



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



Date 10/23/22

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.
10/23/2022	0	60	10.4		195		19		74		74		6			14		310		164.9	
10/23/2022	1	60	10.3		200		20		91		78		6			14		309		164.2	
10/23/2022	2	60	10.2		198		17		77		78		6			14		309		166.4	
10/23/2022	3	60	10.4		199		18		82		78		6	6		14		309	309	165.9	165.4
10/23/2022	4	60	10.3		199		16		92		82		6			14		309		163.8	
10/23/2022	5	60	10.3		196		11		71		84		4			14		309		166.5	
10/23/2022	6	60	10.3		188		9		67		87		4			14		309		167.0	
10/23/2022	7	60	10.5		199		13		68		82		3	4		14	14	309	309	165.8	165.8
10/23/2022	8	60	10.6		197		22		95		77		4			14		309		164.3	
10/23/2022	9	60	10.6		195		20		81		76		3			14		309		164.9	
10/23/2022	10	60	10.5		194		22		93		76		4			14		310		166.3	
10/23/2022	11	60	10.6		198		30		123		76		3	3		14		309	309	164.5	165.0
10/23/2022	12	60	10.5		197		26		121		79		3			14		310		168.5	
10/23/2022	13	60	10.7		195		25		104		76		3			14		309		164.0	
10/23/2022	14	60	10.6		194		23		117		80		3			14		309		166.4	
10/23/2022	15	60	10.7		199		29		132		78		3	3		14	14	309	309	167.1	166.5
10/23/2022	16	60	10.6		198		20		71		71		3			14		309		166.6	
10/23/2022	17	60	11.0		199		22		72		70		4			14		310		165.7	
10/23/2022	18	60	10.3		195		24		95		75		9			14		309		169.0	
10/23/2022	19	60	10.5		192		21		95		78		3	5		14		309	309	164.6	166.5
10/23/2022	20	60	10.7		196		25		116		79		5			14		310		171.0	
10/23/2022	21	60	11.0		196		19		91		79		6			14		309		164.2	
10/23/2022	22	60	10.8		194		24		100		76		5			13		309		164.5	
10/23/2022	23	60	10.6		183		20		86		76		4	5		14	14	309	309	166.6	166.5

Average:
Geometric Mean Average:

Limit:

196	20
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 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 10/23/22

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.
10/23/2022	0	60	11.0		198		21		85		76		5			14		310		165.0	
10/23/2022	1	60	11.1		198		20		82		76		5			14		310		164.8	
10/23/2022	2	60	11.0		198		18		71		74		5			14		310		166.3	
10/23/2022	3	60	11.1		199		16		56		71		4	5		14		310	310	164.9	165.3
10/23/2022	4	60	11.1		196		20		81		75		3			14		310		164.9	
10/23/2022	5	60	11.2		195		13		51		76		2			14		310		164.6	
10/23/2022	6	60	11.1		195		12		53		78		1			14		310		165.2	
10/23/2022	7	60	10.9		195		9		46		80		2	2		14	14	310	310	165.2	165.0
10/23/2022	8	60	10.8		192		17		75		77		1			14		310		166.2	
10/23/2022	9	60	10.8		196		17		71		76		1			9		310		165.3	
10/23/2022	10	60	10.8		194		20		81		75		1			14		310		164.7	
10/23/2022	11	60	10.9		192		23		93		75		1	1		14		310	310	163.4	164.9
10/23/2022	12	60	10.8		189		27		111		76		1			14		310		166.1	
10/23/2022	13	60	10.7		194		20		81		76		1			14		310		164.6	
10/23/2022	14	60	10.8		193		23		97		76		1			14		310		165.2	
10/23/2022	15	60	10.8		187		20		83		76		1	1		14	13	310	310	163.8	164.9
10/23/2022	16	60	10.8		192		16		56		71		1			14		310		163.3	
10/23/2022	17	60	10.7		192		19		67		72		1			13		310		164.6	
10/23/2022	18	60	10.8		194		19		64		70		2			15		310		163.7	
10/23/2022	19	60	10.7		187		18		70		74		2	1		14		310	310	164.9	164.1
10/23/2022	20	60	10.7		187		18		67		73		1			14		310		165.8	
10/23/2022	21	60	10.8		192		20		78		74		2			14		310		165.1	
10/23/2022	22	60	10.8		182		22		85		74		2			14		310		163.4	
10/23/2022	23	60	10.9		187		18		69		73		2	2		14	14	310	310	165.2	164.9

Average:
Geometric Mean Average:

Limit:

193	18
≤ 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
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 23-Oct-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	3	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

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 23-Oct-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	2
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	2	2	1	1	1	1	1	1
9	1	2	1	1	1	1	1	1	1	1	1
10	1	1	1	2	1	1	1	2	2	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	2	1	2	2	1	2	1	2	1	2	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	2	2	1	1	2	1
23	1	1	1	1	1	1	1	1	1	1	1

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown