



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



Date 1/18/23

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.
1/18/2023	0	60	10.2		201		5		35		86		5			13		309		166.9	
1/18/2023	1	60	10.3		195		4		35		88		5			13		309		165.2	
1/18/2023	2	60	10.5		200		7		41		84		5			13		309		166.5	
1/18/2023	3	60	10.5		197		14		51		74		4	5		13		309	309	166.2	166.2
1/18/2023	4	60	10.5		195		12		51		76		5			13		309		165.8	
1/18/2023	5	60	10.4		200		9		40		77		4			13		310		165.0	
1/18/2023	6	60	10.5		198		15		51		72		5			13		310		165.4	
1/18/2023	7	60	10.7		192		28		81		65		4	4		13	13	309	309	168.7	166.2
1/18/2023	8	60	10.8		199		22		58		63		6			13		309		165.0	
1/18/2023	9	60	10.8		197		20		48		57		5			13		309		165.5	
1/18/2023	10	60	11.0		199		22		71		69		5			13		309		165.8	
1/18/2023	11	60	10.9		199		17		53		67		5	5		13		310	309	165.2	165.4
1/18/2023	12	60	10.6		196		8		37		78		6			13		310		166.4	
1/18/2023	13	60	10.9		204		21		53		61		5			13		309		166.1	
1/18/2023	14	60	11.0		196		24		44		45		4			13		309		166.0	
1/18/2023	15	60	10.5		199		6		28		79		4	5		13	13	310	309	166.0	166.1
1/18/2023	16	60	10.7		197		5		24		79		3			13		309		167.1	
1/18/2023	17	60	10.8		200		4		29		85		2			13		309		165.5	
1/18/2023	18	60	10.4		199		7		37		81		4			13		310		165.3	
1/18/2023	19	60	10.3		199		9		41		78		4	3		13		310	309	166.2	166.0
1/18/2023	20	60	10.4		198		19		53		64		4			13		309		166.6	
1/18/2023	21	60	10.6		199		25		58		57		5			12		309		165.5	
1/18/2023	22	60	10.7		198		24		68		64		4			13		309		165.8	
1/18/2023	23	60	10.6		198		21		63		67		3	4		13	13	309	309	165.2	165.8

Average:  
Geometric Mean Average:

Limit:

198	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
≤ 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 1/18/23

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.
1/18/2023	0	60	10.3		196		1		18		95		4			13		310		165.7	
1/18/2023	1	60	10.4		193		1		24		96		4			13		310		165.6	
1/18/2023	2	60	10.3		197		0		25		99		5			13		310		165.8	
1/18/2023	3	60	10.3		182		1		32		96		4	4		13		310	310	165.6	165.7
1/18/2023	4	60	10.3		198		1		28		97		5			13		310		165.5	
1/18/2023	5	60	10.3		195		1		27		96		3			14		310		165.7	
1/18/2023	6	60	10.3		190		2		27		94		4			14		310		165.3	
1/18/2023	7	60	10.6		194		8		50		84		5	4		13	13	310	310	165.3	165.4
1/18/2023	8	60	11.1		190		23		41		45		5			13		310		165.3	
1/18/2023	9	60	10.9		193		6		26		77		5			14		310		165.4	
1/18/2023	10	60	11.2		193		2		19		89		5			13		310		164.7	
1/18/2023	11	60	10.7		198		1		19		97		5	5		13		310	310	165.9	165.3
1/18/2023	12	60	10.2		182		1		21		93		108			13		310		154.5	
1/18/2023	13	60	10.5		188		0		19		98		3			13		310		166.6	
1/18/2023	14	60	10.4		191		6		43		87		4			14		310		166.3	
1/18/2023	15	60	10.3		194		1		23		96		5	30		13	13	310	310	167.2	163.7
1/18/2023	16	60	10.9		193		1		19		94		3			13		310		165.3	
1/18/2023	17	60	10.5		187		1		24		96		3			14		310		167.2	
1/18/2023	18	60	10.7		193		1		22		96		4			13		310		166.9	
1/18/2023	19	60	10.9		192		1		26		95		3	3		13		310	310	166.7	166.5
1/18/2023	20	60	10.9		190		4		32		87		4			13		310		166.4	
1/18/2023	21	60	11.0		194		10		32		70		4			14		310		166.6	
1/18/2023	22	60	11.0		189		13		31		59		5			13		310		166.4	
1/18/2023	23	60	11.1		192		12		40		70		5	4		13	13	310	310	166.3	166.4

Average:  
Geometric Mean Average:

Limit:

192	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

93
≥ 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 18-Jan-2023

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	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

**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 18-Jan-2023

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	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	IBC	5	IBC	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	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	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

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