



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



Date 9/14/22

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.
9/14/2022	0	60	10.3		197		9		53		83		5			14		307		163.4	
9/14/2022	1	60	10.4		198		12		49		75		5			13		304		165.8	
9/14/2022	2	60	10.2		196		15		61		75		5			14		308		166.0	
9/14/2022	3	60	10.3		197		15		60		74		5	5		13		309	307	164.6	165.0
9/14/2022	4	60	10.1		193		11		58		82		4			14		307		167.9	
9/14/2022	5	60	10.0		192		4		27		86		5			14		302		167.3	
9/14/2022	6	60	10.0		199		6		28		79		5			13		309		165.2	
9/14/2022	7	60	10.2		191		6		28		78		5	5		14	14	306	306	165.1	166.4
9/14/2022	8	60	10.3		185		5		29		81		3			14		306		167.0	
9/14/2022	9	60	10.5		193		4		30		88		6			13		307		166.2	
9/14/2022	10	60	10.5		191		12		58		79		5			14		303		164.4	
9/14/2022	11	60	10.0		192		11		49		77		6	5		14		313	307	167.1	166.1
9/14/2022	12	60	10.3		198		8		36		78		6			14		310		165.5	
9/14/2022	13	60	10.3		197		11		43		75		6			13		310		166.7	
9/14/2022	14	60	10.4		196		10		44		77		5			14		309		165.6	
9/14/2022	15	60	10.3		200		13		54		75		5	5		14	14	309	310	166.0	166.0
9/14/2022	16	60	10.3		198		16		60		73		6			13		310		166.3	
9/14/2022	17	60	10.4		190		18		68		74		4			14		309		167.9	
9/14/2022	18	60	10.3		195		13		50		75		5			14		309		169.0	
9/14/2022	19	60	10.5		197		21		71		70		5	5		13		310	309	165.3	167.1
9/14/2022	20	60	10.4		199		11		40		72		4			14		309		166.1	
9/14/2022	21	60	10.3		197		15		46		68		4			13		309		168.1	
9/14/2022	22	60	10.3		199		17		56		69		4			14		310		165.8	
9/14/2022	23	60	10.4		199		15		45		67		4	4		13	14	309	309	164.0	166.0

Average:  
Geometric Mean Average:

Limit:

195	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

77
≥ 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

**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 9/14/22

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.
9/14/2022	0	60	10.9		172		4		29		85		7			14		313		166.2	
9/14/2022	1	60	11.1		179		12		29		59		7			14		313		164.7	
9/14/2022	2	60	10.9		174		10		29		65		6			14		316		166.3	
9/14/2022	3	60	10.9		175		12		36		66		6	6		14		314	314	167.0	166.0
9/14/2022	4	60	10.7		178		3		27		89		7			14		305		164.6	
9/14/2022	5	60	10.8		168		3		30		89		5			14		302		166.9	
9/14/2022	6	60	10.7		176		4		24		85		5			14		311		167.2	
9/14/2022	7	60	10.9		167		4		24		82		6	6		14	14	306	306	166.6	166.3
9/14/2022	8	60	11.3		171		3		15		82		8			14		303		161.0	
9/14/2022	9	60	11.1		161		5		25		78		8			13		307		166.4	
9/14/2022	10	60	11.0		184		5		23		79		8			14		311		164.8	
9/14/2022	11	60	10.6		179		4		31		86		7	8		14		306	307	166.7	164.7
9/14/2022	12	60	10.7		177		7		39		81		8			13		310		167.1	
9/14/2022	13	60	10.9		182		5		26		81		6			13		310		165.1	
9/14/2022	14	60	10.5		179		5		31		83		7			13		310		166.7	
9/14/2022	15	60	10.6		182		6		30		82		6	7		13	14	310	310	166.2	166.3
9/14/2022	16	60	10.7		172		11		42		74		7			14		310		167.8	
9/14/2022	17	60	10.9		152		7		28		74		6			14		310		167.3	
9/14/2022	18	60	11.0		160		3		19		82		6			14		310		166.0	
9/14/2022	19	60	11.0		181		4		19		80		7	6		14		310	310	164.1	166.3
9/14/2022	20	60	11.3		159		7		26		75		5			14		309		168.8	
9/14/2022	21	60	11.2		166		7		22		68		6			14		310		164.7	
9/14/2022	22	50	15.9		229		10		12		19		752			16		308		88.2	
9/14/2022	23	0	19.4	IF	435	IF	141	IF	62	IBF	0	IBF	5947	IF	255	1	14	309	309	23.7	140.5

Average:  
Geometric Mean Average:

Limit:

175	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

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 14-Sep-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	3	IC	6	IC	0	0	0	0	1	0	1
7	1	1	1	1	1	1	1	1	0	1	0
8	0	1	1	1	1	1	1	1	1	1	0
9	0	1	1	1	1	0	1	1	1	0	0
10	1	0	0	0	0	0	0	1	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	1	0	0
13	0	1	0	0	0	0	0	0	0	0	0
14	0	1	1	0	0	0	0	0	0	0	0
15	1	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

**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 14-Sep-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	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	IF	1	IF
23	1	IF	1	IF	1	IF	1	IF	1	IF	1

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