



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



Date 3/13/22

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.
3/13/2022	0	60	10.0		196		25		101		76		4			16		309		164.7	
3/13/2022	1	60	10.1		199		23		81		71		4			13		310		164.8	
3/13/2022	2																				
3/13/2022	3	60	10.2		199		25		92		72		4	4		14		309	309	165.5	165.0
3/13/2022	4	60	10.2		203		27		80		67		5			15		310		166.3	
3/13/2022	5	60	10.2		195		23		74		70		5			14		310		165.7	
3/13/2022	6	60	10.2		197		24		80		70		5			15		309		166.3	
3/13/2022	7	60	10.3		195		23		74		69		4	5		14	14	309	309	165.9	166.1
3/13/2022	8	60	10.3		198		26		90		72		4			14		310		165.6	
3/13/2022	9	60	10.3		199		24		82		71		5			15		309		166.4	
3/13/2022	10	60	10.2		198		22		85		75		5			13		310		165.8	
3/13/2022	11	60	10.5		196		26		101		74		5	5		14		311	310	166.3	166.0
3/13/2022	12	60	10.9		187		21		74		72		7			14		308		164.8	
3/13/2022	13	60	10.4		199		26		105		75		4			14		309		165.9	
3/13/2022	14	60	10.3		196		25		93		73		4			13		310		166.5	
3/13/2022	15	60	10.3		198		18		75		76		4	5		14	14	309	309	165.8	165.7
3/13/2022	16	60	10.2		196		20		87		77		5			14		309		164.8	
3/13/2022	17	60	10.5		195		16		68		77		3			13		310		163.7	
3/13/2022	18	60	10.4		198		28		112		75		4			14		309		164.6	
3/13/2022	19	60	10.3		200		24		97		75		4	4		14		309	309	165.4	164.6
3/13/2022	20	60	10.0		197		21		88		77		4			14		310		168.5	
3/13/2022	21	60	10.3		199		20		72		73		4			13		309		166.8	
3/13/2022	22	60	10.1		199		22		74		70		4			13		310		165.5	
3/13/2022	23	60	10.2		197		23		87		73		5	4		14	14	310	310	164.5	166.3

Average: Geometric Mean Average:	<b>197</b>	<b>23</b>	<b>OR</b>	<b>73</b>	see above	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



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



Date 3/13/22

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.
3/13/2022	0	60	9.5		166		25		67		63		2			15		311		164.9	
3/13/2022	1	60	9.5		168		25		56		55		2			14		315		165.9	
3/13/2022	2																				
3/13/2022	3	60	9.6		176		25		58		57		2	2		14		308	311	166.2	165.7
3/13/2022	4	60	9.3		179		21		46		55		4			14		303		165.8	
3/13/2022	5	60	9.5		183		22		41		46		1			14		307		165.2	
3/13/2022	6	60	9.6		187		24		57		57		2			14		309		165.4	
3/13/2022	7	60	9.8		187		24		54		55		2	2		14	14	310	308	165.2	165.4
3/13/2022	8	60	9.7		185		25		58		56		2			13		310		165.8	
3/13/2022	9	60	9.7		181		22		52		58		2			13		310		165.3	
3/13/2022	10	60	9.7		188		21		46		54		2			14		310		166.1	
3/13/2022	11	60	9.7		186		24		51		54		2	2		14		310	310	165.6	165.7
3/13/2022	12	60	9.6		174		24		59		60		1			14		309		166.3	
3/13/2022	13	60	9.7		184		26		74		64		2			14		310		164.9	
3/13/2022	14	60	9.6		177		31		86		64		1			13		310		166.3	
3/13/2022	15	60	9.6		176		16		61		73		1	1		14	14	309	310	164.7	165.5
3/13/2022	16	60	9.6		186		22		70		69		1			14		314		165.1	
3/13/2022	17	60	9.5		181		17		39		57		1			14		313		166.1	
3/13/2022	18	60	9.6		184		19		52		64		1			14		314		164.9	
3/13/2022	19	60	9.5		181		21		65		68		1	1		14		315	314	165.9	165.5
3/13/2022	20	60	9.5		173		11		37		69		1			14		310		165.8	
3/13/2022	21	60	9.5		184		2		38		95		1			14		294		165.4	
3/13/2022	22	60	9.8		177		12		46		74		1			14		305		163.1	
3/13/2022	23	19	14.2	IF	194	IF	7	IF	15	IBF	49	IBF	174	IF	1	14	14	304	303	117.7	164.8

Average:  
Geometric Mean Average:

Limit:

180	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

65
≥ 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 13-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	2	2	2	2	1	2	2	2	2
1	1	2	2	2	2	2	2	2	2	2	2
2	0	0	0	0	0	0	0	0	0	0	0
3	2	2	2	1	1	1	1	1	1	1	1
4	1	1	1	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
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	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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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 13-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	0	0	0	0	0	0	0	0	0	0	0	
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	IF	2	IF	2	IF	2	IF	2

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