



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



Date 2/10/22

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.
2/10/2022	0	60	9.6		197		8		24		68		8			13		304		166.3	
2/10/2022	1	60	9.8		194		8		23		64		7			13		304		165.0	
2/10/2022	2	60	9.6		196		20		61		67		7			13		304		168.1	
2/10/2022	3	60	9.8		198		17		50		66		7	7		13		305	304	165.5	166.2
2/10/2022	4	60	9.9		198		16		46		67		7			13		304		164.2	
2/10/2022	5	60	9.9		197		21		65		68		8			13		304		164.4	
2/10/2022	6	60	9.9		196		21		61		65		8			14		305		166.1	
2/10/2022	7	60	10.0		191		9		16		47		10	8		13	13	305	304	166.6	165.3
2/10/2022	8	60	9.8		194		21		50		57		9			13		307		168.5	
2/10/2022	9	60	10.2		195		18		62		70		9			13		310		165.6	
2/10/2022	10	60	10.1		198		16		46		66		8			13		309		165.6	
2/10/2022	11	60	10.3		199		17		42		60		6	8		13		310	309	165.0	166.2
2/10/2022	12	60	10.1		196		27		22		0		7			13		314		166.4	
2/10/2022	13	60	10.1		194		6		21		74		8			13		303		165.4	
2/10/2022	14	60	10.2		188		9		21		58		9			13		311		165.3	
2/10/2022	15	60	10.3		199		17		22		23		9	8		13	13	309	309	166.1	165.8
2/10/2022	16	60	10.3		186		39		114		66		9			13		310		168.2	
2/10/2022	17	60	10.6		189		73		229		68		8			13		309		167.2	
2/10/2022	18	60	10.1		195		59		177		67		8			13		310		166.8	
2/10/2022	19	60	10.2		198		23		69		67		8	8		13		309	309	165.7	167.0
2/10/2022	20	60	10.1		197		23		92		75		8			13		309		165.6	
2/10/2022	21	60	10.2		199		31		115		73		8			13		309		166.4	
2/10/2022	22	60	10.2		198		26		96		72		8			13		310		164.6	
2/10/2022	23	60	10.0		197		21		91		77		7	8		13	13	309	309	166.4	165.7

Average:  
Geometric Mean Average:

Limit:

195	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

64
≥ 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 2/10/22

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.
2/10/2022	0	60	9.4		195		13		32		60		2			14		310		166.7	
2/10/2022	1	60	9.6		196		10		28		65		2			13		310		166.0	
2/10/2022	2	60	9.6		183		14		34		59		4			13		310		164.6	
2/10/2022	3	60	9.4		193		22		53		58		3	3		13		310	310	167.4	166.2
2/10/2022	4	60	9.5		184		10		45		78		4			13		310		166.1	
2/10/2022	5	60	9.4		189		17		62		73		3			13		310		166.9	
2/10/2022	6	60	9.6		197		15		47		67		3			14		310		166.5	
2/10/2022	7	60	9.5		194		6		24		77		5	4		13	13	310	310	166.3	166.4
2/10/2022	8	60	9.5		189		24		86		72		4			14		310		167.1	
2/10/2022	9	60	9.5		194		22		70		69		3			13		310		166.8	
2/10/2022	10	60	9.3		195		12		40		70		2			13		310		167.1	
2/10/2022	11	60	9.2		182		12		33		64		3	3		13		310	310	165.5	166.6
2/10/2022	12	60	9.1		192		20		29		32		2			13		313		167.6	
2/10/2022	13	60	9.1		192		3		25		87		2			13		310		167.0	
2/10/2022	14	60	9.3		188		7		33		79		2			13		310		166.1	
2/10/2022	15	60	9.5		188		11		31		64		4	3		12	13	310	311	166.2	166.7
2/10/2022	16	60	9.7		190		33		79		58		2			13		310		167.7	
2/10/2022	17	60	9.7		181		110		301		63		3			13		307		165.9	
2/10/2022	18	60	9.4		184		27		127		79		4			13		300		166.3	
2/10/2022	19	60	9.2		183		3		25		87		3	3		13		300	304	166.8	166.7
2/10/2022	20	60	9.3		197		3		36		92		3			14		300		165.1	
2/10/2022	21	60	9.5		190		11		69		84		2			13		300		166.5	
2/10/2022	22	60	9.5		193		6		41		85		2			13		300		166.7	
2/10/2022	23	60	9.5		195		10		60		83		2	2		14	13	300	300	166.9	166.3

Average:  
Geometric Mean Average:

Limit:

190	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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
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## WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 10-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	6	IC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
8	2	2	2	2	2	1	1	1	2	1	1
9	1	1	1	1	1	1	1	1	1	1	1
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	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 10-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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