



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



Date 9/5/22

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.
9/5/2022	0	60	10.8		189		23		67		66		3			14		306		165.9	
9/5/2022	1	60	10.9		193		25		69		64		3			13		307		167.4	
9/5/2022	2	60	10.5		182		27		84		68		3			14		306		169.1	
9/5/2022	3	60	10.6		193		23		65		65		4	3		14		311	308	168.5	167.7
9/5/2022	4	60	10.4		187		24		70		65		4			13		314		166.2	
9/5/2022	5	60	10.6		194		22		58		63		3			13		310		165.3	
9/5/2022	6	60	10.6		194		20		57		64		3			13		309		164.8	
9/5/2022	7	60	10.5		190		25		66		62		3	3		14	14	311	311	166.7	165.8
9/5/2022	8	60	10.6		192		23		60		62		4			14		308		164.7	
9/5/2022	9	60	10.6		191		19		53		63		4			13		310		162.9	
9/5/2022	10	60	10.5		194		23		55		57		3			13		314		165.5	
9/5/2022	11	60	10.4		187		24		55		57		3	3		14		312	311	166.4	164.9
9/5/2022	12	60	10.4		190		26		57		55		3			13		314		165.8	
9/5/2022	13	60	10.3		189		21		64		67		4			14		314		164.6	
9/5/2022	14	60	10.4		190		19		55		67		4			14		312		164.6	
9/5/2022	15	60	10.3		188		19		56		66		3	3		13	13	314	313	168.8	166.0
9/5/2022	16	60	10.3		192		8		52		84		4			13		307		166.6	
9/5/2022	17	60	10.3		190		12		58		80		3			14		301		164.2	
9/5/2022	18	60	10.3		190		12		54		78		3			14		305		164.7	
9/5/2022	19	60	10.2		196		12		66		81		3	3		13		302	304	166.9	165.6
9/5/2022	20	60	10.6		198		23		101		77		3			13		302		163.1	
9/5/2022	21	60	10.6		191		34		133		74		3			14		306		163.7	
9/5/2022	22	60	10.5		193		21		76		72		3			14		310		169.7	
9/5/2022	23	60	10.5		195		8		45		83		3	3		14	14	307	307	164.1	165.1

Average: Geometric Mean Average:	<b>191</b>	<b>19</b>	<b>OR</b>	<b>70</b>	see above	see above	see above	
Limit:	<b>≤ 205</b> 24-HR Block Avg.	<b>≤ 29</b> 24-HR Geometric Mean		<b>≥ 75%</b> Removal Efficiency	<b>≤ 69</b> ppmc 4-HR Block Average	<b>≥ 12</b> lb/hr 8-HR. Block Average	<b>≤ 345</b> °F 4-HR Block Average	<b>≤ 173</b> 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



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Date 9/5/22

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.
9/5/2022	0	60	11.1		170		7		16		56		6			15		310		164.0	
9/5/2022	1	60	11.9		169		9		19		55		10			15		309		152.3	
9/5/2022	2	60	11.5		166		14		26		45		7			14		313		161.7	
9/5/2022	3	60	11.0		168		11		18		35		6	7		14		317	312	162.9	160.2
9/5/2022	4	60	10.9		162		18		25		28		4			14		319		166.8	
9/5/2022	5	60	11.0		160		12		14		17		3			14		317		166.5	
9/5/2022	6	60	11.1		164		16		16		0		3			14		313		164.1	
9/5/2022	7	60	11.2		167		13		16		20		3	3		14	14	312	315	163.0	165.1
9/5/2022	8	60	10.9		160		18		22		21		3			14		313		165.2	
9/5/2022	9	60	11.1		160		18		20		8		3			14		312		165.0	
9/5/2022	10	60	11.8		162		12		16		26		19			14		309		152.0	
9/5/2022	11	60	11.0		158		15		20		28		3	7		14		312	311	165.3	161.9
9/5/2022	12	60	11.1		155		15		23		36		6			14		315		165.0	
9/5/2022	13	60	11.3		164		8		19		58		4			14		312		163.9	
9/5/2022	14	60	11.2		163		7		20		66		3			14		308		165.4	
9/5/2022	15	60	11.2		157		4		22		81		5	4		14	14	306	310	164.6	164.7
9/5/2022	16	60	11.0		156		6		27		80		3			14		306		164.2	
9/5/2022	17	60	10.9		150		10		30		68		3			14		308		164.7	
9/5/2022	18	60	10.9		155		6		20		71		3			14		310		163.2	
9/5/2022	19	60	10.9		157		11		23		53		4	3		14		313	309	164.4	164.1
9/5/2022	20	60	11.1		178		6		26		77		3			14		308		164.0	
9/5/2022	21	60	11.4		180		15		39		62		3			14		306		164.9	
9/5/2022	22	60	11.5		183		10		33		71		5			14		307		163.5	
9/5/2022	23	60	11.0		179		6		19		67		4	4		14	14	314	309	165.3	164.4

Average:  
Geometric Mean Average:

Limit:

164	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

53
≥ 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 05-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	4	IC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	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 05-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	3	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	3	3	3	3	3	3	3	3	3	3	3
5	3	3	3	3	3	4	4	4	4	4	3
6	2	IBC	8	IBC	4	3	4	4	4	4	4
7	4	4	4	4	4	3	4	4	4	3	4
8	4	4	4	4	4	4	4	4	4	4	4
9	4	5	4	4	4	4	4	4	4	4	4
10	4	4	4	4	4	3	4	4	4	4	4
11	4	4	4	4	3	4	4	4	4	4	4
12	4	4	4	3	4	4	4	4	4	4	4
13	4	4	4	5	5	5	5	5	6	5	5
14	4	5	5	5	5	7	4	4	4	4	5
15	5	5	10	6	1	1	1	1	1	1	3
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	2	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1

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 B - Bad                            M - Maintenance                      P - Purge                      E - Excluded                      \* - Shutdown