



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



Date 8/19/22

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.
8/19/2022	0	60	9.7		178		19		65		71		6			14		298		164.1	
8/19/2022	1	60	9.7		180		24		79		70		3			14		296		167.1	
8/19/2022	2	60	9.5		185		14		46		69		3			14		299		166.8	
8/19/2022	3	60	9.3		190		9		38		76		3	4		14		299	298	166.8	166.2
8/19/2022	4	60	9.5		183		9		38		77		3			13		299		163.9	
8/19/2022	5	60	9.4		193		20		43		54		3			14		305		166.7	
8/19/2022	6	60	9.7		180		8		28		70		5			13		307		157.6	
8/19/2022	7	60	9.6		175		11		25		56		4	4		11	13	310	305	165.4	163.4
8/19/2022	8	60	9.8		178		21		61		66		4			13		306		167.8	
8/19/2022	9	60	10.3		182		16		54		71		3			13		303		166.8	
8/19/2022	10	60	10.3		187		25		74		66		4			14		305		166.4	
8/19/2022	11	60	10.0		193		37		81		55		5	4		14		312	306	165.8	166.7
8/19/2022	12	60	9.8		191		28		62		55		5			14		312		165.9	
8/19/2022	13	60	9.8		197		18		30		40		5			14		320		166.4	
8/19/2022	14	60	9.9		191		11		29		62		5			14		306		164.5	
8/19/2022	15	60	9.8		195		19		25		24		5	5		14	14	316	314	165.5	165.6
8/19/2022	16	60	9.9		193		8		27		71		4			14		311		165.8	
8/19/2022	17	60	9.7		191		13		32		60		4			12		303		168.8	
8/19/2022	18	60	10.0		180		7		45		84		5			14		295		166.8	
8/19/2022	19	60	10.0		195		6		50		88		4	5		14		286	299	165.6	166.7
8/19/2022	20	60	10.1		193		15		65		77		4			14		287		165.3	
8/19/2022	21	60	10.0		192		25		89		71		4			14		304		165.3	
8/19/2022	22	60	10.0		192		22		77		72		4			14		310		165.1	
8/19/2022	23	60	10.0		191		25		73		66		4	4		14	14	311	303	165.3	165.2

Average:  
Geometric Mean Average:

Limit:

188	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

68
≥ 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 8/19/22

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.
8/19/2022	0	60	10.8		170		14		28		50		7			14		310		165.7	
8/19/2022	1	60	10.7		168		10		24		58		4			14		310		165.3	
8/19/2022	2	60	10.8		166		16		25		38		5			14		310		165.5	
8/19/2022	3	60	10.9		151		24		39		40		5	6		14		310	310	167.8	166.1
8/19/2022	4	60	10.6		163		29		45		37		5			14		310		166.3	
8/19/2022	5	60	10.6		166		13		21		39		6			14		310		166.3	
8/19/2022	6	60	10.0		168		7		12		45		4			14		310		162.9	
8/19/2022	7	60	10.2		163		6		16		61		4	5		14	14	310	310	165.3	165.2
8/19/2022	8	60	10.4		154		22		45		51		5			14		310		167.1	
8/19/2022	9	60	10.5		145		9		25		64		5			14		310		166.6	
8/19/2022	10	60	10.4		159		20		54		62		4			14		310		165.4	
8/19/2022	11	60	10.2		160		35		111		69		5	5		14		310	310	166.6	166.4
8/19/2022	12	60	10.4		172		28		103		73		3			14		311		166.6	
8/19/2022	13	60	10.2		161		19		41		54		5			14		310		166.8	
8/19/2022	14	60	10.0		158		14		35		60		4			14		310		166.9	
8/19/2022	15	60	9.9		195		27		44		39		2	3		14	14	310	310	167.3	166.9
8/19/2022	16	60	10.1		181		20		32		39		3			14		310		166.8	
8/19/2022	17	60	10.2		180		17		33		47		3			14		310		166.5	
8/19/2022	18	60	10.2		177		22		42		48		3			14		310		166.6	
8/19/2022	19	60	10.2		171		22		43		49		3	3		14		310	310	167.5	166.9
8/19/2022	20	60	10.4		169		22		57		62		3			14		310		166.0	
8/19/2022	21	60	10.4		175		28		96		71		3			14		310		167.2	
8/19/2022	22	60	10.4		172		23		71		68		2			14		310		166.6	
8/19/2022	23	60	10.5		173		37		124		70		3	3		14	14	310	310	166.5	166.6

Average:  
Geometric Mean Average:

Limit:

167	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

55
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 4-HR Block Average

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



Date 19-Aug-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	1
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

**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 19-Aug-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	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	1
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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