



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



Date 3/9/22

Wheel Plant Wheelabrator North Andover  
Unit 1 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.
3/9/2022	0	60	10.2		200		30		116		74		5			15		309		166.8	
3/9/2022	1	60	10.2		197		29		114		75		5			13		309		166.8	
3/9/2022	2	60	10.2		199		25		84		71		4			14		309		165.5	
3/9/2022	3	60	10.3		199		27		89		70		4	4		14		309	309	165.5	166.2
3/9/2022	4	60	10.4		194		27		89		69		3			14		310		164.9	
3/9/2022	5	60	10.2		199		28		97		72		4			15		310		164.5	
3/9/2022	6	60	10.3		197		33		121		73		3			13		309		165.9	
3/9/2022	7	60	10.3		197		30		126		76		3	3		15	14	304	308	167.5	165.7
3/9/2022	8	60	10.6		198		24		92		73		2			13		304		167.2	
3/9/2022	9	60	10.6		195		16		80		80		2			16		301		166.9	
3/9/2022	10	60	10.7		197		17		72		77		3			14		307		165.3	
3/9/2022	11	60	10.3		196		14		81		83		5	3		13		310	306	167.3	166.7
3/9/2022	12	60	10.2		200		12		56		79		5			14		310		163.7	
3/9/2022	13	60	10.2		199		7		40		83		4			13		309		165.4	
3/9/2022	14	60	10.4		197		11		41		74		3			13		310		165.3	
3/9/2022	15	60	10.1		196		16		59		74		5	4		14	14	309	309	166.1	165.1
3/9/2022	16	60	10.1		197		16		60		74		6			14		309		165.0	
3/9/2022	17	60	10.1		197		24		93		74		5			15		309		164.9	
3/9/2022	18	60	10.1		198		27		109		75		4			14		309		165.1	
3/9/2022	19	60	10.0		199		20		73		72		4	5		13		309	309	167.3	165.6
3/9/2022	20	60	10.1		197		14		44		69		4			13		309		166.5	
3/9/2022	21	60	10.0		197		21		54		60		4			14		309		166.7	
3/9/2022	22	60	10.0		196		21		53		60		4			13		309		166.0	
3/9/2022	23	60	10.1		199		24		74		67		4	4		16	14	309	309	164.6	165.9

Average:  
Geometric Mean Average:

Limit:

198	20
≤ 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 3/9/22

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.
3/9/2022	0	60	9.6		180		26		74		64		2			14		304		166.4	
3/9/2022	1	60	9.5		173		29		80		63		2			14		309		167.2	
3/9/2022	2	60	9.4		178		28		73		61		2			13		311		167.0	
3/9/2022	3	60	9.5		180		22		54		60		2	2		13		311	309	166.5	166.7
3/9/2022	4	60	9.5		177		32		87		63		3			13		312		166.8	
3/9/2022	5	60	9.7		181		25		87		71		2			14		306		166.9	
3/9/2022	6	60	9.7		179		27		77		65		2			15		302		166.2	
3/9/2022	7	60	9.8		180		36		125		71		1	2		14	14	307	307	167.2	166.8
3/9/2022	8	60	9.9		155		20		83		76		1			14		302		167.3	
3/9/2022	9	60	9.8		172		7		44		85		3			15		301		166.0	
3/9/2022	10	60	9.7		165		15		71		79		3			15		308		167.0	
3/9/2022	11	60	9.6		177		4		39		89		3	2		15		309	305	166.4	166.7
3/9/2022	12	60	9.6		182		6		37		85		3			14		310		164.8	
3/9/2022	13	60	9.5		179		5		35		86		3			14		310		166.2	
3/9/2022	14	60	9.3		186		9		39		76		3			15		310		167.1	
3/9/2022	15	60	9.5		173		11		36		71		3	3		15	15	310	310	166.7	166.2
3/9/2022	16	60	9.3		187		6		29		81		4			15		310		166.0	
3/9/2022	17	60	9.3		178		5		27		80		3			15		310		167.1	
3/9/2022	18	60	9.3		173		7		30		78		3			15		310		166.4	
3/9/2022	19	60	9.2		179		13		39		68		3	3		14		310	310	166.5	166.5
3/9/2022	20	60	9.4		175		5		21		75		3			15		310		165.8	
3/9/2022	21	60	9.5		179		12		28		58		2			15		310		166.1	
3/9/2022	22	60	9.3		179		12		32		61		2			15		310		166.5	
3/9/2022	23	60	9.4		176		20		41		50		3	2		15	15	310	310	167.1	166.4

Average:  
Geometric Mean Average:

Limit:

177	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

73
≥ 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-Mar-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	2	2	1	2	2	2	2	2	2	2	1
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	1	1	2	2	1	1
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	1	2	2	2	2	2	2	2	2	2	1
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	1	1	1	1	2	1	1
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 09-Mar-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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