



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



Date 12/24/22

Wheel Plant Wheelabrator North Andover  
Unit 1 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.
12/24/2022	0	60	11.0		198		15		67		78		8			14		309		164.6	
12/24/2022	1	60	11.2		201		25		94		74		6			15		309		167.0	
12/24/2022	2	60	11.2		197		20		64		69		4			14		309		167.3	
12/24/2022	3	60	10.8		197		17		58		70		6	6		14		309	309	164.4	165.8
12/24/2022	4	60	10.8		200		19		67		71		5			14		309		164.7	
12/24/2022	5	60	10.6		199		14		59		77		5			14		309		165.7	
12/24/2022	6	60	10.2		199		12		58		79		7			14		310		165.6	
12/24/2022	7	60	10.3		197		13		54		76		7	6		13	14	309	309	163.9	165.0
12/24/2022	8	60	10.4		195		11		53		80		6			12		309		166.6	
12/24/2022	9	60	10.7		199		12		56		78		6			13		309		165.9	
12/24/2022	10	60	10.6		200		10		52		81		6			14		310		166.0	
12/24/2022	11	60	10.8		198		20		57		64		6	6		14		309	309	166.3	166.2
12/24/2022	12	60	10.9		199		17		51		67		5			14		309		165.3	
12/24/2022	13	60	10.8		198		21		51		58		7			14		309		165.7	
12/24/2022	14	60	10.7		200		19		64		71		9			14		310		165.9	
12/24/2022	15	60	10.6		198		5		50		91		8	7		13	14	309	309	165.1	165.5
12/24/2022	16	60	10.9		196		12		49		76		9			14		309		165.3	
12/24/2022	17	60	10.9		202		19		53		63		6			13		309		165.2	
12/24/2022	18	60	10.8		197		25		101		76		6			13		309		166.5	
12/24/2022	19	60	10.5		199		24		99		76		6	7		13		310	309	166.8	165.9
12/24/2022	20	60	11.0		200		17		63		74		5			13		309		168.2	
12/24/2022	21	60	10.7		198		14		51		72		5			13		309		166.4	
12/24/2022	22	60	10.7		198		9		39		78		5			15		309		166.1	
12/24/2022	23	60	10.6		198		13		47		72		6	5		13	13	309	309	166.1	166.7

Average:  
Geometric Mean Average:

Limit:

198	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 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



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Date 12/24/22

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.
12/24/2022	0	60	10.9		198		7		71		90		5			14		311		164.7	
12/24/2022	1	60	11.2		197		14		81		83		3			15		311		165.7	
12/24/2022	2	60	11.1		198		6		49		88		3			14		311		164.4	
12/24/2022	3	60	11.0		198		4		57		94		3	3		13		311	311	165.3	165.0
12/24/2022	4	60	11.1		199		9		63		86		4			15		311		165.1	
12/24/2022	5	60	11.0		197		5		56		90		3			14		311		166.0	
12/24/2022	6	60	10.8		198		1		44		98		3			14		311		166.2	
12/24/2022	7	60	10.9		197		4		56		93		4	3		15	14	311	311	163.5	165.2
12/24/2022	8	60	10.9		198		6		58		90		3			14		311		166.1	
12/24/2022	9	60	10.9		198		5		45		90		3			14		311		166.2	
12/24/2022	10	60	10.9		197		1		36		98		3			14		311		166.0	
12/24/2022	11	60	10.9		198		5		49		90		2	3		14		311	311	165.9	166.0
12/24/2022	12	60	10.9		197		5		49		89		2			15		311		166.6	
12/24/2022	13	60	11.0		196		7		50		86		2			15		311		165.9	
12/24/2022	14	60	10.8		199		8		55		85		4			14		311		166.3	
12/24/2022	15	60	10.8		198		8		62		87		3	3		14	14	311	311	167.1	166.5
12/24/2022	16	60	11.0		199		7		46		86		2			14		311		165.5	
12/24/2022	17	60	10.9		196		16		76		80		3			14		311		165.7	
12/24/2022	18	60	10.9		197		20		82		75		3			13		311		166.8	
12/24/2022	19	60	10.7		197		8		49		84		12	5		15		311	311	166.7	166.2
12/24/2022	20	60	10.9		199		6		39		86		2			14		311		165.9	
12/24/2022	21	60	10.9		197		5		37		86		2			14		311		166.7	
12/24/2022	22	60	10.9		199		4		37		90		3			14		311		163.6	
12/24/2022	23	60	10.8		197		4		41		91		2	2		14	14	311	311	166.1	165.6

Average:  
Geometric Mean Average:

Limit:

198	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

89
≥ 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 24-Dec-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	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	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 24-Dec-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	1	1	1	0	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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