



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



Date 6/26/22

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.
6/26/2022	0	60	10.4		194		15		48		69		3			15		309		164.0	
6/26/2022	1	60	10.3		182		12		47		74		3			13		309		166.3	
6/26/2022	2	60	10.4		205		21		58		65		2			14		309		168.7	
6/26/2022	3	60	10.2		198		15		53		72		2	3		14		310	309	166.5	166.4
6/26/2022	4	60	10.2		194		13		46		72		3			13		310		166.7	
6/26/2022	5	60	10.4		192		14		46		70		3			13		309		167.7	
6/26/2022	6	60	10.3		189		11		49		78		3			13		309		169.0	
6/26/2022	7	60	10.4		176		10		52		81		3	3		13	14	309	309	163.4	166.7
6/26/2022	8	60	10.5		190		11		50		78		2			13		309		164.5	
6/26/2022	9	60	10.5		189		11		50		78		2			14		309		166.8	
6/26/2022	10	60	10.5		193		10		48		79		3			14		310		164.6	
6/26/2022	11	60	9.9		178		13		60		78		3	3		13		309	309	172.5	167.1
6/26/2022	12	60	10.6		194		14		50		72		3			13		309		165.4	
6/26/2022	13	60	10.4		195		22		66		67		3			13		310		166.3	
6/26/2022	14	60	10.2		197		14		50		72		3			13		309		166.5	
6/26/2022	15	60	10.3		190		12		53		77		3	3		13	13	309	309	164.4	165.6
6/26/2022	16	60	10.3		200		18		51		64		2			13		309		164.4	
6/26/2022	17	60	10.3		210		20		49		60		2			14		310		166.0	
6/26/2022	18	60	10.4		207		16		50		68		2			14		309		165.1	
6/26/2022	19	60	10.4		206		18		51		64		3	2		14		309	309	165.4	165.2
6/26/2022	20	60	10.3		215		18		49		62		3			13		309		167.9	
6/26/2022	21	60	10.2		191		18		50		64		3			13		309		168.3	
6/26/2022	22	60	10.3		202		14		44		67		2			13		309		165.0	
6/26/2022	23	60	10.2		191		18		49		63		3	3		13	13	309	309	166.0	166.8

Average: Geometric Mean Average:	<b>195</b>	<b>15</b>	<b>OR</b>	<b>71</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>see above</b> <b>≤ 345</b> °F 4-HR Block Average	<b>see above</b> <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 6/26/22

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.
6/26/2022	0	60	10.2		175		8		37		79		2			13		305		165.2	
6/26/2022	1	60	10.0		190		7		24		71		1			13		306		168.0	
6/26/2022	2	60	10.0		185		11		24		56		1			13		309		168.3	
6/26/2022	3	60	10.0		191		4		23		84		1	1		13		309	307	167.4	167.2
6/26/2022	4	60	9.9		189		4		23		83		3			14		306		166.9	
6/26/2022	5	60	9.9		188		6		31		80		2			13		306		168.4	
6/26/2022	6	60	9.8		182		12		31		61		2			14		310		171.6	
6/26/2022	7	60	10.2		184		13		30		57		2	2		14	13	308	308	167.0	168.5
6/26/2022	8	60	10.1		177		4		22		81		2			14		306		165.2	
6/26/2022	9	60	10.1		182		4		18		80		2			13		312		166.0	
6/26/2022	10	60	10.1		182		2		18		87		1			14		314		167.1	
6/26/2022	11	60	9.8		182		3		25		87		2	2		14		312	311	168.9	166.8
6/26/2022	12	60	10.5		193		3		22		85		2			14		305		166.3	
6/26/2022	13	60	10.0		181		11		27		59		2			13		309		171.4	
6/26/2022	14	60	10.3		185		3		22		84		2			13		306		168.9	
6/26/2022	15	60	9.9		185		10		29		65		2	2		14	14	309	307	168.4	168.8
6/26/2022	16	60	10.2		187		6		25		77		2			13		305		166.8	
6/26/2022	17	60	10.1		180		8		20		61		2			13		307		168.2	
6/26/2022	18	60	10.3		179		7		19		63		2			13		308		166.1	
6/26/2022	19	60	10.3		184		3		14		82		1	2		13		307	307	165.9	166.7
6/26/2022	20	60	10.5		191		4		19		79		1			13		307		165.6	
6/26/2022	21	60	10.4		190		8		21		62		1			13		309		166.9	
6/26/2022	22	60	10.4		193		15		23		36		1			13		310		168.4	
6/26/2022	23	60	10.4		186		10		17		42		1	1		14	13	314	310	166.1	166.8

Average:  
Geometric Mean Average:

Limit:

185	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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 26-Jun-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	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	IC	6	IC	2	2	2	2	2	2	3
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

**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 26-Jun-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	0	1	1	1	0	1
3	1	0	1	1	1	1	0	0	1	1	1
4	0	1	1	1	1	1	1	0	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	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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