



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



Date 2/9/22

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.
2/9/2022	0	60	10.1		195		4		26		86		7			14		304		163.6	
2/9/2022	1	60	10.1		197		3		26		87		7			14		304		161.5	
2/9/2022	2	60	10.0		197		3		26		86		8			14		304		164.1	
2/9/2022	3	60	9.8		196		7		37		81		8	7		14		305	304	165.3	163.6
2/9/2022	4	60	9.9		197		9		23		60		6			14		304		168.7	
2/9/2022	5	60	10.0		195		8		18		56		7			14		304		164.9	
2/9/2022	6	60	10.1		195		10		24		59		8			14		304		163.9	
2/9/2022	7	60	10.0		200		13		46		72		7	7		15	14	305	304	164.8	165.6
2/9/2022	8	60	10.1		198		12		43		72		7			14		304		165.6	
2/9/2022	9	60	10.0		196		9		40		77		6			13		304		166.7	
2/9/2022	10	60	10.3		198		17		64		73		8			13		304		164.3	
2/9/2022	11	60	10.2		197		16		40		58		7	7		13		304	304	166.5	165.8
2/9/2022	12	60	10.1		199		20		66		70		8			13		304		168.0	
2/9/2022	13	60	9.9		196		14		51		72		9			13		304		166.5	
2/9/2022	14	60	10.2		197		16		51		68		7			13		305		164.4	
2/9/2022	15	60	10.3		199		22		63		65		7	8		13	13	304	304	165.2	166.0
2/9/2022	16	60	10.1		196		7		26		72		7			13		304		164.4	
2/9/2022	17	60	10.1		196		13		23		43		7			13		305		167.6	
2/9/2022	18	60	10.0		199		9		19		53		7			13		304		168.5	
2/9/2022	19	60	10.0		197		10		25		61		7	7		13		304	304	165.4	166.5
2/9/2022	20	60	9.8		198		7		23		68		8			12		304		165.5	
2/9/2022	21	60	10.0		199		10		25		59		7			13		304		162.8	
2/9/2022	22	60	9.8		198		11		32		66		7			13		305		166.1	
2/9/2022	23	60	9.8		197		11		31		64		7	7		13	13	304	304	165.9	165.1

Average: Geometric Mean Average:	197	10	<b>OR</b>	70	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 2/9/22

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.
2/9/2022	0	60	9.4		194		4		28		86		2			14		310		166.2	
2/9/2022	1	60	9.4		197		4		29		87		2			14		310		165.4	
2/9/2022	2	60	9.5		197		5		29		83		2			14		310		166.6	
2/9/2022	3	60	9.5		195		5		26		81		2	2		14		310	310	166.8	166.3
2/9/2022	4	60	9.4		189		7		27		74		2			14		310		166.6	
2/9/2022	5	60	9.4		196		7		30		76		1			14		310		166.6	
2/9/2022	6	60	9.6		193		9		36		75		2			14		310		166.7	
2/9/2022	7	60	9.4		195		8		34		78		3	2		14	14	310	310	164.3	166.1
2/9/2022	8	60	9.4		196		9		37		75		2			14		310		167.1	
2/9/2022	9	60	9.7		196		19		67		72		2			13		310		166.3	
2/9/2022	10	60	9.4		192		12		33		63		3			13		310		166.5	
2/9/2022	11	60	9.6		192		16		33		53		3	2		13		310	310	166.3	166.5
2/9/2022	12	60	9.5		193		12		36		67		2			13		310		166.5	
2/9/2022	13	60	9.2		195		18		71		75		2			13		310		165.6	
2/9/2022	14	60	9.5		187		15		44		66		1			13		310		165.8	
2/9/2022	15	60	9.6		197		26		79		67		2	2		13	13	310	310	166.9	166.2
2/9/2022	16	60	9.2		193		13		45		71		2			13		310		166.7	
2/9/2022	17	60	9.3		195		11		34		67		2			13		310		166.3	
2/9/2022	18	60	9.4		197		15		36		58		3			13		310		166.9	
2/9/2022	19	60	9.5		193		8		19		56		3	3		13		310	310	165.6	166.4
2/9/2022	20	60	9.4		196		7		26		72		2			13		310		167.6	
2/9/2022	21	60	9.6		189		18		46		60		2			13		310		166.6	
2/9/2022	22	60	9.7		196		16		44		64		2			14		310		166.6	
2/9/2022	23	60	9.5		196		14		39		64		3	2		14	13	310	310	167.0	166.9

Average:  
Geometric Mean Average:

Limit:

194	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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 09-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	5	IC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	2	2	2	1	1
8	2	2	2	2	2	2	2	2	2	2	2
9	1	2	1	1	2	1	1	1	2	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	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 09-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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