



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



Date 6/3/22

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.
6/3/2022	0	60	10.3		195		19		67		72		3			13		304		166.3	
6/3/2022	1	60	10.3		201		21		64		67		2			13		304		164.6	
6/3/2022	2	60	10.3		198		14		48		70		2			13		305		164.0	
6/3/2022	3	60	10.1		199		17		51		68		2	2		14		304	304	166.0	165.2
6/3/2022	4	60	10.3		200		12		45		73		2			13		305		165.7	
6/3/2022	5	60	10.4		198		7		20		64		2			13		305		167.5	
6/3/2022	6	60	10.4		199		21		55		62		3			14		304		164.4	
6/3/2022	7	60	10.4		196		12		38		68		4	3		13	13	304	304	164.2	165.4
6/3/2022	8	60	10.4		185		7		33		79		3			13		305		166.0	
6/3/2022	9	60	10.7		192		7		40		83		4			13		304		163.7	
6/3/2022	10	60	10.6		201		10		24		57		4			13		305		162.6	
6/3/2022	11	60	10.7		193		3		23		87		3	4		13		304	304	165.4	164.5
6/3/2022	12	60	10.3		199		3		32		90		4			13		304		164.6	
6/3/2022	13	60	10.6		199		7		33		77		3			13		304		163.7	
6/3/2022	14	60	10.2		196		7		45		85		5			14		305		167.0	
6/3/2022	15	60	10.2		198		5		37		87		5	4		13	13	304	304	166.8	165.5
6/3/2022	16	60	10.2		189		5		34		85		5			13		304		164.5	
6/3/2022	17	60	10.0		193		2		37		94		5			13		304		167.0	
6/3/2022	18	60	10.3		197		5		46		89		4			14		304		164.8	
6/3/2022	19	60	10.1		197		3		40		92		4	4		13		304	304	165.2	165.4
6/3/2022	20	60	10.2		196		6		38		85		4			13		304		163.5	
6/3/2022	21	60	10.2		196		6		37		84		4			13		304		164.7	
6/3/2022	22	60	10.2		194		5		32		83		4			13		305		166.0	
6/3/2022	23	60	10.1		198		4		35		89		4	4		13	13	304	304	165.2	164.9

Average:  
Geometric Mean Average:

Limit:

196	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 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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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.
6/3/2022	0	60	10.4		192		18		43		57		0			13		311		166.0	
6/3/2022	1	60	10.2		195		22		53		58		0			13		310		166.1	
6/3/2022	2	60	10.2		193		14		36		61		0			14		313		165.9	
6/3/2022	3	60	10.2		196		22		43		49		0	0		15		317	313	165.5	165.9
6/3/2022	4	60	10.3		185		11		38		70		2			14		313		166.2	
6/3/2022	5	60	10.3		195		7		30		78		0			14		309		165.3	
6/3/2022	6	60	10.5		192		6		22		71		1			14		316		166.0	
6/3/2022	7	60	10.3		198		6		23		72		2	1		14	14	316	314	165.5	165.7
6/3/2022	8	60	10.7		177		5		26		81		1			14		311		165.7	
6/3/2022	9	60	10.5		192		7		37		82		2			14		313		164.1	
6/3/2022	10	60	10.2		196		7		27		73		2			14		320		165.5	
6/3/2022	11	60	10.5		156		3		19		84		0	1		14		307	313	167.3	165.7
6/3/2022	12	60	10.2		193		2		22		91		1			14		318		165.1	
6/3/2022	13	60	10.4		197		4		34		89		0			14		311		166.3	
6/3/2022	14	60	10.2		196		6		45		86		1			14		312		166.1	
6/3/2022	15	60	10.0		198		4		34		87		1	1		14	14	310	313	165.8	165.9
6/3/2022	16	60	10.0		196		3		29		90		1			15		309		165.0	
6/3/2022	17	60	9.9		197		3		26		89		1			14		314		166.0	
6/3/2022	18	60	9.9		197		2		23		91		1			14		310		165.2	
6/3/2022	19	60	10.0		196		2		23		91		1	1		14		310	311	165.5	165.4
6/3/2022	20	60	10.0		196		2		24		90		0			14		306		165.2	
6/3/2022	21	60	10.1		193		3		25		88		1			14		304		165.9	
6/3/2022	22	60	10.2		196		3		16		79		0			14		303		167.4	
6/3/2022	23	60	10.2		198		5		23		80		1	1		14	14	307	305	166.1	166.2

Average:  
Geometric Mean Average:

Limit:

193	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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

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

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



Date 03-Jun-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	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

**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 03-Jun-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	0	0	0	1	1	0	1	1	1	0	0
1	0	1	1	1	1	1	1	1	1	1	0
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	0	0	0	0	0	1	0	0
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	IBC	4	IBC	1	1	1	1	1	1	1
7	1	1	1	1	0	1	1	1	1	1	0
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	0	1	1	1	1
12	0	1	1	1	1	1	1	1	1	1	0
13	0	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	0	0	0	1	0
18	0	1	1	1	1	1	1	1	1	1	0
19	0	0	1	1	0	1	1	1	1	1	0
20	0	0	0	0	0	1	1	0	1	1	0
21	1	1	0	0	0	0	0	1	1	0	0
22	1	1	1	1	0	0	1	1	1	0	0
23	1	1	1	1	1	1	1	1	1	1	1

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