



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



Date 8/18/22

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.
8/18/2022	0	60	9.7		171		31		81		61		3			13		304		166.6	
8/18/2022	1	60	9.8		181		21		64		67		3			13		310		165.2	
8/18/2022	2	60	9.9		179		28		85		68		3			12		309		165.4	
8/18/2022	3	60	9.7		177		23		73		68		3	3		13		309	308	164.7	165.5
8/18/2022	4	60	9.6		170		21		50		59		3			13		309		165.6	
8/18/2022	5	60	9.6		174		18		40		56		4			13		311		165.5	
8/18/2022	6	60	9.9		178		9		29		68		4			13		308		158.8	
8/18/2022	7	60	9.8		180		10		36		71		4	4		14	13	307	309	163.8	163.4
8/18/2022	8	60	9.9		159		8		34		77		4			13		308		165.4	
8/18/2022	9	60	9.8		185		24		84		71		4			14		306		167.0	
8/18/2022	10	60	10.1		166		12		57		79		78			13		301		161.4	
8/18/2022	11	60	9.5		163		7		49		85		3	22		13		286	300	157.5	162.8
8/18/2022	12	60	9.2		163		20		50		61		3			13		314		164.2	
8/18/2022	13	60	9.4		187		15		68		78		3			14		306		165.9	
8/18/2022	14	60	9.0		182		22		73		70		4			14		307		166.1	
8/18/2022	15	60	9.1		168		12		39		70		4	3		14	14	312	310	165.6	165.5
8/18/2022	16	60	9.4		181		22		76		71		2			14		303		165.7	
8/18/2022	17	60	9.4		186		22		65		66		3			14		304		164.5	
8/18/2022	18	60	9.3		181		18		22		20		3			14		307		165.4	
8/18/2022	19	60	9.3		188		19		32		40		2	3		14		312	306	165.8	165.3
8/18/2022	20	60	9.2		181		21		36		42		3			14		313		166.7	
8/18/2022	21	60	9.1		180		21		39		46		3			14		318		165.5	
8/18/2022	22	60	9.1		181		19		39		53		3			14		320		166.6	
8/18/2022	23	60	9.1		170		8		44		81		4	3		14	14	305	314	165.3	166.0

Average:  
Geometric Mean Average:

Limit:

176	17
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

66
≥ 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 8/18/22

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.
8/18/2022	0	60	10.6		159		28		75		63		4			13		310		164.9	
8/18/2022	1	60	10.7		161		17		42		61		4			13		310		166.1	
8/18/2022	2	60	10.9		169		28		86		67		4			14		310		164.6	
8/18/2022	3	60	10.6		166		27		84		68		4	4		12		310	310	165.9	165.4
8/18/2022	4	60	10.7		170		20		67		70		5			15		310		165.7	
8/18/2022	5	60	10.5		167		11		30		63		5			12		310		165.9	
8/18/2022	6	60	10.6		168		8		21		60		4			12		310		165.7	
8/18/2022	7	60	11.0		172		14		24		42		6	5		14	13	310	310	163.7	165.2
8/18/2022	8	60	10.7		166		21		39		47		8			14		311		166.7	
8/18/2022	9	60	10.7		172		21		66		68		7			14		310		165.1	
8/18/2022	10	60	10.8		163		12		31		62		5			14		310		164.9	
8/18/2022	11	60	10.7		168		16		40		59		5	6		13		310	310	165.3	165.5
8/18/2022	12	60	10.5		180		6		21		70		4			14		310		165.4	
8/18/2022	13	60	10.7		184		16		38		58		5			14		310		165.7	
8/18/2022	14	60	10.7		187		9		28		67		5			14		310		165.4	
8/18/2022	15	60	10.4		182		4		16		75		4	4		14	14	310	310	167.5	166.0
8/18/2022	16	60	10.7		170		13		41		69		5			14		310		164.6	
8/18/2022	17	60	10.6		176		12		31		62		5			14		310		166.3	
8/18/2022	18	60	10.6		169		10		25		62		4			14		310		165.5	
8/18/2022	19	60	10.7		168		7		24		68		4	5		14		310	310	164.8	165.3
8/18/2022	20	60	10.6		164		5		18		70		4			14		310		165.1	
8/18/2022	21	60	10.6		171		7		19		65		4			14		310		166.4	
8/18/2022	22	60	10.7		172		10		24		59		5			14		310		164.6	
8/18/2022	23	60	10.7		177		12		26		54		6	5		14	14	310	310	164.9	165.2

Average: Geometric Mean Average:	171	12	<b>OR</b>	64	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≥ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 klb/hr 4-HR Block Average

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



Date 18-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

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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 18-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	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	0	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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