



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



Date 3/28/22

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.
3/28/2022	0	60	9.9		183		18		61		70		3			13		304		166.0	
3/28/2022	1	60	9.8		179		20		63		69		3			13		304		166.8	
3/28/2022	2	60	9.8		188		22		66		67		3			14		304		165.9	
3/28/2022	3	60	9.8		186		19		54		65		3	3		13		304	304	166.1	166.2
3/28/2022	4	60	9.8		178		31		83		63		5			14		304		166.9	
3/28/2022	5	60	10.0		194		24		66		64		4			14		307		165.5	
3/28/2022	6	60	9.7		196		22		79		72		4			13		306		167.8	
3/28/2022	7	60	9.9		198		18		52		65		4	4		13	13	307	306	166.1	166.6
3/28/2022	8	60	9.8		193		14		50		72		4			13		306		166.9	
3/28/2022	9	60	10.0		192		14		49		72		4			14		306		164.6	
3/28/2022	10	60	9.9		192		18		44		59		6			13		308		160.8	
3/28/2022	11	60	10.1		191		17		38		55		6	5		13		310	307	165.2	164.4
3/28/2022	12	60	10.1		197		12		27		56		5			13		309		163.5	
3/28/2022	13	60	9.7		194		15		35		58		5			13		310		164.9	
3/28/2022	14	60	9.8		195		14		36		59		5			13		309		165.2	
3/28/2022	15	60	9.9		192		14		34		60		4	5		13	13	309	309	165.4	164.7
3/28/2022	16	60	9.9		184		9		27		67		4			13		309		164.7	
3/28/2022	17	60	9.8		198		13		34		61		5			13		309		166.1	
3/28/2022	18	60	9.7		194		14		29		50		5			13		309		165.7	
3/28/2022	19	60	9.7		197		20		35		43		5	5		14		310	309	165.4	165.5
3/28/2022	20	60	9.7		197		20		39		49		6			13		309		166.5	
3/28/2022	21	60	9.6		197		14		37		61		6			14		309		167.5	
3/28/2022	22	60	9.7		194		13		35		63		5			13		310		165.4	
3/28/2022	23	60	9.7		194		21		54		62		5	6		13	13	309	309	165.8	166.3

Average:  
Geometric Mean Average:

Limit:

192	17
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

63
≥ 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 3/28/22

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.
3/28/2022	0	60	9.2		156		1		31		96		2			13		306		167.5	
3/28/2022	1	60	9.1		163		1		30		97		4			13		305		166.9	
3/28/2022	2	60	9.0		161		0		25		98		3			12		305		167.3	
3/28/2022	3	60	9.0		167		0		17		99		2	3		12		305	305	167.4	167.3
3/28/2022	4	60	9.1		160		5		39		87		2			15		305		168.5	
3/28/2022	5	60	9.3		166		8		33		77		1			14		307		165.8	
3/28/2022	6	60	9.1		153		13		37		65		1			16		307		170.0	
3/28/2022	7	60	9.3		173		3		11		77		2	2		16	14	307	306	165.9	167.5
3/28/2022	8	60	9.5		183		1		0		0		3			15		307		160.0	
3/28/2022	9	60	9.5		166		2		4		58		3			14		307		163.5	
3/28/2022	10	60	9.5		174		3		11		75		3			15		308		165.8	
3/28/2022	11	60	9.3		181		1		4		79		6	4		14		309	308	165.3	163.7
3/28/2022	12	60	9.2		187		2		0		0		3			15		309		165.6	
3/28/2022	13	60	9.4		179		2		11		86		3			15		309		164.9	
3/28/2022	14	60	9.3		175		1		1		6		3			14		309		165.2	
3/28/2022	15	60	9.4		169		1		0		0		2	3		16	15	309	309	165.3	165.3
3/28/2022	16	60	9.6		165		1		0		0		2			14		309		167.1	
3/28/2022	17	60	9.4		163		0		0		0		2			15		309		163.3	
3/28/2022	18	60	9.2		168		2		4		60		2			14		309		167.0	
3/28/2022	19	60	9.2		179		1		4		88		2	2		14		309	309	166.5	166.0
3/28/2022	20	60	9.2		182		1		6		90		2			13		309		166.3	
3/28/2022	21	60	9.2		184		1		5		74		2			14		309		167.6	
3/28/2022	22	60	9.3		179		2		12		84		2			15		309		166.4	
3/28/2022	23	60	9.4		177		3		34		91		2	2		13	14	309	309	166.4	166.7

Average:  
Geometric Mean Average:

Limit:

171	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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 28-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	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	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	1	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	1	1	1	1	1	1	1
20	1	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 28-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	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

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