



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



Date 2/8/22

Wheel Plant Wheelabrator North Andover  
Unit 1 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.
2/8/2022	0	60	9.7		197		20		2		0		6			14		305		166.7	
2/8/2022	1	60	10.1		199		8		0		0		7			14		304		160.6	
2/8/2022	2	60	9.9		193		16		2		0		7			14		305		160.4	
2/8/2022	3	60	10.0		197		16		3		0		6	6		14		304	304	163.8	162.8
2/8/2022	4	60	9.8		192		13		1		0		7			14		304		162.5	
2/8/2022	5	60	9.6		195		13		5		0		7			14		305		163.1	
2/8/2022	6	60	9.7		196		9		2		0		7			14		304		164.4	
2/8/2022	7	60	9.6		196		14		5		0		6	7		14	14	304	304	165.7	163.9
2/8/2022	8	60	9.9		195		11		56		81		7			14		304		163.7	
2/8/2022	9	60	9.6		191		12		64		81		8			14		304		161.8	
2/8/2022	10	60	9.7		199		16		62		75		8			14		305		167.3	
2/8/2022	11	60	10.0		199		18		60		70		8	8		14		305	304	163.6	164.1
2/8/2022	12	60	9.8		197		17		57		71		7			14		304		164.3	
2/8/2022	13	60	9.8		196		8		41		81		8			15		304		163.8	
2/8/2022	14	60	9.7		198		7		30		77		7			14		304		165.3	
2/8/2022	15	60	9.8		197		7		35		80		6	7		14	14	304	304	166.4	164.9
2/8/2022	16	60	9.8		198		8		27		72		7			15		304		165.6	
2/8/2022	17	60	9.7		195		12		54		78		7			14		304		165.8	
2/8/2022	18	60	9.9		192		6		28		80		7			14		304		165.8	
2/8/2022	19	60	9.9		191		6		30		81		6	7		14		304	304	163.6	165.2
2/8/2022	20	60	9.8		194		4		25		83		7			14		304		164.5	
2/8/2022	21	60	9.9		194		4		23		81		7			14		304		164.4	
2/8/2022	22	60	9.7		195		6		33		83		7			14		304		165.0	
2/8/2022	23	60	9.7		194		4		31		86		7	7		14	14	304	304	165.8	164.9

Average: Geometric Mean Average:	195	10	<b>OR</b>	31	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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



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



Date 2/8/22

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.
2/8/2022	0	60	9.7		197		12		31		61		2			14		310		165.6	
2/8/2022	1	60	9.6		197		7		24		70		2			14		310		165.9	
2/8/2022	2	60	9.5		198		6		22		72		2			14		310		165.7	
2/8/2022	3	60	9.7		194		9		24		61		2	2		14		310	310	164.9	165.5
2/8/2022	4	60	9.6		200		9		24		64		2			14		310		165.9	
2/8/2022	5	60	9.5		196		8		34		75		3			14		310		165.3	
2/8/2022	6	60	9.6		199		18		34		47		3			14		310		165.9	
2/8/2022	7	60	9.3		198		12		41		70		3	3		14	14	309	310	166.7	165.9
2/8/2022	8	60	9.5		198		15		113		87		3			14		310		166.9	
2/8/2022	9	60	9.3		198		12		60		80		3			14		310		165.8	
2/8/2022	10	60	9.1		195		10		49		79		2			14		310		166.8	
2/8/2022	11	60	9.0		196		7		44		84		3	3		14		310	310	165.7	166.3
2/8/2022	12	60	9.3		196		19		66		70		2			14		310		167.2	
2/8/2022	13	60	9.3		200		7		47		85		3			14		310		167.1	
2/8/2022	14	60	9.2		194		7		42		84		3			14		310		166.4	
2/8/2022	15	60	9.1		196		4		36		89		2	2		14	14	310	310	166.8	166.9
2/8/2022	16	60	9.3		198		6		40		85		2			14		310		166.1	
2/8/2022	17	60	9.2		195		4		36		89		2			14		310		166.2	
2/8/2022	18	60	9.2		196		3		29		89		2			14		310		166.9	
2/8/2022	19	60	9.3		196		5		35		87		2	2		14		310	310	166.5	166.4
2/8/2022	20	60	9.2		194		4		33		88		2			15		310		166.3	
2/8/2022	21	60	9.4		197		3		28		89		2			13		310		166.5	
2/8/2022	22	60	9.3		198		6		38		85		2			14		310		166.3	
2/8/2022	23	60	9.3		194		5		36		85		2	2		14	14	310	310	166.4	166.4

Average:  
Geometric Mean Average:

Limit:

197	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 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-Feb-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	7	IC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	2	1	1	2	2	1
9	1	2	2	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	2	1	2	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 08-Feb-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	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

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