9.7		198		16		56		72		6			14		309		168.5	
4/8/2022	18	60	10.0		196		19		73		74		6			13		312		168.2	
4/8/2022	19	60	10.2		196		17		72		77		7	6		13		307	308	167.0	167.7
4/8/2022	20	60	9.8		196		16		55		70		6			13		305		166.7	
4/8/2022	21	60	9.7		193		19		55		66		6			14		317		166.5	
4/8/2022	22	60	9.8		198		21		65		68		5			14		313		166.6	
4/8/2022	23	60	10.0		193		21		66		68		6	6		14	13	315	312	164.4	166.1

Average:  
Geometric Mean Average:

Limit:

188	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

71
≥ 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 4/8/22

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.
4/8/2022	0	60	9.8		195		1		41		96		2			13		310		167.7	
4/8/2022	1	60	9.9		190		2		38		95		2			13		310		167.9	
4/8/2022	2	60	9.8		187		1		43		97		2			14		310		167.8	
4/8/2022	3	60	9.6		195		2		49		96		2	2		13		310	310	167.8	167.8
4/8/2022	4	60	9.6		195		5		63		92		3			13		310		168.1	
4/8/2022	5	60	9.8		190		3		55		95		1			13		310		167.5	
4/8/2022	6	60	9.8		180		11		82		86		2			13		310		166.7	
4/8/2022	7	60	9.7		192		4		57		92		2	2		13	13	310	310	167.3	167.4
4/8/2022	8	60	10.1		189		2		46		96		1			13		310		157.9	
4/8/2022	9	60	9.8		194		4		56		92		3			13		310		167.8	
4/8/2022	10	60	9.9		183		4		63		94		1			13		309		167.7	
4/8/2022	11	60	9.4		188		2		56		97		3	2		13		310	310	168.0	165.3
4/8/2022	12	60	9.7		192		11		95		89		2			12		310		166.9	
4/8/2022	13	60	9.4		193		7		78		91		2			11		310		167.3	
4/8/2022	14	60	9.5		191		31		151		79		2			13		310		167.8	
4/8/2022	15	60	9.5		192		37		176		79		2	2		14	13	310	310	166.6	167.2
4/8/2022	16	60	9.6		188		10		106		91		2			15		310		163.7	
4/8/2022	17	60	9.5		194		5		78		94		3			13		310		168.5	
4/8/2022	18	60	9.7		191		62		232		74		3			12		310		166.1	
4/8/2022	19	60	9.6		196		13		115		89		1	2		13		308	310	169.3	166.9
4/8/2022	20	60	9.3		189		16		117		86		2			13		310		168.5	
4/8/2022	21	60	9.5		198		19		115		83		2			14		310		167.8	
4/8/2022	22	60	9.6		195		12		97		88		2			14		310		167.2	
4/8/2022	23	60	9.5		196		11		96		88		2	2		14	14	310	310	167.0	167.6

Average:  
Geometric Mean Average:

Limit:

191	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

92
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 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 08-Apr-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	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	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

**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 08-Apr-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IBC	6	IBC	2	2	2	2	2	2	3
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	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	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

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