



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



Date 12/25/22

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.
12/25/2022	0	60	10.7		201		10		45		78		5			14		309		165.7	
12/25/2022	1	60	10.7		199		8		40		81		5			14		310		164.5	
12/25/2022	2	60	10.6		197		13		43		70		5			14		309		166.5	
12/25/2022	3	60	10.6		201		12		40		70		5	5		13		309	309	166.8	165.9
12/25/2022	4	60	10.7		202		19		44		58		4			13		310		165.9	
12/25/2022	5	60	10.8		200		20		48		58		4			15		309		166.4	
12/25/2022	6	60	11.0		197		22		44		50		3			13		309		164.8	
12/25/2022	7	60	11.0		200		21		41		48		3	4		14	14	309	309	167.4	166.1
12/25/2022	8	60	11.2		192		21		43		50		3			13		309		164.9	
12/25/2022	9	60	11.2		202		23		59		60		2			14		310		168.5	
12/25/2022	10	60	11.4		199		21		50		58		3			13		309		165.5	
12/25/2022	11	60	11.3		197		22		53		59		3	3		14		309	309	167.3	166.5
12/25/2022	12	60	11.3		200		20		51		62		2			15		309		165.2	
12/25/2022	13	60	10.9		199		21		50		58		3			14		310		168.1	
12/25/2022	14	60	11.1		197		21		51		58		3			14		309		165.9	
12/25/2022	15	60	11.1		199		22		52		58		2	2		14	14	309	309	166.1	166.3
12/25/2022	16	60	11.0		199		22		60		63		2			14		309		166.2	
12/25/2022	17	60	11.0		199		20		53		63		2			14		309		165.7	
12/25/2022	18	60	10.8		200		20		59		66		2			14		309		168.7	
12/25/2022	19	60	11.3		196		17		55		69		3	2		13		309	309	164.0	166.1
12/25/2022	20	60	11.0		200		23		75		70		2			15		310		167.1	
12/25/2022	21	60	11.3		199		25		89		72		2			15		310		164.9	
12/25/2022	22	60	11.2		195		18		59		69		3			15		309		166.2	
12/25/2022	23	60	11.2		200		17		46		62		3	3		15	14	309	309	165.0	165.8

Average:  
Geometric Mean Average:

Limit:

199	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

64
≥ 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

**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 12/25/22

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.
12/25/2022	0	60	10.8		199		5		46		89		2			15		311		166.0	
12/25/2022	1	60	10.3		196		3		43		92		2			16		311		166.3	
12/25/2022	2	60	10.3		197		1		35		96		2			13		311		166.3	
12/25/2022	3	60	10.2		198		0		30		99		3	2		13		311	311	166.3	166.2
12/25/2022	4	60	10.3		200		1		37		96		3			13		311		166.1	
12/25/2022	5	60	10.2		198		7		48		86		2			14		311		166.6	
12/25/2022	6	60	10.4		198		9		47		80		1			14		311		167.0	
12/25/2022	7	60	10.5		196		14		58		75		1	2		14	14	311	311	166.9	166.6
12/25/2022	8	60	10.6		198		9		49		82		1			13		311		166.6	
12/25/2022	9	60	10.6		198		5		43		89		1			14		311		167.1	
12/25/2022	10	60	10.5		198		4		40		91		1			14		311		166.5	
12/25/2022	11	60	10.4		197		1		35		96		1	1		14		311	311	166.2	166.6
12/25/2022	12	60	10.6		197		1		28		98		1			14		311		166.5	
12/25/2022	13	60	10.5		198		7		46		85		1			14		311		166.4	
12/25/2022	14	60	10.5		199		5		38		87		0			15		311		166.8	
12/25/2022	15	60	10.6		197		5		39		87		0	1		14	14	311	311	164.6	166.1
12/25/2022	16	60	10.4		198		4		38		88		1			15		311		167.1	
12/25/2022	17	60	10.5		198		4		38		90		1			14		311		165.5	
12/25/2022	18	60	10.5		197		1		31		97		0			14		311		167.1	
12/25/2022	19	60	10.5		198		3		40		94		0	0		6		311	311	166.5	166.5
12/25/2022	20	60	10.6		197		4		41		90		0			14		311		166.7	
12/25/2022	21	60	10.7		197		9		50		82		0			15		311		167.0	
12/25/2022	22	60	10.7		198		10		48		79		1			15		311		163.7	
12/25/2022	23	60	10.6		199		6		42		86		0	0		14	13	311	311	166.7	166.0

Average:  
Geometric Mean Average:

Limit:

198	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

91
≥ 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

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



Date 25-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	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	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 25-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	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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