



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



Date 8/14/22

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.
8/14/2022	0	60	9.8		163		2		62		97		2			17		290		162.3	
8/14/2022	1	60	9.9		179		6		70		92		2			15		294		165.1	
8/14/2022	2	60	9.7		178		9		59		85		2			14		302		165.4	
8/14/2022	3	60	9.9		183		12		62		81		2	2		15		304	298	164.1	164.2
8/14/2022	4	60	9.7		184		14		69		80		3			15		304		163.4	
8/14/2022	5	60	9.8		177		15		57		73		3			14		305		164.4	
8/14/2022	6	60	9.6		165		18		52		65		3			14		311		165.9	
8/14/2022	7	60	9.5		164		19		74		74		3	3		14	15	313	308	165.5	164.8
8/14/2022	8	60	9.8		156		14		101		86		4			13		302		163.6	
8/14/2022	9	60	9.9		171		21		101		79		4			14		298		162.3	
8/14/2022	10	60	9.5		170		13		45		72		3			13		312		167.4	
8/14/2022	11	60	9.8		176		14		49		70		2	3		13		316	307	167.0	165.1
8/14/2022	12	60	9.9		172		14		56		75		2			14		309		164.9	
8/14/2022	13	60	9.6		170		10		50		80		9			14		312		168.1	
8/14/2022	14	60	9.9		172		7		42		84		3			14		312		164.1	
8/14/2022	15	60	9.9		177		13		48		73		3	4		14	14	316	312	165.3	165.6
8/14/2022	16	60	9.5		169		19		74		74		3			14		312		167.0	
8/14/2022	17	60	9.7		166		17		65		73		3			14		312		165.8	
8/14/2022	18	60	9.8		158		9		57		84		3			14		308		166.1	
8/14/2022	19	60	9.9		168		10		67		84		3	3		14		297	307	165.2	166.0
8/14/2022	20	60	9.9		165		20		77		75		4			14		299		164.6	
8/14/2022	21	60	9.7		163		19		77		75		4			14		306		166.1	
8/14/2022	22	60	9.7		172		18		62		70		4			14		308		165.7	
8/14/2022	23	60	9.5		163		17		63		73		24	9		14	14	311	306	167.0	165.8

Average:  
Geometric Mean Average:

Limit:

170	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 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 8/14/22

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.
8/14/2022	0	60	10.6		178		9		70		87		2			15		305		165.4	
8/14/2022	1	60	10.6		176		7		62		89		1			14		302		166.4	
8/14/2022	2	60	10.4		183		9		56		84		1			14		307		168.8	
8/14/2022	3	60	10.5		177		8		67		88		1	I		14		302	304	166.4	166.8
8/14/2022	4	60	10.7		183		6		68		91		2			14		300		165.7	
8/14/2022	5	60	10.6		182		10		57		82		2			14		304		165.1	
8/14/2022	6	60	10.5		181		13		58		77		2			13		313		166.0	
8/14/2022	7	60	10.3		181		16		80		80		2	I		15	14	313	308	167.5	166.1
8/14/2022	8	60	10.6		171		24		120		80		2			14		306		166.0	
8/14/2022	9	60	10.6		171		17		87		80		2			14		304		164.4	
8/14/2022	10	60	10.3		174		6		48		87		2			14		305		165.8	
8/14/2022	11	60	10.4		173		5		58		91		1	I		15		304	305	166.6	165.7
8/14/2022	12	60	10.4		177		11		77		86		2			15		302		165.7	
8/14/2022	13	60	10.3		176		6		60		91		2			14		301		165.9	
8/14/2022	14	60	10.4		168		11		74		85		2			14		303		166.6	
8/14/2022	15	60	10.4		167		13		66		80		2	I		15	14	304	303	165.2	165.9
8/14/2022	16	60	10.3		165		8		51		85		2			15		308		167.3	
8/14/2022	17	60	10.3		168		9		48		81		2			15		310		167.1	
8/14/2022	18	60	10.3		165		11		52		79		2			15		310		166.1	
8/14/2022	19	60	10.4		166		8		44		81		2	I		15		310	310	165.6	166.5
8/14/2022	20	60	10.4		166		11		63		82		2			15		309		166.8	
8/14/2022	21	60	10.4		170		13		67		81		2			15		304		165.4	
8/14/2022	22	60	10.4		170		15		53		71		2			15		305		167.2	
8/14/2022	23	60	10.4		167		11		46		77		3	I		15	15	304	305	165.3	166.2

Average:  
Geometric Mean Average:

Limit:

173	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

84
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

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≤ 173 4-HR Block Average

klb/hr

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



Date 14-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 14-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	0	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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