



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



Date 3/10/22

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.
3/10/2022	0	60	10.0		195		21		65		68		4			18		309		166.9	
3/10/2022	1	60	10.3		188		21		55		61		3			19		309		165.2	
3/10/2022	2	60	10.2		195		20		50		61		2			16		310		168.3	
3/10/2022	3	60	10.3		185		24		76		69		5	3		19		309	309	165.3	166.4
3/10/2022	4	60	10.3		199		23		77		70		6			17		310		165.8	
3/10/2022	5	60	10.2		196		22		53		59		5			17		310		165.1	
3/10/2022	6	60	10.3		199		23		53		56		6			18		309		165.0	
3/10/2022	7	60	10.2		196		23		55		58		6	6		18	18	309	309	165.3	165.3
3/10/2022	8	60	10.2		195		19		56		65		6			16		309		168.4	
3/10/2022	9	60	10.2		198		14		50		73		6			15		309		165.5	
3/10/2022	10	60	10.4		193		14		47		71		5			13		309		165.9	
3/10/2022	11	60	10.1		198		4		31		87		6	6		14		310	309	165.5	166.3
3/10/2022	12	60	10.3		197		21		87		76		4			14		309		166.9	
3/10/2022	13	60	9.9		199		6		37		84		6			16		310		165.1	
3/10/2022	14	60	10.0		197		18		82		78		6			14		308		166.7	
3/10/2022	15	60	10.0		200		12		45		72		6	5		13	14	309	309	168.4	166.8
3/10/2022	16	60	9.9		188		15		53		71		6			13		309		166.3	
3/10/2022	17	60	9.9		189		3		30		90		6			15		309		164.0	
3/10/2022	18	60	10.1		199		17		53		68		5			13		309		165.0	
3/10/2022	19	60	10.2		198		22		66		67		5	6		14		309	309	164.8	165.0
3/10/2022	20	60	10.1		198		18		51		65		5			15		309		164.5	
3/10/2022	21	60	10.0		201		24		72		66		5			17		308		167.3	
3/10/2022	22	60	9.9		199		27		93		71		6			15		304		167.9	
3/10/2022	23	60	9.9		192		15		54		72		5	5		13	14	304	307	165.6	166.3

Average:  
Geometric Mean Average:

Limit:

196	16
≤ 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 3/10/22

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.
3/10/2022	0	60	9.2		178		14		30		52		2			15		310		166.8	
3/10/2022	1	60	9.4		167		12		24		49		3			15		310		166.6	
3/10/2022	2	60	9.2		168		15		26		45		2			15		310		167.6	
3/10/2022	3	60	9.4		172		19		36		47		2	2		15		310	310	165.9	166.7
3/10/2022	4	60	9.3		167		23		34		31		5			14		310		166.9	
3/10/2022	5	60	9.4		163		20		45		55		2			15		310		166.9	
3/10/2022	6	60	9.6		181		19		30		37		3			15		310		164.3	
3/10/2022	7	60	9.4		176		24		33		28		3	3		15	15	310	310	166.1	166.0
3/10/2022	8	60	9.5		176		15		30		50		4			16		310		166.1	
3/10/2022	9	60	9.3		175		7		26		75		3			14		310		167.4	
3/10/2022	10	60	9.4		173		6		21		72		3			15		310		166.9	
3/10/2022	11	60	9.4		167		6		25		75		4	3		12		310	310	165.8	166.5
3/10/2022	12	60	9.3		160		10		35		70		3			13		310		167.0	
3/10/2022	13	60	9.1		174		7		30		75		3			15		310		167.1	
3/10/2022	14	60	9.3		182		18		72		75		4			12		309		165.8	
3/10/2022	15	60	9.5		173		8		31		75		1	3		13	14	310	310	166.4	166.6
3/10/2022	16	60	9.2		175		11		31		64		3			13		310		166.4	
3/10/2022	17	60	9.1		180		2		17		87		3			11		310		167.0	
3/10/2022	18	60	9.1		179		2		25		91		3			11		310		166.9	
3/10/2022	19	60	9.4		170		7		34		79		3	3		16		310	310	166.2	166.6
3/10/2022	20	60	9.2		178		8		29		72		3			16		310		167.4	
3/10/2022	21	60	9.3		186		21		61		66		2			16		309		166.4	
3/10/2022	22	60	9.2		182		22		59		63		3			14		305		166.8	
3/10/2022	23	60	9.1		172		16		39		59		3	3		14	14	305	307	167.3	167.0

Average:  
Geometric Mean Average:

Limit:

174	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

66
≥ 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 10-Mar-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	1	2	2	2	2	2	2	2	2	2	1
4	2	2	1	1	2	2	2	2	2	2	1
5	2	2	2	2	2	2	1	1	2	2	1
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	1	2	2	2	1	1
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	1	2	2	2	1	2	1
22	2	2	2	2	2	2	2	2	2	2	2
23	1	2	2	1	2	2	2	2	2	2	1

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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 10-Mar-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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